

Report on the correspondence and papers of
CHARLES ALFRED COULSON, FRS (1910-1974)
1900 - 78
deposited in the Bodleian Library, Oxford

Volume one : handlist of the papers

reproduced for the
Contemporary Scientific Archives Centre
(CSAC 60/4/78)

by
THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS
Quality House, Quality Court, Chancery Lane,
London WC2A 1HP

1978

All rights reserved

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

Supported by the Royal Society, the British Library, the Council of
Engineering Institutions

REPORT ON THE PAPERS OF

CHARLES ALFRED COULSON, F.R.S.

(1910 - 1974)

Vol. I. Handlist of the papers

Compiled by: Harriot Weiskittel

Jeannine Alton

Deposited in the Bodleian Library, Oxford, 1978

CONTENTS OF THE COLLECTION

	<u>Pages</u>
<u>VOLUME I</u>	
GENERAL INTRODUCTION	3
SECTION A. BIOGRAPHICAL AND PERSONAL	11
Introductory note to Section A	11
Note on 'Travel arrangements', Boxes A.5 - A.11	20
SECTION B. SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS	45
Introductory note to Section B	45
SECTION C. CORRESPONDENCE	134
Introductory note to Sections C and G	134
Note on Shorter correspondence, Boxes C.23 - C.38	154
Note on Miscellaneous correspondence, Boxes C.39 - C.44	173
SECTION D. RELIGIOUS, HUMANITARIAN, PACIFIST WRITINGS	175
Introductory note to Section D.	175
SECTION E. SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS, CONFERENCES	204
Introductory note to Section E	204
SECTION F. RELIGIOUS, HUMANITARIAN, PACIFIST ORGANISATIONS	224
Introductory note to Section F	224
Index to organisations in Section F	225
SECTION G. CORRESPONDENCE	242
Introductory note to Section G	242
SECTION H. OXFORD UNIVERSITY	257
Introductory note to Section H	257

continued

NOTE: All requests for access to the papers should be addressed in the first instance to the Keeper of Western Manuscripts, Bodleian Library, Oxford.

CONTENTS OF THE COLLECTION (continued)

	<u>Pages</u>
<u>VOLUME II</u>	
CONSPECTUS OF CAC'S PUBLICATIONS	267
Note on the Conspectus	267
BIBLIOGRAPHY OF CAC'S PUBLICATIONS	291
INDEX OF CORRESPONDENTS	310
Note on the Index	310

NOTE: All requests for access to the papers should be addressed in the first instance to the Keeper of Western Manuscripts, Bodleian Library, Oxford.

GENERAL INTRODUCTION TO THE COULSON PAPERS

PROVENANCE

The papers were received from Mrs. Eileen Coulson (widow) who had assembled them from CAC's Department, his study at home and other sources.

They deal primarily with CAC's own career from about 1930 to his death in 1974, but include some earlier material relating to the Coulson family, especially Alfred Coulson, CAC's father (earliest date 1905); there is also reference to posthumously-published scientific papers by CAC, to obituaries and tributes, and to a collection of his lectures scheduled for publication in 1978.

Before handing on the collection, Mrs. Coulson, assisted by Miss R. Schwerdt (CAC's secretary), Dr. W.E. Duncanson and other advisers, had perused the papers and placed them in numbered folders and boxes; the initials 'RS' and 'WED' appear on many of the folders. Material considered to be sensitive was removed and transferred by Mrs. Coulson as a separate collection to the Bodleian Library, where it will remain under restriction until 2004. Correspondence was segregated into separate sections (C and G, see notes on pp. 134-135, 242) according to the degree of scientific detail it contained, and a full list of CAC's book reviews was compiled by Mrs. Coulson (Box D.9); the entries for Boxes B.28 - B.42 are based on notes made by Dr. R.B. Mallion, Mrs. Coulson and others. We are very pleased to acknowledge this invaluable work initially done before processing began.

The collection, when received, was therefore already partly sorted, numbered and boxed, and this seriously curtailed the degree of flexibility of treatment which it could subsequently bear. Material which might have been re-assembled by subject, chronological or alphabetical order could not be re-assigned because boxes were full and index numbers already allocated. Folders, some exceedingly bulky and heterogeneous in content, could not be split into more manageable units without creating a reference system so complex as to be unproductive. Furthermore, new material, which continued to be received from time to time throughout the processing period, could not be slotted into its logical place for lack of room and could only be attached at the end of a section. Sections A and B have suffered particularly from these addenda; the anomalies which have ensued, though greatly regretted, were inevitable, and every effort has been made to supply cross-referencing and links between items.

CONTENT

The sections into which the material is divided are listed on p.1-2 and each section is accompanied by a note on the principal features and interest.

An account of CAC's scientific achievements, particularly in relation to molecular structure and bonding, is given in the Memoir by S.L. Altmann and E.J. Bowen FRS (Biographical Memoirs of Fellows of the Royal Society, 20, 1974, 73-134) to which reference should be made and a copy of which is included in A.14.2. Mention is made there also of his 'many-sided' life, but only a study of the manuscript collection is likely to convey the actual workload he undertook or the charge of energy and dedication which he brought to it. Similarly, his 'legendary' correspondence is referred to in several published tributes, as is the concluding episode when, learning that his illness was terminal, he signed eighty letters, many of which he typed himself, in the three days before his death to leave his life in order; but it is only when these letters take their place in the folders at the end of a lifetime's correspondence and friendship, or to close a newly-projected line of research, that their poignancy is realised.

From his first academic appointment at Dundee in 1938, CAC attached the greatest importance to fostering or creating research schools, and as his international reputation grew, his Summer Schools, Rencontres and other meetings developed into increasingly major undertakings of widely-attended renown, while he was under constant pressure to accept research students and colleagues on sabbatical from all over the world. His successive departments were prolific in publications and in students who continued to spread his methods and influence. The care he showed for them extended to material details of housing, schooling, and finance as well as to supervision of research and subsequent career. The paternalism of the guidance which he gave reflects the 'family' atmosphere he deliberately created through informal coffee gatherings, Christmas parties, summer picnics, reunions, anniversary celebrations and similar activities designed to foster a sense of community.

This 'group' activity almost certainly derives from his particular pursuit of the religious life, and can already be seen strongly at work in CAC's years at Cambridge 1928 - 38, in which he organised meetings, Sunday schools, summer camps, fellowship sessions and the like for friends from city, country and university circles. From the same years also date his pacifism (which he put into practice in the Second World War) and his many humanitarian interests such as care for the unemployed or the refugees of the 1930s. The extent to which these concerns continued and proliferated in later years can be seen in the collection, though it is less easy to realise at first sight how deliberately he mingled 'science' and 'religion' in his life and how interfused they are in all his dealings.

continued

It might seem from the above that CAC was overly idealistic; but this is not the case. Though he was besieged by calls to lend his time, his name or his support to countless causes, many seemingly worthy, he by no means accepted them all; the many letters in which he explains his decision to decline such appeals are carefully reasoned, kind and helpful, but illuminating in their revelation of his sharp eye for ill-conceived, specious or uncandid proposals. Even so, he was prodigal in the causes he undertook and the energy he expended; the unpublished talks, sermons and contributions in the collection would, if brought together, double the official bibliography of 444 items. Major writing or lecturing commitments were preceded by a culling of material - quotations, press-cuttings, statistics, etc., many annotated - which has its own interest in providing a tour d'horizon of a topic at a particular time.

The working papers, calculations and correspondence, particularly in Section B, help to provide a picture of the development of theoretical chemistry as a subject of scientific research and as an academic discipline with which CAC was closely involved from about 1930 until his death in 1974. CAC was himself aware also of the importance of lecture notes and drafts as a source of historical information on teaching methods, curriculum development and the spread of new ideas from the frontiers of research through the various strata of the education system; hence his preservation of his notes taken as an undergraduate and graduate at Cambridge University (A.19.8) and his retention and updating of his own lectures and talks.

In many respects, the correspondence remains the feature of the most lasting interest. The range and number of CAC's correspondents may indeed be guessed from a glance at the general index, but the brobdignagian size and disparate content of his daily postbag can best be gauged from the folders of 'shorter' exchanges where the random chance of alphabetical order has thrown together correspondence of every level of discourse and opinion. CAC's replies never cease to astonish, while being instantly recognisable. It could truly be said that he never wrote a routine letter. His distinctive style, present from the earliest years, rests on a syntax designed to convey the quality of the speaking voice; it reflects an unwearied patience, integrity and unfailing concern with the welfare of his interlocutors, be they eminent colleagues, members of a congregation or unknown persons from the general public. He touched countless lives, and never without effect.

PRESENTATION

Each item has three references, to Section, box and folder. The Sections are listed in the Table of Contents on pp. 1-2; each box is given a separate page or pages in the handlist, together with the number of folders it contains, and a running title of its general contents, e.g.

<u>BOX B.34</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>16 folders</u>
-----------------	---	-------------------

DESCRIPTIONS

Titles or descriptions in inverted commas are those which appear on the folders or documents, either in CAC's hand or in those of Mrs. Coulson and her advisers who looked through the material after his death.

The documents are too numerous to be individually itemised or calendared, but an account of the contents of each folder is given which it is hoped will suffice to furnish adequate guidance to its substance.

ABBREVIATIONS

Publications which are listed in the Bibliography of the Royal Society Memoir by S. L. Altmann and E. J. Bowen are referred to in the form R.S. ... placed at the end of the relevant entry or entries.

The only other abbreviation used is CAC, which Coulson himself always employed when referring in the third person to his own writings or activities.

CORRESPONDENCE

Two Sections of the collection, C and G, are devoted entirely to correspondence. Each is further sub-divided as follows:

Boxes C.1 - C.22 and G.1 - G.21: individually named folders of correspondents with whom CAC had frequent and extensive exchanges and relations; these folders are all listed, dated and indexed. See introductory note on pp.134-135, 242.

Boxes C.23 - C.38: 'miscellaneous folders' of shorter correspondence in which more than one correspondent is included; these folders are listed and indexed. See introductory note on p.154.

Boxes C.39 - C.44: brief exchanges of letters, scientific and personal, not indexed.

All other Sections also contain correspondence, much of it extensive, or of interest. This has been noted in the handlist, and the names of the correspondents appear in the general index.

From about 1930, CAC almost always typed his letters and kept carbon copies. Many of these copies, in all Sections of the collection, were made on the backs of incoming letters, invitations, drafts and the like. Although many of these are of interest in themselves, it has not been possible to make a note of such cases or to index the individuals or organisations concerned.

Note on the index of correspondents

The general index on pp.311-364 is not exhaustive. To have included the name of every correspondent would have produced an index of unmanageable proportions and doubtful utility.

Correspondents on matters in the following categories have not been included:

- minor editorial and publishing arrangements;
- routine departmental and university administration;
- formal requests for reprints, permission to use published material;
- personal letters from the general public (though see note on A.15 - A.17);
- cases where only CAC's carbon copy survives.

NOTE: This information is repeated on p.135 and p.310 for ease of reference.

LOCATIONS OF OTHER MATERIAL

Bradford University

Peace Studies Library: books, periodicals and pamphlets from CAC's library.

Cambridge University

University Library: CAC's notes on lectures attended as undergraduate and graduate (see A.19.8).

Wesley House: CAC's papers relating to the 'Cambridge Group' movement.

London University

Audiovisual Centre: two videotapes of lecture 'What happens to an electron in a molecule?'

King's College Library: a comprehensive collection of books on Science and Religion, separately housed as 'the Coulson Collection'.

Open University

Tape of lecture 'Making Models. What is applied mathematics all about?' (see B.10.6)

Oxford University

- Bodleian Library: (1) addenda to main collection (restricted to 2004, including information about individuals and organisations, and family letters).
(2) CAC's correspondence with W. Hume-Rothery (CSAC 1/73, Items 132, 132a, 133, 133a).
(3) collection of CAC's publications.

Mathematical Institute: photographs of CAC and scientific books from CAC's library.

Radcliffe Science Library: scientific books from CAC's library.

Theoretical Chemistry Department: photographs of CAC, scientific books from CAC's library and collection of CAC's publications.

Wadham College Library: scientific books from CAC's library.

Royal Society, London

Collection of CAC's publications.

CONSPECTUS

Pp. 268 - 290 contain a conspectus of CAC's publications as listed in the Royal Society Memoir and the principal items in the collection to which they refer. Only the more extended references (to research, publication or reception of work and ensuing correspondence) are given, minor allusions in letters, requests for reprints, etc. being omitted. There are 444 listed publications in the Memoir; B.42.6 and 7 refer to posthumously published articles which take the number to 447.

Pp. 291 - 309 contain a photocopy of the Bibliography of CAC's publications as listed in the Biographical Memoir by S.L. Altmann and E.J. Bowen F.R.S. to which reference has been made throughout in the form R.S. _____. It is reproduced here by permission in order to enable users of the Conspectus to identify the full titles of published works elsewhere referred to only by their numbers.

Although it is hoped that the conspectus will be useful in charting the fortunes of the listed works, it must be stressed that these represent only a part even of CAC's written work, and virtually ignore his vast and influential output through the spoken word in radio and television programmes, sermons, panels, conferences, discussion groups, colloquia and meetings. In this context, attention is drawn particularly to Section D. Religious, Humanitarian and Pacifist Writings and its Introduction on p. 175.

Several series of major invitation lectures given by CAC on scientific and religious matters remained unpublished because of continuing pressure of work; among these are the Firth Lecture at Nottingham (D.4.3, D.4.4), the Sir D. Owen Evans Lectures at Aberystwyth (A.20.2, D.4.5 - D.4.9) the George B. Pegram Lectures at Brookhaven (Box B.5).

The box of book reviews (D.9) assembles 200 items of writings and correspondence on scientific and religious subjects not recorded in the official bibliography.

NOTE: This information is repeated on p.267 for ease of reference.

ACKNOWLEDGEMENTS

The catalogue of the Coulson papers has been a collective labour and we are very grateful to the following individuals:

to Mrs. E. Coulson, Miss R. Schwerdt, Dr. R.B. Mallion, Dr. W.E. Duncanson and Dr. S.L. Altmann for their initial work in ordering the papers and for information and advice during the later stages of preparing the handlist for publication;

to the Department of Western Manuscripts of the Bodleian Library for making available space in the stack in which to work on the collection and for advice on its arrangements and presentation;

to Mrs. M.M. Edwards for careful and accurate typing, and immense patience with successive drafts and emendations of the handlist.

J.B. Alton

H.H. Weiskittel

July 1978

SECTION A

BIOGRAPHICAL AND PERSONAL

20 BOXES

Although the boxes in this Section contain the major part of the biographical material, many folders in the other Sections also include biographical and personal information. This arises in part from CAC's distinctive correspondence style but principally from his deliberate mingling of scientific, religious and personal interest throughout his career. The most striking of these references are indicated and cross-referenced in the handlist.

Other biographical material, photographs and correspondence remain in family hands.

Since the documents were received and processed piecemeal (see under PROVENANCE in the General Introduction), accurate chronological or subject order could not be maintained, but cross-references are given as fully as possible. There is an explanatory note on Boxes A.5 - A.11 ('Travel arrangements') on p.20.

BOX A.1

DIARIES

46 items

All the items listed below are pocket diaries,
with the exception of A.1.8., A.1.31. and A.1.38.

A.1.1.	1931	A.1.14.	1943
A.1.2.	1932	A.1.15.	1944
A.1.3.	1933	A.1.16.	1945-46
A.1.4.	1934	A.1.17.	1946-47
A.1.5.	1935	A.1.18.	1947-48
A.1.6.	1936	A.1.19.	1948-49
A.1.7.	1937	A.1.20.	1949-50
A.1.8.	1938 (ledger)	A.1.21.	1950-51
A.1.9.	1938	A.1.22.	1951-52
A.1.10.	1939	A.1.23.	1952-53
A.1.11.	1940	A.1.24.	1953-54
A.1.12.	1941	A.1.25.	1954-55
A.1.13.	1942	A.1.26.	1955-56

Box A.1 continued

BOX A.1

continued

A.1.27.	1956-57	A.1.44.	1971-72
A.1.28.	1957-58	A.1.45.	1972-73
A.1.29.	1958-59	A.1.46.	1973-74
A.1.30.	1959-60		
A.1.31.	1959	(engagement diary. N.B. This covers the period of CAC's service as Vice-President of the Methodist Conference 1959-60)	
A.1.32.	1960-61		
A.1.33.	1961-62		
A.1.34.	1962-63		
A.1.35.	1963-64		
A.1.36.	1964-65		
A.1.37.	1965-66		
A.1.38.	1962-66 (5-year diary)		
A.1.39.	1966-67		
A.1.40.	1967-68		
A.1.41.	1968-69		
A.1.42.	1969-70		

BOX A.2

BIOGRAPHICAL AND CAREER

15 folders

A.2.1.

Home, School and University records.

1910-34

Includes family photographs, school reports, notices, letters and press-cuttings of scholarships and awards; CAC's itemised account of his expenditure at Cambridge 1928-31, his letters home re job and career prospects 1931 (before the award of a Research Scholarship at Trinity College, Cambridge).

A.2.2.

Folder inscribed 'Jobs'.

1932-54

Misc. applications for posts, offers of posts abroad, many with lists of publications, testimonials, correspondence. Includes:

Correspondence re teaching posts at Harrow School, Winchester College 1932.

Applications for:

Readership in Mathematics, Imperial College	1938
Lecturership in Mathematics, Dundee	1938
Chair of Mathematics, Bangor	1941
Chair of Mathematics, Swansea	1941
Chair of Physics, Dundee	1942
ICI Research Fellowship, Oxford	1945
Fellowship in Mathematics, Magdalen College, Oxford	1945
Wykeham Professorship of Theoretical Physics, Oxford	1945
Chair of Theoretical Physics, King's College, London	1946
Rouse Ball Professorship in Mathematics, Oxford	1951

Offers of posts abroad (declined) and related correspondence:

Illinois Institute of Technology	1946
Ahamabad Physical Research Institute	1949
University of Illinois	1954

Folder also includes:

Letter from R.H. Fowler on comparative merits of careers in teaching or research.	1932
---	------

Correspondence with W.P. Milne <u>re</u> CAC's replacing Brodetsky at Leeds University for one term.	1936
--	------

(see also B.7.1.-4.)

BOX A.2

continued

- A.2.2. continued 5 letters from Sir Edmund Whittaker. 1939-45
- Correspondence with H.S. Allen re teaching of
Pure and Applied Mathematics at St. Andrew's. 1940
- Miscellaneous certificates of residence and
education at Cambridge.
- A.2.3. 'Miscellaneous work correspondence'.
Includes:
Correspondence and reports on pupils at Cambridge. 1933-34
Invitation to review book on spectra for CUP. 1934
Scientific correspondence with Ronald P. Bell. 1942-48, 1957,
1962, 1965
Correspondence on hydrogen spectrum,
with W. Mayo Venable. 1943
Correspondence with G. Rabel re his script on
Max Planck. 1951
Correspondence with Oliver and Boyd re CAC's
publications (see also E.13.7.). 1951-52
- A.2.4. Miscellaneous correspondence of CAC with Bishop
of Ely re CAC's Confirmation into the Anglican
Church 1935
with Charles Raven 1934, 1948-53
with Ian Ramsey 1951
R.S. 117
(see also D.7.9.)
- A.2.5. 'Centenary Supper Party correspondence 1958'.
This was a party given to celebrate publication of
100th paper by CAC's Quantum Group in the Mathe-
matical Institute, Oxford.
Folder includes numerous letters and messages of
congratulation (not indexed).
(see also Box A.4 for papers re other anniversary
celebrations)
- A.2.6. Pictures for guessing games, etc. at 'Centenary
Party' 1958, painted by Miss E. Huggett (sister-in-law
of D.E. Lea qv.).

C.A. Coulson
CSAC 60/4/78

BOX A.2

continued

- A.2.7. 'Matters associated with Vice-Presidency of the Methodist Conference 1959'.
Includes: miscellaneous biographical notes; sermon 'Christ confronts our age', and various shorter writings and messages for Methodist newsletters and publications; copy of CAC's speech to Conference in reply to his nomination as Vice-President; (part only) schedule of engagements undertaken, and CAC's letter of advice (July 1960) to Marjorie Lonsdale, a subsequent Vice-President, on the problems and pleasures of the office; letter of good wishes sent to CAC from 1973 Conference.
(see A.1.31. for CAC's engagement diary for the Vice-Presidential year)
- A.2.8. Biographical material, recollections and tributes assembled 1974-75 for compilation of Royal Society Memoir, from family, friends and colleagues.
(see also A.14.2.)
- A.2.9. Letters of condolence to Mrs. Coulson with recollections 1973-74 of CAC. These are a selection of letters passed on by Mrs. Coulson for their biographical interest. The remainder of the correspondence received after CAC's death remains in family hands.
- A.2.10. CAC's passports 1936-74.
- A.2.11. Spiral-bound notebook inscribed 'Lending Library' and containing CAC's list of books borrowed from his own library.
- A.2.12. Ledger-type notebook, containing list of books purchased by CAC for his Quantum Theory Group, with notes of sources of finance.
- A.2.13. Folder of miscellaneous souvenirs, press-cuttings, signed menus, photographs, etc.
- A.2.14. Exercise book, 'Geometrical Conics', begun at Clifton College and continued at Trinity College, Cambridge.
- A.2.15. Folder of mathematical drawings by 'Coulson ma', at Clifton College.
- A.2.16. Account of Coulson family by Mrs E. Lee Coulson

BOX A.3

CORRESPONDENCE AND CAREER

10 folders

- A.3.1. Correspondence exchanged with parents 1931-43.
Includes letters and press-cuttings re CAC's visit to USA to lecture on pacifism, 1937 (see also A.13.3., D.5.7.) and some early photographs of CAC's parents, 1905-06.
- A.3.2. Correspondence exchanged with twin brother, John Metcalfe Coulson, 1934-70.
CAC's letter of 27 October 1935 contains a spirited account of the incident when he gave up the set of rooms allotted to, and furnished by, him in Trinity to A.E. Housman, who had reluctantly accepted his doctor's advice to move into ground-floor rooms because of his heart condition. Housman occupied the rooms until his death in April 1936, but CAC declined the offer to move back into them because the alterations made to accommodate Housman had made them less attractive to him (see A.3.3. below).
Folder includes a small amount of correspondence with other relatives and friends.
- A.3.3. Miscellaneous correspondence of biographical interest, 1933-38.
Includes:
2 letters from A.E. Housman, December 1935, re his occupation of CAC's allotted rooms in Trinity (see A.3.2. above).
Correspondence with Fellows of Trinity re this incident (see A.3.2. above).
Correspondence with R.H. Fowler re CAC's deferred doctorate, November 1936;
letter from J.E. Lennard-Jones re CAC's career, February 1937;
short notes from J.J. Thomson, G.F.C. Searle;
correspondence re arrangements organised by CAC for elocution classes for local Methodist preachers;
correspondence with W.R. Dean, 1932, 1936;
letters from Patrick Duff (1935) and H.S.M. Coxeter (1932, offering CAC his rooms and furniture in Trinity);
correspondence re pupils at Cambridge;
enquiry by CAC re External Ph.D. at London (before award of Prize Fellowship at Trinity) 1933;

BOX A.3

continued

A.3.3.
continued

letter from CAC to Junior Bursar, Trinity College, expressing the wish that the 'bedders' for him and D.E. Lea might be excused their duties over Good Friday and Easter Monday, and allowed a holiday, 1934;

letter from Charles Raven regretting that a visit to Ireland would prevent him from solemnising the marriage of Charles and Eileen Coulson, 1938.

A.3.4.

Miscellaneous correspondence and accounts re purchase of books, furniture, etc. for CAC's rooms in Trinity College, 1934-35 (see A.3.2. above, and R.S. Memoir, p.79).

A.3.5.

Correspondence with Deans, Bursars, etc. of various Cambridge Colleges re CAC's scheme for helping unemployed men by training them as guides to the colleges, 1933.

A.3.6.

CAC's appearance before Conscientious Objectors Tribunal, 1939-40.

Includes:

official documents re registration as Conscientious Objector, and arrangements for Tribunal, with CAC's statement of his beliefs, August 1940;

similar statements of belief, and correspondence from G.S. Rushbrooke and others;

related press-cuttings and printed matter.

Folder also includes correspondence with J.E. Lennard-Jones offering CAC a place in his wartime group, which CAC declined on conscientious grounds, 1939.

A.3.7.

Miscellaneous correspondence 1933-54.

Folder includes letters on personal, scientific and religious matters, some relatively trivial, others of biographical interest.

A.3.8.

Correspondence with Secretary, China Christian Universities Association re invitation to CAC to teach at 'Yenching University (CAC declined because of his commitments at King's College, London), 1947.

A.3.9.

Miscellaneous domestic correspondence.

1950-60

A.3.10.

Miscellaneous notes and speeches of thanks by CAC on award of Honorary Degrees.

(see also A.12.6.)

<u>BOX A.4</u>	<u>ANNIVERSARIES AND REUNIONS</u>	<u>4 folders</u>
----------------	-----------------------------------	------------------

- | | | |
|--------|--|------|
| A.4.1. | CAC's 60th birthday conference in Oxford,
April 1971.

Lists of guests and participants, greetings from
friends and colleagues (not indexed).

(see also A.14.13. for photograph) | 1971 |
| A.4.2. | Celebration of publications of 100 papers by
Department of Theoretical Physics, King's College,
London.

Correspondence, accounts, lists of guests, souvenirs. | 1951 |
| A.4.3. | 'Reunion colloquium and travel claims' <u>re</u> One-day
Symposium of Wave Mechanics and Quantum Theory
Group, Oxford.

Arrangements, correspondence with colleagues and
participants (not indexed), lists of guests. | 1968 |
| A.4.4. | Miscellaneous correspondence <u>re</u> above (not
indexed). | 1968 |

(see also A.2.5. and A.2.6., Quantum Group celebrations in 1958 and
A.14.14., Opening of Theoretical Chemistry Department, Oxford, 1973)

BOXES A.5-A.11 'TRAVEL ARRANGEMENTS'

The description 'Travel Arrangements', which was that already on the folders, has been retained for convenience.

The boxes contain, in addition to travel schedules and arrangements, many other documents relating to CAC's extensive overseas lecture tours and attendance at international conferences. They include personal and scientific correspondence, notes and drafts for papers to be delivered by CAC or colleagues, comments on the above, editorial correspondence and arrangements for publication, and the like. There is also extensive correspondence and material concerning CAC's 'incidental' or 'spare-time' visits to churches, chapels, religious groups, student societies and similar organizations during his visits abroad, sometimes on behalf of official sponsors such as the British Council, the Royal Society, or Oxfam, sometimes as a result of the numerous appeals he received to visit or preach. His reports on some of these visits are included, and indicated in the list below.

The folders attest both the tightly-packed schedules CAC drew up for these visits and the variety of his commitments, as well as the punctilious care and humanity with which he discharged them.

Many of the folders include notes or texts for talks not published elsewhere or listed in the bibliography of the Memoir. References to the latter are given where relevant, as are cross-references to other sections of the handlist.

For similar conferences and activities in the UK, see especially Section E.

BOX A.5

TRAVEL ARRANGEMENTS 1948-1955

9 folders

- A.5.1. Molecular Electronic Quantum Mechanics Conference, sponsored by University of Texas and National Science Foundation, held at Austin, Texas, 7-9 December 1955; and CAC's visits in USA, 4-18 December 1955. 1955
- Includes: conference programme, photograph, travel and financial arrangements, CAC's notes, abstract of CAC's paper, invitations to visit other universities (M.I.T., Universities of Minnesota, Wisconsin, Northwestern and Chicago) and related correspondence.
- A.5.2. Symposium of the Quantum Theory of Molecules, Stockholm and Uppsala, 21-25 March 1955. 1955
- Includes: conference programme and abstracts of papers delivered, lists of participants, CAC's notes, correspondence re CAC's lectures in Oslo and Trondheim, travel arrangements.
- A.5.3. Lectures in Belgium, 11-16 January 1954. 1954
- (sponsored by the British Council)
- Invitation and travel arrangements.
- A.5.4. Lectures in Madrid and Valladolid 18-26 March 1953. 1953
- (sponsored by the British Council)
- Includes: CAC's notes for, and typescript of, lectures; invitations to lecture; correspondence with British Council and Spanish Embassy; CAC's report to the British Council on his visit.
- A.5.5. Visit to University of North Carolina to deliver the McNair Lectures, and to Haverford College as Philips Visitor, April 1954. 1954
- Includes: invitation to give lectures, schedule of visits, printed matter re both universities, correspondence from sponsors and from members of audience at lecture, including exchange with Mrs. Ellen Knox re Einstein's views on the influence of a scientist's personality on his research.
- The McNair Lectures were published as Science and Christian Belief.
- R.S. 165
- (see also D.12.1.-D.12.2.)

BOX A.5

continued

- A.5.6. International Conference on Theoretical Physics, 1953
Kyoto, 7-29 September 1953.
Includes: extensive correspondence re pacifism and religion; invitations to lecture; CAC's notes on Japanese scientific work.
- A.5.7. Conference on Quantum-Mechanical Methods in 1951
Valence Theory, Shelter Island, New York, 8-10
September 1951.
Includes: conference programme and printed information; ms. and typescript of CAC's contribution and his comments on other papers presented at the conference; offprints and publications; correspondence, including invitation (declined) to lecture at Harvard during visit to USA.
R.S. 131, 132, 133, 136, 137, 138
(see also B.1.19, B.1.22, G.3.4.-G.3.6.)
- A.5.8. Visit to Switzerland, April 1951 1951
Schedule of visit, and lectures to be given at Zurich and Basle; brief correspondence with colleagues re organization of visit.
Lecture tour in Holland, 5-28 March 1949. 1949
Includes: travel arrangements and programme of lectures; extensive ms. notes and drafts for lectures on 'Methods of Molecular Orbitals', 'Methods of Atomic Orbitals', 'Hybridisation', 'Conjugated Compounds', 'Polarities and Strengths of Bonds', 'Colour', 'Future Developments', extended lecture on 'Benzene'.
Correspondence with colleagues re subjects and timetable of lectures, letters of thanks, etc.
- A.5.9. Symposium on Chemical Bonding, organized by 1948
Centre National de la Recherche Scientifique, Paris,
4-11, 12-18 April 1948.
Correspondence with organiser E. Bauer re organization, and participants, and re subsequent visit to Paris by CAC; with M. Haissinsky re publication of paper given by CAC at symposium.
R.S.90
(see also B.17.6., B.34.9.)

<u>BOX A.6</u>	<u>TRAVEL ARRANGEMENTS 1956-1958</u>	<u>10 folders</u>
A.6.1.	<u>University of Malaya - External Examiner 1958-59.</u> Correspondence <u>re</u> lectures, examining, appointments. (see also A.6.3. below)	1958-59
A.6.2.	<u>Washington USA Methodist Conference, 2-6 July 1958.</u> Includes: printed matter <u>re</u> conference, travel arrangements, correspondence <u>re</u> CAC's address. <u>R.S. 220</u> (see also D.7.4.)	1958
A.6.3.	<u>Singapore and Kuala Lumpur, 8-16 May 1958.</u> CAC was External Examiner. Includes: programme for CAC's visit, requests for visits, talks and sermons, correspondence with academic and religious colleagues and friends, typescript article 'I write as a Christian' published in <u>Peace News</u> 1.8.58. (see also A.6.1. above)	1958
A.6.4.	<u>'Belgium. Brussels. 10-15 April 1958'</u> CAC served as member of the Jury for the award of the Francqui Prize. Includes: printed matter <u>re</u> Fondation Francqui, invitation to serve, correspondence with organisers and colleagues.	1958
A.6.5.	<u>Colloque International sur Le Calcul des fonctions d'onde moléculaires, Paris, September 1957.</u> Invitation to read paper, travel arrangements, correspondence with organisers and colleagues. <u>R.S. 223</u>	1957
A.6.6.	<u>'From benzene to graphite', 3rd Carbon Conference, Buffalo, 10-14 June 1957.</u> (CAC cancelled his visit because of ill-health) Correspondence with organisers, arrangements for publication of paper, ms. abstracts of papers to be delivered, some scientific correspondence 1956-58. <u>R.S. 226</u> (see also B.39.8.)	1957

BOX A.6

continued

- A.6.7. Lecture tour to Holland, 10-15 December 1956. 1956
Schedule of lectures, travel arrangements, notes on talks to be given, correspondence re scientific and religious talks 1955-57.
- A.6.8. International Symposium on Hydrogen Bonding, Ljubljana. 1957
Programme, lists of participants, abstracts of papers read, some annotated by CAC; correspondence with organisers; arrangements for publication 1956-58.
- A.6.9. 9th World Methodist Conference, Lake Junaluska, North Carolina, August-September 1956. 1956
Travel and visa arrangements, printed information re conference, arrangements for delivery and publication of CAC's lecture 'Nuclear knowledge and Christian responsibility', miscellaneous correspondence with organisers, delegates and participants.
R.S. 192
(see also D.1.5., F.7.3. (Epworth Press))
- A.6.10. Arrangements for lectures delivered in USA after World Methodist Conference, September 1956, at:
 Bell Telephone Co., Murray Hill, New Jersey
 University of Rochester, New York
 DuPont Co. Experimental Station.
Personal and scientific correspondence re lectures and visits 1955-56.

BOX A.7

TRAVEL ARRANGEMENTS 1959-62

6 folders

A.7.1.

Visit to South Africa, to give Peter Ainslie Memorial Lecture, and to conduct the Mission to Rhodes University, 21 July-14 August 1962.

1962

Includes: programme of visit, programmes for services, requests for articles, correspondence with Methodist clergy and student associations re organization and publicity for Mission etc., summary of addresses given by CAC in Belfast (January 1962).

R.S. 289

(see also D.1.7. and A.7.3. below)

A.7.2.

Visit to Israel, April 1962

1962

Includes: correspondence with the British Council re arrangements for visit, programme of Pesach School in Theoretical Chemistry (Hebrew University, Jerusalem) at which CAC lectured, CAC's report to the British Council on his visits to Pesach School and to Weizmann Institute, Rehovot, and Technion, Haifa.

A.7.3.

Mission to Queen's University, Belfast, 28 January-4 February 1962.

1962

Includes: printed programmes, press-cuttings, etc., correspondence with organisers and with those who had attended the Mission, summary of addresses, typescript of addresses 'Science and the Mission' and 'Prelude to Mission'.

A.7.4.

World Council of Churches Assembly, New Delhi, 17 November-8 December 1961.

1961

Includes: printed material re Council and Assembly, invitations to visit and lecture on scientific and religious topics in course of visit, from many colleagues, organizations, etc., travel schedules, correspondence with scientists and colleagues in India and UK re problems of Indian science and possibilities of assistance from Britain, ms. drafts for CAC's 'Appeal to all Governments and People'.

(see also F.6.14.)

Box A.7 continued

BOX A.7

continued

- A.7.5. Conference on Molecular Quantum Mechanics, 1959
 Boulder, Colorado, June 1959.

Includes: programme of conference and abstracts of papers presented, CAC's notes taken during conference, typescript of CAC's paper 'The present state of molecular structure calculations', correspondence.

R.S. 251

(see also B.1.6.)

- A.7.6. George Fisher Baker Lectures, Cornell University 1959
 New York, Hilary Term, January-April 1959.

(includes many subsidiary visits and talks)

Arrangements for Sabbatical leave, personal arrangements for travel grants, house, car, school, finance, etc., correspondence re programme of lectures at Cornell, numerous invitations to lecture, to visit other universities, industrial and research laboratories, etc.; some scientific correspondence.

(see also B.9.1.- B.9.21.)

BOX A.8

TRAVEL ARRANGEMENTS 1963-64

5 folders

A.8.1.

Visit to Russia, 7-22 January 1963.

1963

CAC visited Russia under the Exchange Agreement between the Academy of Sciences of the USSR and the Royal Society. He visited Moscow, Leningrad and Kiev.

Includes: travel arrangements and schedules, background information from the British Council, the Royal Society, etc., correspondence with colleagues in UK and USSR, CAC's correspondence and reports on his visit, ms. of Preface to Russian translation of CAC's book Valence.

A.8.2.

Correspondence with Herbert Dingle on theories and writings of G. Sapunov in connection with CAC's visit to Russia.

1962-63

A.8.3.

Visit to Czechoslovakia, 2-13 July 1963.

1963

Includes: travel schedules and arrangements for lectures, some scientific correspondence and ms. notes.

A.8.4.

Visit to Duke University, North Carolina, 3-11 October 1963.

1963

Includes: travel schedules and correspondence on scientific and religious lectures (see also D.2.7.).

During this visit CAC also delivered four Mead-Swing Lectures at Oberlin College, Cleveland, Ohio, on:

Overcrowded Molecules
The New Fluorides of the Inert Gases
Science and the Idea of God
Science, Civilization and Religion

A.8.5.

Mission to the University, Dublin, February-March 1964.

1964

Includes: travel schedule, miscellaneous correspondence 1962-64, typescript talk on 'Science, Power and Purpose'.

BOX A.9

TRAVEL ARRANGEMENTS 1964-66

6 folders

- A.9.1. Visit to Fordham University, Bronx, New York, to 1966
 deliver a series of four lectures, 17-30 September 1966.

 Includes: invitation and related correspondence re
 scheduling of visit, lectures and other engagements
 during stay, programme of lectures (including one
 titled 'Religion and Science 1983-85') (see also
 D.2.8.), invitation and related correspondence re
 CAC's participation in Conference on Science and
 Religion sponsored by Broadway Presbyterian Church.
- A.9.2. Lectures to Hungarian Academy of Science, 19-29 1965
 September 1965.

 (sponsored by the British Council and the Royal Society)

 Includes: correspondence with sponsors re travel
 arrangements, insurance, etc., background information,
 correspondence with officers of Academy re topics for
 lectures, personal and scientific correspondence with
 Hungarian colleagues, CAC's report to the British
 Council on visit.
- A.9.3. Visit to Nigeria, 1-22 January 1965. 1965

 CAC attended meetings organized by World Council
 of Churches, and gave scientific lectures under the
 aegis of the British Council.

 Includes: schedule of visit, correspondence and CAC's
 report to the British Council.
- A.9.4. Visit to Australia, 19-27 April 1964, to deliver 1964
 scientific and religious lectures in Sydney and Melbourne.

 Includes: schedule of visit and printed programme of
 lectures, correspondence with Wesley College, Universities
 of Sydney and Melbourne re visits, topics for lectures,
 letters of thanks, etc.; letters to CAC following his
 radio broadcast.

 (see also D.7.6.)

Box A.9 continued

BOX A.9

continued

A.9.5. Visit to New Zealand, 30 March-19 April 1964. 1964

CAC's visit was at the invitation of the Methodist Spiritual Advance Committee.

Includes: correspondence with leaders of Methodist community re scheduling of visit, proposed itinerary, topics for lectures, numerous invitations from Methodist, pacifist and university groups, with letters of thanks, etc., correspondence with scientific colleagues re CAC's lectures to university departments.

A.9.6. Solvay Conference, 13^{me} Conseil de Chimie, de l'Institut International de Chimie, Brussels, 25-30 October 1965. 1965

Includes: correspondence with conference organisers for CAC to give the opening address, and for its publication in text of the Proceedings, programme, printed copies of papers to be presented and of discussions.

Includes unlabelled folder of scientific notes, calculations and drawings for figures.

R.S. 361

<u>BOX A.10</u>	<u>TRAVEL ARRANGEMENTS 1966-71</u>	<u>10 folders</u>
A.10.1.	<u>'Utah and Vancouver trip, August 1971'.</u> College of Science Colloquium, Utah State University: programme, official documents, correspondence 1971. (see also A.20.4.) Fourth Canadian Symposium on Theoretical Chemistry, University of British Columbia: programme, list of participants, correspondence 1971. (see also B.20.9.)	1971
A.10.2.	<u>University of Cincinnati, Ohio</u> CAC was Distinguished Visiting Lecturer, 3-16 January 1970. Includes: correspondence <u>re</u> schedule of lectures and social engagements, invitations to visit other universities, miscellaneous printed matter, newsletters, press-cuttings, programme of symposium on molecular quantum mechanics.	1970
A.10.3.-A.10.4.	<u>Visit to University of East Africa as Royal Society Visiting Professor, November 1968-March 1969.</u> A.10.3. Correspondence with Royal Society and University officers <u>re</u> schedule of visit and topics for lectures, 23pp. typescript report to Royal Society (with covering letter to P.M.S. Blackett), and printed copy of report. A.10.4. Official documents, financial arrangements <u>re</u> visit, photograph, press-cuttings, correspondence with universities and colleges in East Africa, correspondence with Methodist Missionary Society and Overseas Development Institute. (see also B.16.1.-B.16.3. for lectures, correspondence and background material on East African affairs, and F.5.10. for CAC's reports on Oxfam projects in Africa which he visited in the course of this journey)	1968-69

Box A.10. continued

BOX A.10

continued

A.10.5.

XXII Congress of the International Union of Pure and Applied Chemistry (IUPAC) Australia, and Chemical Society meetings in Australia and New Zealand, 7-28 August 1969.

Includes: CAC's schedule, correspondence re travel and financial arrangements; lecture schedules and publication arrangements; services to be conducted by CAC, broadcasts by CAC, some scientific correspondence, material and correspondence re Hon. D.Sc. conferred by University of Otago, New Zealand.

R.S. 401

(see also A.20.3., B.41.10.)

A.10.6.

Visit to Polytechnic Institute of Brooklyn, to deliver a series of lectures on 'Non-Valence Reactions', 18 March-17 April 1968.

Includes: correspondence re schedule of visit, proposed topics for lectures, financial arrangements, accommodation, programme of visit, many invitations to visit universities and research establishments (Rutgers, Princeton, George Washington University, Brookhaven National Laboratory, Rochester, Syracuse, McGill, Toronto, Columbia universities).

(see also B.12.1.-B.12.5.)

Visit to Rio de Janeiro, 18-20 April 1968, and correspondence.

A.10.7.

Visit to Nebraska for convocation on 'Foundations for Christian Mission', 30 November-3 December 1967.

Includes: programme of visit, correspondence with Methodist leaders, ms. drafts and typescript notes for two addresses given at convocation: 'Foundations in Scientific Understanding' and 'Foundations in Human Values'; CAC's notes, invitations to deliver scientific lectures at University of Nebraska.

A.10.8.

Visit to University of West Indies to give valedictory service, 16-27 June 1967.

Includes: arrangements for visit, scheduling of lectures and sermons, itinerary of lectures and accommodation, correspondence re Oxfam.

BOX A.10

continued

- A.10.9. 'India Spectroscopy Conference, Bombay, and 1967
 Oxfam visits', 4-13 January 1967.

Includes: programme and printed matter re conference, invitations to visit other universities and laboratories, itinerary and schedule of visits, draft notes for abstract, ms. and typescript notes for CAC's conference contribution, and those taken during conference discussions, including comments on CAC's paper by R.S. Mulliken, and CAC's reply; some scientific correspondence.

R.S. 353

(see also B.8.10.)

- A.10.10. Summer Schools on Theoretical Chemistry, Yugoslavia 1967
 and Hungary, 1967.

Includes: correspondence re scheduling, etc., programme, list of participants.

(see also B.4.15. drafts of lectures on Non-Valence Interaction, delivered at the School)

BOX A.11

TRAVEL ARRANGEMENTS 1950-74

6 folders

- A.11.1. 'Foreign engagements pending 1950-57'.
Miscellaneous invitations to lecture, mostly declined or deferred (not indexed).
Includes: folder of correspondence 1953-56 re proposed symposium on The Resonance Controversy (with L. Pauling and D. Sokolov as contributors) and CAC's intended contribution 'Marxist and Western accounts of resonance'.
(see also D.8.6.)
- A.11.2. 'Possible future visits to U.S.A. Invitations 1959-69'
Miscellaneous invitations to give scientific and religious lectures, mostly declined or deferred (not indexed).
(see also A.13.12.)
- A.11.3. 'Trieste Winter College, 10-16 January 1972'.
Includes: correspondence with colleagues and organisers re lectures at International Centre for Theoretical Physics, Trieste.
R.S. 430
- A.11.4. Visit to U.S.A., 1972.
Includes: correspondence re address given by CAC at Robert A. Welch Foundation, Houston, Texas, and other visits, also lectures at General Electric.
R.S. 428
(see also B.1.8. and B.10.16.)
- A.11.5. Visit to Israel, January 1973.
Includes: correspondence, travel schedule, conference programmes, report by CAC to Royal Society on visits 31 December 1972-14 January 1973; to Farkash Symposium, Jerusalem; Tel-Aviv and Negev Universities; Technion, Haifa; Weizmann Institute, Rehovot.
(see also A.13.14. and B.1.8.)
- A.11.6. Correspondence re CAC's last engagements 1972-74.

BOX A.12

FAMILY AND BIOGRAPHICAL

10 items

A.12.1.-
A.12.4.

Account books of Alfred Coulson (CAC's father), showing itemised daily and annual income and expenditure.

A.12.1. 1900-1915

A.12.2. 1918-1933

A.12.3. 1933-1949

A.12.4. 1950-1953

Includes a note by CAC about his father, left unfinished at his (CAC's) death.

NOTE: The Brotherton Library, University of Leeds, holds the following sets of notes taken by CAC's father at Owen's College, Manchester, and Yorkshire College:

Notebook of experiments in physics carried out as an undergraduate at the Yorkshire College, 1894-96 (MS. 239)

Notebook of experiments in physics carried out at Owen's College, Manchester, 1899-1900 (MS. 241)

Chemistry lecture notes, Yorkshire College, 1894-95 (MS. 242)

Physics lecture notes from January 1900 (MS. 243)

Physics lecture notes, Yorkshire College, 1895-96 (MS 244)

A.12.5. Essay by CAC 'The City and County of Bristol', written at Clifton College. (c) 1924

A.12.6. Honours and awards

Official correspondence with universities and societies. Whenever there is material in addition to the correspondence, a note is given below. 1956-73

New York Academy of Sciences, Hon. Life Membership: certificate. 1956

Société Chimique de Belgique, Hon. Member. 1962

British Institute of Radiology, Silvanus Thompson Memorial Medal and Lecture. 1963

University of Sheffield, Firth Visiting Professorship of Chemistry. 1968-69

University of Leicester, Hon. D.Sc.: copy of laureation address. 1969

BOX A.12

continued

- | | |
|----------------------|---|
| A.12.6.
continued | <p>University of East Anglia, Hon. D.Sc.: copy of laureation address. 1969</p> <p>University of Otago, Hon. D.Sc. 1969</p> <p>University of Bradford, Hon. D.Tech. 1970-72</p> <p>Royal Society, the Davy Medal: copy of citation. 1970</p> <p>Societas Scientiarum Fennica, Foreign Member. 1971</p> <p>University of Cambridge, Hon. D.Sc.: news-clippings, copy of laureation address, menu and seating plan for luncheon. 1971</p> <p>University of Sheffield, Hon. D.Litt. 1971</p> <p>University of Kent, Hon. D.Sc. 1971</p> <p>University of Stockholm, Hon. Fil.D. 1971</p> <p>University of Hull, Hon. D.Sc. 1972</p> <p>University of Manchester, Hon. D.Sc. 1971</p> <p>Goodricke College, York University, member of SCR. 1972</p> <p>Croatian Chemical Society, Hon. Fellow. 1972</p> <p>University of St. Andrews, Hon. D.D.: copy of laureation address. 1973</p> <p>King's College, London, Hon. Fellow. 1973</p> <p>(see also A.3.10. for miscellaneous speeches of thanks by CAC for honorary degrees)</p> |
| A.12.7. | Numerous biographical notes on CAC, prepared for various bibliographical and reference works, lists of publications and of endowed lectures given, etc. |
| A.12.8. | School exercise book, with notes on physics, lecture notes. n.d. |
| A.12.9. | School exercise book 'Special Set A Chemistry. Mr. Muirhead', lecture notes. |
| A.12.10. | Miscellaneous correspondence on career, 1959, 1967-74. Folder includes tribute to CAC given by Professor J.W. Linnett at Nottingham, September 1974. |

<u>BOX A.13</u>	<u>BIOGRAPHICAL AND CAREER</u>	<u>18 folders</u>
A.13.1.	Notebook 'Long vac. term 1931': miscellaneous laboratory experiments, indexed at front of book by CAC.	1931
A.13.2.	Applications for Commonwealth and other Fellowships.	1937
A.13.3.	Press-cuttings re CAC's first USA tour, when he lectured for the Emergency Peace Campaign. (see also A.3.1., D.5.7.)	1937
A.13.4.	Election to Fellowship of the Royal Society of Edinburgh.	1941
A.13.5.- A.13.9.	Miscellaneous correspondence re membership and subscription to learned societies:	
A.13.5.	American Physical Society	1939-73
A.13.6.	Chemical Society (see also E.2.1., E.2.2.)	1947-70
A.13.7.	American Chemical Society	1948-70
A.13.8.	Institute of Physics (see also E.4.3.)	1952-72
A.13.9.	Faraday Society (see also E.3.1.)	1958
A.13.10.	Election to Honorary Membership of American Academy of Arts and Sciences: correspondence and certificate.	1963
A.13.11.	Membership of Institute of Mathematics and its Applications, formal correspondence only. (see also B.10.4., E.4.1. and E.4.2.)	1964
A.13.12.	'Half-promises' for numerous engagements and invitations to speak (religious and scientific), mainly in UK. (see also A.11.1., A.11.2.)	1955, 1960-66
A.13.13.	Notes taken by CAC of lectures by Professor George Temple FRS on 'Eigenvalues and Eigenvectors'. (see Box B.13.)	(c) 1965

BOX A.13

continued

- A.13.14. Correspondence, travel arrangements, etc. for 1973
CAC's last journey abroad, to receive Hon. degree
at Hebrew University of Jerusalem, July 1973.

Includes transcript of recording of Farkash Memorial
Lecture, delivered by CAC in January 1973 in
Jerusalem.

(see also A.11.5.)
- A.13.15. 'Correspondence as member of Committee of Edin- 1939-42, 1974
burgh Mathematical Society'.
- A.13.16. Miscellaneous biographical correspondence; several 1959-73
of these letters contain interesting thoughts and
recollections of a personal and biographical nature.
- A.13.17. Correspondence with and re Wadham College, Oxford. 1971-72
- A.13.18. 'Possible scientists' peace appeal', an international 1948
text drafted by Michel Magat (Paris).

CAC's correspondence with Magat and other
interested British scientists on the merits of the appeal.

(see also C.12.7.)

<u>BOX A.14</u>	<u>REMINISCENCES AND PHOTOGRAPHS</u>	<u>17 items</u>
A.14.1.	Correspondence re award of the Lecomte de Noüy Prize to CAC for his book <u>Science and Christian Belief</u> 1955, and later correspondence with Mrs. Lecomte de Noüy re CAC's nomination as Hon. Member of the Foundation, and its affairs. (see also D.12.1.-D.12.2.)	1955-56, 1963-66
A.14.2.	Miscellaneous tributes and reminiscences of CAC, collected by E. J. Bowen for the Royal Society Biographical <u>Memoir</u> , from Norman March, Stanley Rushbrooke, C. Strachan (of personal and scientific interest). Folder includes copy of <u>Memoir</u> . (see also A.2.8.)	1974
A.14.3.- A.14.12.	Group photographs taken at CAC's Summer Schools, arranged chronologically. There is a key for all the photographs except that for 1971. A.14.3. 1957 A.14.4. 1959 A.14.5. 1960 A.14.6. 1966 A.14.7. 1967 A.14.8. 1968 A.14.9. 1970 A.14.10. 1971 A.14.11. 1972 A.14.12. 1973	
A.14.13.	Group photograph of CAC's 60th Birthday Conference, held in Oxford, April 1971 (with key). (see also A.4.1.)	1971
A.14.14.	Correspondence and papers re dinner for members of Theoretical Chemistry Department, to commemorate its opening. (see also B.16.4., B.16.5.)	1973
A.14.15.	Xerox of photograph of Theoretical Chemistry Building, South Parks Road, Oxford.	
A.14.16.	Photographs of CAC, taken during a lecture given in Denmark.	(c) 1959
A.14.17.	Photograph of Trinity College Cambridge Mathematical Society, May 1938 (with key).	1938

BOX A.15, BOX A.16 PERSONAL CORRESPONDENCE,
CAMBRIDGE

13, and 17 folders

These boxes contain personal correspondence, mainly with friends made in Cambridge. The correspondents include city, local and university people, some of short acquaintance and others who became lifelong friends.

The subject matter is chiefly religion, pacifism, humanitarianism and principles of conduct. CAC's influence as an active moral force in the lives of others is clearly seen, and the letters cast considerable light on his scientific and personal development.

The names of only a few correspondents appear in the general index, but a full list of correspondents, with dates and a brief indication of subject matter, is enclosed with each box.

A.15.1. - A.15.13. B - L

A.16.1. - A.16.17. L - W

BOX A.17

'CAMBRIDGE GROUP' AND METHODISM

17 folders

Personal correspondence, mainly related to the 'Cambridge Group' of Methodists in which CAC played an active role 1931-38, and to Methodist activities, meetings and conferences. The subject matter and interest of the correspondence are similar to those of A.15 and A.16, and some of the correspondents overlap.

A list of correspondents is enclosed with the box.

CAC especially asked that his papers relating to the 'Cambridge Group' movement be preserved. A collection, including papers of the Reverend W.H. Beales, founder of the movement, is housed in the archives of Wesley House, Cambridge.

A.17.1.- A.17.9.	Individual correspondence folders (list enclosed in box).	
A.17.10.	Cambridge Group Conference at Cardiff, 1932, organised by CAC and Eric Duncanson: programme, reports, etc.	1932
A.17.11.	Cambridge Group on Psychology, organised by Harold Beales: programme of activities drawn up by Beales, circular letter by CAC.	1936
A.17.12.	Conference Committee on Corporate Prayer: correspondence, drafts for manuals, reports of activities.	1935
A.17.13.	Friendship Circle.	1948-50
A.17.14.- A.17.16.	Miscellaneous correspondence with friends, mainly 'Cambridge Group' 1931-38 (not sorted or indexed).	1931-38
A.17.17.	'Children's Stories, etc.' Folder of printed material, ms. notes and outlines of stories, songs and hymns suitable for children, assembled by CAC. Letter from Eileen Burrett [Mrs. Coulson] recommending suitable material, 1935.	1933-35

(see also F.1.1.)

BOX A.18

SUMMER CAMPS 1934-42

11 folders

The box contains 11 folders relating to the organization by CAC of his Summer Camps in various parts of the country. All the folders include correspondence, details of travel and camping arrangements, a budget and journal for the camp.

A.18.1.	1935
A.18.2.	1934, 1935
A.18.3.	1936
A.18.4.	1937
A.18.5.	1937
A.18.6.	1938
A.18.7.	1938
A.18.8.	1939
A.18.9.	1940
A.18.10.	1941
A.18.11.	1942

BOX A.19

BIOGRAPHICAL

9 folders

A.19.1.

'Philosophical Transactions of the Avuncular Society. Volume two'.

Notes and reflections by CAC on factors in his own development, and especially on religion; mostly June 1930-June 1932, with one letter from Douglas Lea 1938.

A.19.2.

'Letters to Arthur, Vol. One July 1930-July 1932'.

10 letters, each separately filed and titled by CAC, on various topics: work and career at Cambridge, politics, Christian marriage, etc.

A.19.3.

'C's ideas'.

Notes and reflections on:

'What I believe'

'Free Will'

'How to pray'

'My testimony'

'Draft. Albert Hall Speech'

(various dates 1931-32)

A.19.4.

'Sermons. Vol.1 June 1931-July 1932'.

9 sermons, each separately filed and titled by CAC.

A.19.5.

'Short diary 1933'.

Also CAC's declaration of intent to give 10% of his income throughout his life to religious purposes.

1931

A.19.6.

Miscellaneous press-cuttings, mainly re CAC's religious activities.

1932-62

A.19.7.

Miscellaneous printed obituaries and tributes to CAC.

Copy of the appeal letter for the Charles Coulson Memorial Fund 'to further study and research in Theoretical Chemistry and related subjects, particularly by providing financial assistance for scholars from abroad who would wish to come to Oxford'.

Box A.19 continued

BOX A.19

continued

A.19.8.

Correspondence with University Library, Cambridge, re CAC's notes of lectures attended by him as an undergraduate and graduate 1931-33, and deposited by him in the Library 1970 and 1972.

The notes, 'about 2 feet or a few inches more', are of lectures by 'J.J. Thomson, Rutherford, Besicovitch, Sir Harold Jeffreys, Eddington, S. Chandrasekhar, R.H. Fowler, Blackett, Cockcroft and others', described by CAC as 'the greatest collection of physicists ever to be in the same laboratory at the same time ... To work in the Cavendish at that time was almost overwhelming'.

CAC later (1972) added his notes on 'the first set of lectures ever given in this country on quantum chemistry' by Lennard-Jones in Cambridge in 1933.

He also gave various reminiscences of lecturers and their methods, and an account of his own painstaking system of note-taking and writing up of material.

(see also B.13.)

A.19.9.

Miscellaneous printed matter relating to CAC's scientific and religious activities; various dates 1936-73, and a Xerox copy of the advertisement for the first appointment to the newly-established Coulson Professorship of Theoretical Chemistry, University of Oxford 1976.

<u>BOX A.20</u>	<u>TAPE RECORDINGS</u>	<u>5 items</u>
A.20.1.	Speech at official opening of Walsall and Staffordshire Technical College, October 1962.	1962
A.20.2.	Sir D. Owen Evans Lectures, Aberystwyth. Three lectures on: 'The influence of science on the Christian faith'. (see also D.4.5.-D.4.9.)	1966
A.20.3.	'What is a human being?'. Lecture, with ensuing questions and answers, given in Sydney, Australia, August 1969. (see also A.10.5.)	1969
A.20.4.	'Science and society. The human use of human beings'. Lecture given in Logan, Utah, August 1971. (see also A.10.1.)	1971
A.20.5.	Cassette of letters, dictated by CAC ready for typing in the department. Miss R. Schwerdt describes it as 'a very typical batch of letters, probably November/December 1973' (CAC was already seriously ill, and died in January 1974). Miss Schwerdt lists the contents as follows: 'Letters re engagement; book review; a proposed Theoretical Chemistry Institute; the future of Summer Schools; letter to OUP about new book; letter about visiting professor from Israel; letter about someone's promotion; letter to a research student in difficulties'.	

SECTION B

SCIENTIFIC WORKING PAPERS, LECTURES,
PUBLICATIONS

43 BOXES

The material may be divided very roughly as follows:

Boxes B.1 - B.27: scientific lectures, talks, addresses, broadcasts,
publications

Boxes B.28 - B.43: research notes, working papers, publications.

The content of the folders throughout this Section varies from short manuscript notes for research projects or an informal talk to a fully-prepared lecture or scientific paper complete with its working notes, background or supplementary research material, drafts, scientific or editorial correspondence and a copy or reprint of the published text. Many of the folders bear, on the inside cover, CAC's list of the places or occasions at which the talk was delivered.

Box B.15 is interesting in showing the way in which CAC conceived and developed ideas for research problems for himself, his collaborators and his teams of research students; see the note on p. 74 about this and similar items elsewhere in the collection.

The list below contains, as far as possible, an indication of the extent and date of the material in each folder and cross-references to similar or related material in other Sections. When a specific publication is dealt with, a reference to the Royal Society Memoir is given in the form R.S. The conspectus on pp. 268-290 may be consulted for fuller references to such listed works, but it should be stressed that many of the lectures and talks in this Section were not published.

<u>BOX B.1</u>	<u>SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS</u>	<u>22 folders</u>
B.1.1.	<p>'The spirit of applied mathematics'. Inaugural Lecture, Rouse Ball Chair of Mathematics, Oxford. Working notes, supplementary material assembled in preparation for lecture. Typescript, annotated offprint. Correspondence <u>re</u> arrangements for delivery and publication. <u>R.S. 140</u></p>	1952
B.1.2.	<p>'Wave mechanics in physics, chemistry and biology'. Inaugural Lecture, Chair of Theoretical Physics, King's College, London. Working notes. Typescript. <u>R.S. 69</u></p>	1948
B.1.3.	<p>'Symmetry'. The Faraday Lecture, the Chemical Society, Oxford, January 1968. Working notes, ms. and typescript drafts, figures for published version. List of places and dates of delivery is on the inside of the folder cover. <u>R.S. 363</u></p>	1967-69
B.1.4.	<p>'Overcrowded molecules'. Ms. of lecture delivered at Kekulé Symposium on Theoretical Organic Chemistry, London, 1958. List of places and dates of delivery. <u>R.S. 240</u> (see also B.3.9.)</p>	1955-64
B.1.5.	<p>'Compton profile'. Working notes and manuscript.</p>	1947-50

BOX B.1

continued

- B.1.6. 'What does a molecule look like?' 1956-61
Working notes for lecture.
List of places and dates of delivery.
R.S. 251
- B.1.7. 'Bond lengths involving carbon'. 1962-63
Working notes, ms., list of slides for lecture,
figures for published version.
R.S. 309
- B.1.8. 'd-electrons'. 1968-72
Lecture first delivered at Oxford Symposium on
Valence and Relativity, 1968 (see also E.2.3.)
and which formed the basis of later papers delivered
at the Robert A. Welch Conference, Texas, 1972
(see also A.11.4.) and at the Farkash Symposium,
Jerusalem, 1973 (see also A.13.14.)
Working notes, ms., bibliography, list of slides
for lecture, figures for published version.
R.S. 379, 428
- B.1.9. 'Correlation energies in atoms'. n.d.
Working notes.
- B.1.10. 'What is a dipole moment?' 1950-62
Notes, brief manuscript.
- B.1.11. 'Localised and non-localised bonds'. 1948-54
Working notes, ms., typescript.
Supplementary research material.
CAC gave a paper in French in Paris, 1948, based
on this material.
R.S. 49, 90, 93, 118
(see also B.17.6., B.34.9.)
- B.1.12. 'Theory of carcinogens'. 1948
Notes, typescript of work relative to research
carried out by CAC on carcinogenic hydrocarbon
molecules with support of grant from British Empire
Cancer Campaign.
(see also E.1.4.)

BOX B.1

continued

- B.1.13. 'Jahn-Teller effect in molecules'. 1962
Working notes.
R.S. 278, 286
- B.1.14. '20th century revolution in Physics. Planck to Eddington'. 1958
Miscellaneous working notes for lecture on history of modern physics.
- B.1.15. 'Decline and fall of science'. 1962, 1966
Ms. notes.
- B.1.16. 'Physics and the philosophers'. 1957, 1962, 1972
Notes, ms. draft.
- B.1.17. 'Fact and fiction in Physics'. 1950-58
Notes, ms., several different typescript versions.
R.S. 241, 250
- B.1.18. 'Any more physics?' 1949-70
Notes, ms., related offprints.
List of places and dates of delivery.
- B.1.19. Report on a (post-conference) informal discussion on integrals, New York, September 1951. Attended by CAC, R.S. Mulliken, M.P. Barnett, H. Shull and others. 1951
Annotated typescript.
(see also A.5.7.)
- B.1.20. 'Present state of molecular structure calculations'. 1959
Closing speech by CAC at Conference of the American Institute of Physics, 1959.
Page proof.
R.S. 251
- B.1.21. 'Future of chemistry'. 1952-55
Notes, rough ms. draft.
Index of places and dates of delivery.

BOX B.1

continued

B.1.22.

'Long-range forces'.

1950-54

Paper delivered at Conference on Quantum
Mechanical Methods in Valence Theory, Shelter
Island, New York, 1951.

Working notes, manuscript.

R.S. 133

(see also A.5.7.)

<u>BOX B.2</u>	<u>SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS</u>	<u>21 folders</u>
B.2.1.	<p>'The contribution of wave mechanics to chemistry'. The Tilden Lecture, The Chemical Society, delivered in London 1951 and in Glasgow 1952. Working notes, supplementary material and related offprints. Ms., heavily corrected typescript, list of slides for lecture, list of figures for published version. Correspondence <u>re</u> arrangements for delivery and publication. <u>R.S. 167</u></p>	1951-54
B.2.2.	<p>'Fun with atomic and molecular charge clouds'. Notes, related printed material.</p>	1962, 1970
B.2.3.	<p>'Vibrations of large systems'. Notes.</p>	1963-70
B.2.4.	<p>'Hybridization'. Notes, typescript. <u>R.S. 187</u></p>	1955-56
B.2.5.	<p>'Ionic-covalent resonance'. Notes for a lecture. Typescript of 'Critical survey of the method of ionic-homopolar resonance.' <u>R.S. 109</u></p>	1951-56
B.2.6.	<p>'Pauling theory of metals and surface states'. Notes for lectures.</p>	1951-59
B.2.7.	<p>'Commutator relationships'. Lecture notes. Includes 2 ms. drafts titled 'Ways to avoid use of the Hamiltonian' and notes and ms. draft for paper 'The use of hypervirial relationships in determining Schrödinger wave functions'. <u>R.S. 328</u></p>	1964-71

BOX B.2

continued

- B.2.8. 'What happens to an atom in a molecule?' 1970-73
Notes for lecture delivered on numerous occasions
(see list inside folder cover).
Ms., figures for published version.
Correspondence.
R.S. 358, 408
- B.2.9. 'Mendeleev periodic table'. 1970-73
Notes for lecture delivered on numerous occasions
(see list inside folder cover).
Ms., typescript for published version 'Wave
mechanics and the periodic table'.
R.S. 388
(see also B.4.8.)
- B.2.10. 'Importance of accurate electron-density determina- 1973
tions'.
Notes, manuscript.
- B.2.11. 'Labs or computers?' 1970-73
Notes for lecture.
Ms. of published version.
R.S. 400, 418
- B.2.12. 'Polymers and molecular solids'. 1972
Notes, typescript of abstract for paper at confer-
ence on band structure, Exeter.
- B.2.13. 'Dipole moments of excited states'. 1972-73
Notes, ms., supplementary material.
Correspondence.
R.S. 416
- B.2.14. 'Shape of the chemical bond'. 1944-55
Notes, ms., typescript, list of slides.
Includes ms. 'Molecules and their Behaviour'.
R.S. 118
- B.2.15. 'The wave equation and its solutions'. 1949-52
Notes, manuscript.

BOX B.2

continued

- | | | |
|---------|--|----------|
| B.2.16. | 'Chemistry and maths'.
Notes, figures. | 1934-37 |
| B.2.17. | 'Quantum theory of the chemical bond'.
Lecture given at Royal Society of Edinburgh.
Notes, typescript, figures for published version,
offprint.
Correspondence.
<u>R.S.26</u> | 1941 |
| B.2.18. | 'Energy levels of long chain compounds'.
Manuscript. | n.d. |
| B.2.19. | 'Relation between applied maths and chemistry'.
Notes for lecture delivered in Glasgow. | 1953 |
| B.2.20. | 'Order of a bond'.
Notes for lectures. | (c) 1940 |
| B.2.21. | 'Lies, d-n lies and statistics'.
Notes for lecture. | 1960 |

<u>BOX B.3</u>	<u>SCIENTIFIC LECTURES</u>	<u>17 folders</u>
B.3.1.	'Recent molecular structure lectures'. Ms. drafts of 'A simplification of Hartree-Fock method', 'The V_{12} plague', 'The non-orthogonality catastrophe'.	1952
B.3.2.	'Virial Theorem lectures'. Ms. draft of lecture 6 'The virial theorem'. Ms. 'Notes on virial theorem (Hurley's Thesis)'. 2 typescripts by N.H. March (with covering letter) on 'The virial theorem in the Thomas-Fermi Theory', and 'The virial theorem for Dirac's equation'.	1952-53
B.3.3.	'Wave Mechanics and its applications'. Course of lectures at Sir John Cass College, London. Ms. draft of lectures. Correspondence re further course of lectures on 'Wave mechanics and molecular structure' to be given at the college by CAC.	1949 1950
B.3.4.	Adult education in H.M. Forces (labelled 'Troops'). Notes for lectures, correspondence.	1941
B.3.5.	'Ligand-field theory'. Course of 14 lectures delivered at Harwell with Simon Altmann. Ms., programme of lectures, correspondence.	1966
B.3.6.	'Methods of calculation'. Early ms. notes on molecular orbitals and various methods of calculation.	
B.3.7.	'U.V. spectra. Colloquia 1948'. Programme and typescript summaries of contributions to colloquium held at King's College, London, spring 1948. CAC's ms. notes for his own contributions (the first introductory lecture and the concluding lecture of the series) and his notes on the lectures of the other speakers (Drs. E.M. Roe, A.D. Walsh, A. Maccoll, D. Craig, and V.A. Crawford) in the series. 26 pp.	1948

BOX B.3

continued

- B.3.8. 'Molecular structure and photoelectron spectroscopy'. 1970
1 p. typescript abstract of CAC's Introductory Lecture at Oxford Conference, September 1970.
Ms. draft, presumably for same Talk.
Related offprints.
- B.3.9. 'Molecular geometry and steric deformation'. 1958
CAC's contribution to the Kekulé Symposium on Theoretical Organic Chemistry, September 1958, London.
Programme of the Symposium, typescript of abstract of CAC's talk.
Correspondence re arrangements for the Symposium, funded by International Union of Pure and Applied Chemistry. (CAC served on the organising committee.)
Ms. notes for CAC's contribution.
R.S. 240
(see also B.1.4. for drafts of CAC's lecture)
- B.3.10. 'U.V. spectra'. 1951-66
Sets of ms. notes on u.v. spectra, of various dates. Includes notes for lecture in Zurich, 1951.
- B.3.11. 'Valence lectures, Dundee, 1939-43'. 1939-43
Introductory notes and programme for a course of 16 lectures on 'Valence and the structure of molecules', 1939 and later.
51 pp. typescript draft of lectures.
24 pp. ms. draft of lectures on 'Spectra and Valence for Chemists', 1943.
7 pp. typescript of paper 'The orbits in benzene'.
- B.3.12. 'Statistical Mechanics ii'. 1948
Ms. drafts of various lectures in a series on statistical mechanics, delivered at King's College, London, 1948.
- B.3.13. 'Teaching of Quantum Chemistry'. 1955
Ms. draft of 'The teaching of quantum mechanics to chemists', CAC's contribution to a British Association discussion meeting, September 1955.
R.S. 185

BOX B.3

continued

B.3.14.

'Statistical Mechanics Lectures'.

Various sets of ms. notes for a course of 8 lectures delivered at King's College, London. All are titled and paginated.

Includes CAC's notes (24 pp.) on R.H. Fowler's book Statistical Mechanics.

B.3.15.

'Spectra Lectures (3)'.

6 pp. typescript draft for a course of 3 lectures on spectra.

n.d. but probably c.1950.

B.3.16.

'Critique of molecular structure'.

(c) 1942

5 pp. ms. draft/short notes for lecture(s) on above topic.

Includes 1 p. ms. notes in another (unidentified) hand.

B.3.17.

'Metals lectures'.

1951-53

A course of 6 lectures on 'Quantum Theory of Metals' delivered at Sir John Cass College, autumn 1951, and later at AERE, Harwell, January-February 1953.

50 pp. ms. draft for delivery at Sir John Cass, with amendments and annotations for Harwell course.

Programme announcing lectures at Sir John Cass.

Correspondence re arrangements for delivery of lectures at Harwell.

Typescript of Chapter XI 'Metals' from unidentified book.

Miscellaneous ms. notes used in preparing lectures.

<u>BOX B.4</u>	<u>SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS</u>	<u>15 folders</u>
B.4.1.-B.4.5.	<u>Lectures delivered at Dundee University</u>	1938-44
B.4.1.	'Theoretical calculations of molecular structure'. Ms. of a series of 6 lectures.	
B.4.2.	'Hydrodynamics. Senior Honours'. Ms. notes.	
B.4.3.	'Dynamics' and 'Ramsay Dynamics'. Extensive ms. notes and drafts.	
B.4.4.	'Interpolation. Numerical integration. Junior Honours'. 2 booklets of ms. notes and drafts, with plan of course and problems to be set, 1943.	
B.4.5.	'Statistics'. 4 numbered booklets of ms. notes and drafts, and loose notes on 'Best Straight Lines'.	
B.4.6.	'Negative bond orders'. Ms. notes and drafts for lectures and papers on bond orders, with CAC's note on inside cover of the folder of dates and places of the lectures. <u>R.S. 370, 371</u>	1968-70
B.4.7.	'X-ray levels and chemical bonding'. Ms. notes, offprints of published papers, with CAC's note on inside cover of the folder of dates and places of the lectures. <u>R.S. 301, 367</u>	1968-69
B.4.8.	'Influence of the new maths on physics'. Material prepared for CAC's visit to Africa, 1968. Notes, list of slides, correspondence, typescript of CAC's lecture on the Periodic Table adapted for delivery on the tour. <u>R.S. 388</u> (see also A.10.3., A.10.4., B.2.9.)	1968-69

BOX B.4

continued

- B.4.9. 'Mathematics of some radiation problems in biology'.
A 'Lecture on Bacteria for Mathematicians'.
Ms. notes, typescript and ms. of lecture. n.d. but before 1944.
- B.4.10. 'Lecture on Gyroscopes'. 1930
Ms. of lecture given to 'Trinity Mathematical Society, 26 November 1940' (one of CAC's first lectures).
(see also B.27.2.)
- B.4.11. 'Electron distribution in large molecules'. n.d.
Ms. notes and drafts for several lectures and papers on the subject.
- B.4.12. 'Electronic Structure of the Boundary Atoms of a Graphite Layer'. 1959
Paper given by CAC at Fourth Conference on Carbon, held in Oxford, 1959.
Annotated typescript, and page proof.
R.S. 253
(see also B.39.14.)
- B.4.13. 'Interatomic Forces'. 1962-67
Ms. notes for several lectures and papers on the subject, with CAC's note on inside cover of folder of dates and places of the lectures.
Transcript of CAC's principal lecture on the subject, given at King's College, London, 1962.
Folder includes proof of an earlier paper by CAC (R.S. 276).
R.S. 285, 302
- B.4.14. 'Spectroscopy and Molecular Structure'. 1950
Report by CAC on Faraday Society Discussions held at Cambridge, September 1950.
R.S. 103
- B.4.15. 'Non-Valence interactions'. 1967
52 pp. ms. draft, and numerous sets of figures for slides, diagrams, etc., with ms. note by CAC 'These are the Hungary lectures'.
The material was prepared for publication in a Hungarian journal, but is not listed in the R.S. Memoir.
(see also A.10.10.)

BOX B.5

INVITATION LECTURES

8 folders

'The Scientist and Society'

1960-61

The George B. Pegram Lectures, Brookhaven
National Laboratory, New York, 1961.

The lectures were entitled:

- I. 'Rates of change in society'
- II. 'Science and politics'
- III. 'Science and philosophy'
- IV. 'Science and human responsibility'

CAC began preparing the lectures for publication but
the book was never completed (see B.5.4. below).

- B.5.1. Correspondence re arrangements for delivery of
lecture, and invitations to CAC to speak at
universities in the area.
- B.5.2. Transcripts of the 4 lectures and of the discussions
following the lectures.
- B.5.3. Ms. drafts of the 4 lectures. Brochure advertising
the series.
- B.5.4. Notes and supplementary material collected by CAC
in preparing lectures for publication. Correspondence
with editors of Columbia University Press (CAC never
completed the manuscript for publication).
- B.5.5. Notes for Lecture I.
- B.5.6. Notes for Lecture II.
- B.5.7. Notes and supplementary material for Lecture III.
- B.5.8. Notes and supplementary material for Lecture IV.

<u>BOX B.6.</u>	<u>SCIENTIFIC LECTURES</u>	<u>6 folders</u>
B.6.1.	'Science and human values' . Collection of notes (ms. and typescript) and printed material on this topic, perhaps assembled for a lecture. Includes copy of J. Bronowski's Carnegie Lectures 'Science and Human Values' sent to CAC by the author.	1960-61 1957
B.6.2.-B.6.6.	'Quantum biology'. Course of 6 post-graduate seminars by CAC, Oxford. Programme for 1964 course 'Applications of Quantum Theory in Biology' and for 1967 course 'Some Problems in Biochemistry' are included in B.6.2. (These were fundamentally the same course, but the seminars were slightly revised for the 1967 series.) B.6.4. and B.6.5. are 2 folders of material on similar topics kept by CAC with his papers for this seminar series.	1964-67
B.6.2.	22 pp. ms. draft for first 5 seminars.	
B.6.3.	Miscellaneous ms. notes by CAC in preparing course, with bibliographical references.	
B.6.4.	'Some quantum theory considerations in biological problems'. 8 pp. ms. notes for a lecture delivered in 1949 at University College, London, with offprint of CAC's inaugural lecture at King's College, London. Miscellaneous later notes added by CAC when updating lecture for 1972 delivery at York University.	1949, 1972
B.6.5.	'M.O. Theory and biology'. 1 p. ms. notes for seminar at Allen and Hanburys (pharmaceutical firm), 1968. Letter and photocopies of articles on the use of molecular orbital calculations in the drug research field.	1968
B.6.6.	Numerous offprints (many are association copies) and other printed material assembled by CAC when preparing the course.	

BOX B.7

SCIENTIFIC LECTURES

14 folders

B.7.1.-B.7.4.

Lectures at Leeds University

1936

These represent CAC's first formal university lectures, delivered at Leeds in 1936 when, at the request of W.P. Milne, he deputised for Professor S. Brodetsky. It was a lecture by Brodetsky, attended while he was still a schoolboy at Clifton College, that inspired CAC to become a mathematician (see p.76 of R.S. Memoir).

All items are ms. drafts.

- B.7.1. 'Advanced dynamics'
 - B.7.2. 'Projectiles'
 - B.7.3. 'Statics'
 - B.7.4. 'Ramsay's hydro solutions'
- (see also A.2.2.)

B.7.5.-B.7.14. Lectures delivered at Dundee University

All items are ms. drafts.

- B.7.5. 'Electricity. Potential theory'
- B.7.6. 'Electricity (senior honours)'
- B.7.7. 'Gravitation'
- B.7.8. 'Partial differentiation'
- B.7.9. 'Differential equations'
- B.7.10. 'Three dimensional solutions'
- B.7.11. 'General course of mathematical physics' 1939-40
- B.7.12. Lectures to Maths general class 1943-44
- B.7.13. Lectures to Maths general class 1944-45
- B.7.14. Junior honours dynamics lectures (c) 1944

<u>BOX B.8</u>	<u>SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS</u>	<u>11 folders</u>
B.8.1.-B.8.7.	<u>Lectures given at Dundee University 1941-45</u>	
B.8.1.	'Junior Honours Calculus' 1942. Numbered booklets and loose pages for lectures.	
B.8.2.	'Junior Honours Applied Dynamics' 1941-42. 8 booklets and loose pages.	
B.8.3.	'Thermodynamics' n.d. 1 booklet.	
B.8.4.	'Permutations and Combinations' n.d. 9 pp. ms.	
B.8.5.	'Kinetic Theory'. 3 booklets.	
B.8.6.	'Special class'. Extensive ms. notes.	
B.8.7.	'Calculus special' 1943-45. Extensive sets of ms. notes, and CAC's plans and timetables of course, various dates 1942-45.	
B.8.8.	'Elementary Atomic Theory'. 54 pp. ms. draft for course of 10 lectures (CAC's index is on inside cover of folder), and further ms. notes for tutorial work and problems.	1948-49
B.8.9.	'Wave-mechanical discussion on the significance of the K-region'. Report on work carried out by CAC and H.H. Greenwood for British Empire Cancer Campaign. 8 pp. typescript. (see also B.38.4., C.1.4., E.1.9.)	1952

BOX B.8

continued

B.8.10.

'Shape and Size of an Excited Molecule'.

1965-69

Several sets of ms. and typescript notes and drafts, lists of slides, diagrams and figures for lectures and papers on the subject. CAC's list of dates and places of the lectures is on inside cover of the folder.

R.S. 353, 354, 372

B.8.11.

'Compounds of the rare gases' and ' XeF_2 '.

1963-69

Extensive ms. notes and drafts for lectures and papers, computer data, background material, correspondence. CAC's list of dates and places of the lectures is on inside cover of the folder.

R.S. 312

BOX B.9

INVITATION LECTURES

21 folders

B.9.1.-B.9.21. 'The Size and Shape of Molecules'.

1958-59

The Fisher Baker Lectures, Cornell University,
New York, February-April 1959.

CAC spent a sabbatical term at Cornell in 1959.
The following folders contain ms. drafts for his lectures,
duplicated notes and material for the students; some
folders include related offprints.

- B.9.1. Programme of the course, notes for Lecture I - 'Introduction'.
- B.9.2. 'Charge distribution in H_2 - the only completely calculable situation'.
- B.9.3. 'Present status of covalent-ionic resonance'.
- B.9.4. 'Valence angles - particularly in triatomic molecules'.
- B.9.5. 'Hybridization - dipole moments - case of H_2O in detail'.
- B.9.6. 'Electronegativity - d-orbital contraction - valence state'.
- B.9.7. 'Electron-deficient molecules'.
- B.9.8. 'Electron-correlation and the method of Configuration Interaction - excited states of molecules'.
- B.9.9. 'The Hydrogen bond'.
- B.9.10. 'Molecular vibrations - bond following - absolute intensities in the infra-red'.
- B.9.11. 'Loose ends'.
- B.9.12. ' π and ζ electrons'.
- B.9.13. 'Fundamentals of conjugation'.
- B.9.14. 'Compression energy - the case of cyclobutadiene'.
- B.9.15. 'Bond orders and effective charges'.
- B.9.16. 'Excited states - colour'.
- B.9.17. 'Influence of molecular symmetry - the ferrocenes'.

BOX B.9

continued

- B.9.18. 'Overcrowded molecules - strain - crystal forces'.
- B.9.19. 'Hyperconjugation'.
- B.9.20. 'The free-electron model'.
- B.9.21. Numerous sets of ms. notes, from a variety of sources,
used by CAC in preparing lectures.

(see also A.7.6., an extensive folder of correspondence
relating to the scheduling of the lectures and to
arrangements for CAC's visit)

<u>BOX B.10</u>	<u>SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS</u>	<u>16 folders</u>
B.10.1.	<p>Numerous sets of ms. notes and drafts for mathematics lectures, Dundee:</p> <p>'Kinematics of a particle'.</p> <p>'Work done by a couple in a small rotation'.</p> <p>'Principle of virtual work'.</p> <p>'Stability of equilibrium with frictionless systems'.</p> <p>'The kinetic energy of a rotating rigid body'.</p> <p>'Moment of momentum about centre of rotation'.</p> <p>'Stretching of elastic bars'.</p> <p>Several unlabelled sets.</p> <p>(see also B.10.11.)</p>	1944-45
B.10.2.-B.10.10.	Lectures on mathematics, with extensive list of places and dates of delivery.	
B.10.2.	<p>'What makes a beautiful proof?'</p> <p>Typescript, with above title.</p> <p>Typescript of 'Mathematics and beauty'.</p> <p><u>R.S. 381</u></p>	<p>1952-60</p> <p>n.d.</p>
B.10.3.	<p>'On liking Mathematics'.</p> <p>Presidential address, Mathematical Association.</p> <p>16 pp. ms. draft.</p> <p>Ms. notes for another lecture on a similar subject.</p> <p>Bibliographical notes.</p> <p><u>R.S. 387</u></p>	1969
B.10.4.	<p>'Mathematics and the real world'.</p> <p>Presidential address, Institute of Mathematics and its Applications, 1972.</p> <p>23 pp. ms. draft, 18 pp. ms. draft (different versions).</p> <p>5 pp. typescript, 18 pp. typescript (different versions).</p> <p>Miscellaneous sets of ms. notes and bibliographical references.</p> <p><u>R.S. 298, 320, 419</u></p>	1955-72

BOX B.10

continued

- B.10.5. 'Likes and dislikes in mathematics'. 1958-71
16 pp. ms. draft.
11 pp. typescript.
4 pp. ms. draft 'Likes and dislikes in maths and physics'.
Miscellaneous ms. notes and bibliographical references.
R.S. 242
- B.10.6. 'Making models. What is applied mathematics all about?'. 1965-73
Typescript, for Open University programme.
Ms. notes.
Correspondence with E.T. Copson and A.D. Rawlins, 1972-73, re origin of phrase 'Applied Mathematics'.
R.S. 377
- B.10.7. 'Mathematics and the Modern World'. 1969-72
Ms. and typescript drafts of several talks on related subjects ('Mathematics is a language', etc.).
Numerous 1 p. notes by CAC of references and quotations on the subject.
- B.10.8. 'How many different keys?'. 1969
6 pp. typescript, with illustrations.
R.S. 377
(see also B.41.2. for correspondence and drafts for this article)
- B.10.9. 'How atoms hang together'. 1966-67
Address to the Junior British Association, Birmingham, April 1966, and March 1967.
Typescript, programme notes.
- B.10.10. 'The variation method: a chapter in applied mathematics'. 1958
12 pp. manuscript.
6 pp. and 16 pp. typescripts (different versions).
R.S. 243

BOX B.10

continued

- B.10.11. 'The nature of bonds between carbon atoms: how they vary with environment'. 1960
Proposed 'Paper symposium' organised by M.J.S. Dewar for publication in Tetrahedron.
Numerous sets of notes (ms. and typescript) of varying dates assembled by CAC.
Includes ms. draft of course of lectures given in Dundee, 1939-42, with titles similar to those in B.10.1.
Correspondence with M.J.S. Dewar, 1960, re CAC's contribution.
- B.10.12. 'The scientific mind'. (c) 1960
8 pp. typescript, perhaps for broadcast.
- B.10.13. 'Valency'. 1964
5 pp. typescript for broadcast (with amendments and annotations in another hand).
Correspondence with BBC re CAC's contribution to series 'A Few Ideas', Third Programme.
Ms. notes.
R.S. 319
- B.10.14. 'Distribution Theory'. 1955
CAC's notes on a course of lectures, perhaps delivered by G. Temple.
- B.10.15. 'Constants of the motion'. (c) 1950, 1972-73
2 sets of ms. notes for lectures.
- B.10.16. 'd-electrons in chemical bonding'. 1972-73
Address at the Robert A. Welch Foundation Conference on Chemical Research, Houston, Texas, November 1972.
46 pp. ms. (and some pp. typescript) draft.
Transcript of discussion following CAC's contribution.
List of references, and legends for figures.
Miscellaneous ms. notes.
Some correspondence with organisers.
Drawings for slides and for published version.
R.S. 428
(see also A.11.4., B.1.8.)

<u>BOX B.11</u>	<u>SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS</u>	<u>12 folders</u>
B.11.1.	'Vector operators'. Ms. notes and drafts for courses of lectures in Oxford.	1962-66
B.11.2.	'Quantum mechanics of atoms and molecules'. Typescript and ms. draft for 'first nine lectures 1938', given at Dundee. Includes 2 pp. typescript list 'L. J. lecture schedule', probably CAC's note of topics covered in Lennard-Jones's lectures in Cambridge, used as basis for his own teaching in Dundee.	1938
B.11.3.	'Introductory wave mechanics'. Lectures given at various dates in London and Oxford. Ms. drafts, plan of the course, correspondence. CAC's indexes to the courses appear on inside cover of the folder.	1949-72
B.11.4.	'Waves'. Extensive notes and drafts for course at Dundee. 7 numbered booklets, and loose pages numbered 'W1-W16'. (see B.11.11., B.11.12. below)	n.d.
B.11.5.	'Calculus of variations'. Ms. drafts, notes, list of topics, for courses of lectures at Oxford.	1964-65
B.11.6.	'Quantum Mechanics'. Ms. draft and list of topics for a course of lectures at Oxford, and a copy of 30 pp. ms. notes taken by a student of 'Quantum Mechanics (Lectures given by Prof. C.A. Coulson to 27 students - Jan. 69)'. 	1969
B.11.7.	'Brillouin's Theorem and Hellmann-Feynman Theorem'. Ms. notes for 'Coffee-party talk', November 1970, typescript with printer's amendments for published paper. <u>R.S. 403</u>	1970

BOX B.11

continued

- B.11.8. 'Bounds to Eigenvalues'. 1969-71.
Ms. notes for courses of lectures in Oxford 1969-71.
Notes, related offprints and research material,
including copy of earlier publication by CAC.
R.S. 315
- B.11.9. 'Hellmann-Feynman Theorem'. 1961-72
Several sets of notes and lectures on the subject,
including courses at Oxford 1961, 1964, 1972.
- B.11.10. Extensive notes and drafts for courses of lectures
at Oxford on large molecules, various dates 1965-67,
but also includes notes for earlier course on 'Small
molecules', 1958, and correspondence 1963.
- B.11.11. Notes for lectures on 'Heat', pages numbered
H.1-H.8, originally given at Dundee and kept with
B.11.4. above.
- B.11.12. Notes for lectures on 'Differential Equations', pages
numbered DE1-DE26, originally given at Dundee and
kept with B.11.4. above, with additional material used
for courses of lectures on Differential Equations at
Oxford, 1964-66.

BOX B.12 SCIENTIFIC LECTURES AND PUBLICATIONS 7 folders

B.12.1.-B.12.5. 'Non-Valence Interactions'. 1967-70

Series of lectures delivered at Polytechnic
Institute of Brooklyn, New York, March-April 1968.

5 folders of notes, correspondence and research
material for uncompleted book based on the lectures.

B.12.1. Ms. drafts for lectures.

B.12.2. Correspondence, ms. notes and references assembled
by CAC for proposed book.

B.12.3. Notes and material for Chapter 2 of book.

B.12.4. Notes and material for Chapters 3 and 4 of book.

B.12.5. Notes and material for Chapter 5 of book.

(see also A.10.6.)

B.12.6. 'Variation method'. 1957-71

Lecture given internationally (index of places and
dates inside front cover).

Notes, correspondence.

R.S. 243, 261

B.12.7. 'Present tendencies in the theory of large molecules'. 1953

Ms. notes and drafts for lecture delivered in
Rochester, New York.

R.S. 160

<u>BOX B.13</u>	<u>NOTES TAKEN BY CAC ON LECTURES OR PUBLICATIONS BY OTHERS</u>	<u>8 folders</u>
B.13.1.	'Lattice vibrations'. Series of 5 lectures by <u>D.F. Hornig</u> .	n.d.
B.13.2.	'Vector model and atoms and molecules'. Lecture by <u>W.G. Penney</u> , 28 February 1936.	1936
B.13.3.	'Neutron diffraction by crystals'. Lectures by <u>K. Lonsdale</u> , April-May 1949. CAC's notes on the lectures, printed material distributed to audience.	1949
B.13.4.	'Imperfections in crystalline solids'. Series of 8 lectures by <u>A.B. Lidiard</u> , Oxford, 1955. CAC's notes on the lectures, printed material distributed to audience.	1955
B.13.5.	'He and H of atoms'. Series of 7 lectures by <u>E.C. Titchmarsh</u> .	n.d.
B.13.6.	One folder of notes taken by CAC at departmental colloquia or summer schools where papers were given by outside speakers or by his own students. The notes are dated and are arranged alphabetically by name of speaker. (see also H.1.1. and H.1.2., programmes for departmental colloquia)	1947-69
B.13.7.	2 envelopes of miscellaneous notes found inside CAC's books. Includes some minor correspondence, which is not indexed.	
B.13.8.	Notes on lectures by <u>H. Jeffreys</u> : 'Statics and particle dynamics', Michaelmas Term 1928 'Rigid dynamics (i)', Lent Term 1929 'Dynamics (ii)', Easter Term 1929.	1928-29

Box B.13 continued

BOX B.13

continued

See also:

A.13.13. Notes on lectures by G.F.J. Temple. 1965

A.19.8. A folder of correspondence re CAC's donation to Cambridge University Library of his notes taken at lectures during his studies and early career there. These include notes on lectures by:

Rutherford

J.E. Lennard-Jones

J. J. Thomson

H. Jeffreys

A. Eddington

P.M.S. Blackett

J.D. Cockcroft

S. Chandrasekhar

R.H. Fowler

A.S. Besicovitch

B.11.2. Typescript of J.E. Lennard-Jones's lecture schedule. n.d.

B.25.1. Notes on lectures by J.E. Lennard-Jones on molecular orbitals. 1934

B.28.2. Notes on lectures and articles by R.A. Millikan, G.I. Taylor, T.E. Stanton, H. Jeffreys, Scott. 1931

B.40.15. Notes on lectures by P.O. Löwdin, J. Dunitz, E. Kapuy and others.

BOX B.14

BAND STRUCTURE OF COMPOUND SEMI-
CONDUCTORS 1957-66

4 folders

This work was undertaken as a Research Contract with the Admiralty Department of Research Programmes and Planning for the study of electronic structure of compound semi-conductors of the zinc blend type.

Copies of the progress reports on the project, nos. 1-7, are included with the folders.

- B.14.1. Ms. notes by CAC, including ms. draft for paper on 'Tetrahedral metallic compounds', written on verso of ms. draft of his Tawney Memorial Lecture on 'Responsibility'.
- B.14.2. Ms. drafts by CAC's collaborators, G. Doggett, D. Stocker and L.B. Rèdei for published reports on the project.
- B.14.3.-
B.14.4. Correspondence with Admiralty, Oxford University and collaborators re establishment of contract, proposals for research, administration of grant, equipment, publication of results, etc.
- B.14.3. 1957-60
- B.14.4. 1960-66
- R.S. 287

BOX B.15

IDEAS FOR RESEARCH

1955-73

One box of notes found in CAC's office at the Theoretical Chemistry Department. Some of the notes are unidentified and undated, but most bear headings by CAC; many are accompanied by the relevant offprints or articles or by correspondence (which is indexed).

In addition to notes on the literature, there are notes of problems or ideas for future research as suggested to CAC by colleagues' lectures or publications, by conversation or by correspondence. Some of the notes are very brief, but some extend to 4-5 numbered pages, perhaps intended for an informal discussion paper.

Similar notes are also to be found in the correspondence folders (Sections C and G) with a heading 'Problem for ...' when CAC suggested research topics for students. Many of the notes are written on the back of correspondence, examination scripts, etc. The type of information and the technique are similar to CAC's 'Problem Book' which he kept during his early career (Item H.1.5.).

(see also B.33.1., B.35.15., B.39.2.)

BOX B.16	SCIENTIFIC LECTURES, PUBLICATIONS	5 folders
B.16.1.- B.16.3.	<p data-bbox="451 338 1074 383">'The problems of higher education in Africa'. A lecture delivered in London to the Royal African Society on 17 March 1971. An abridged version was published in <u>African Affairs</u>. See also A.10.3. and A.10.4., 2 folders of correspondence and other material relative to CAC's visit to the University of East Africa in 1968-69 as a Royal Society Leverhulme Visiting Professor, which formed the basis of this talk. <u>R.S. 407, 417</u></p>	1968-71
	<p data-bbox="451 748 1209 898">B.16.1. Notes on the literature, outline of lecture, ms. and typescript drafts, offprint, and supplementary material used in the preparation of the lecture.</p>	
	<p data-bbox="451 934 1209 1122">B.16.2. Correspondence with the Royal African Society re scheduling of lecture and with professional colleagues interested in the problems of science education in developing countries.</p>	
	<p data-bbox="451 1158 1209 1272">B.16.3. One folder of numerous reports, newsletters and printed material on East Africa, especially with reference to education and science.</p>	
B.16.4.- B.16.5.	<p data-bbox="451 1339 1029 1384">'Theoretical chemistry - past and future'. Inaugural Lecture, Chair of Theoretical Chemistry, University of Oxford, delivered 13 February 1973. <u>R.S. 443</u> (see also A.14.14., A.14.15.)</p>	1973
	<p data-bbox="451 1621 1329 1771">B.16.4. Arrangements for lecture, guest-lists and correspondence. Editor's notes for published text, slides, etc. Author's (incomplete) ms. and typescript.</p> <p data-bbox="609 1787 1329 1944">CAC died before completing the preparation for publication of the text of his Inaugural Lecture. The editorial task was discharged by Dr. Simon Altmann and Miss Rosemary Schwerdt.</p>	
	<p data-bbox="451 1980 1163 2018">B.16.5. Background notes and research material.</p>	

<u>BOX B.17</u>	<u>SCIENTIFIC WORKING PAPERS, TALKS, PUBLICATIONS</u>	<u>10 folders</u>
B.17.1.	'Interstitials in graphites'. Extensive correspondence with colleagues and with publishers re CAC's paper and its findings. Notes, charts and diagrams, related offprints by CAC and others. <u>R.S. 339</u>	1963-67
B.17.2.	'Symmetry in Chemistry'. Proposed article to be written by CAC for <u>Chemie in unserer Zeit</u> . Correspondence with editors, CAC's notes, background material. (CAC died before the article could be written.)	1970-74
B.17.3.	'Hyperconjugation'. Proposed article for <u>Chemical Society Reviews</u> , to be written in collaboration with J.P. Colpa. Correspondence with editors, and with collaborator. CAC's notes on the literature, and outline for article (dated 1967), miscellaneous background material. (CAC died before the article could be completed as planned.)	1967-74
B.17.4.	'Wave mechanics and the alkene bond'. Introductory chapter written in collaboration with E.T. Stewart for book <u>The chemistry of the alkenes</u> , edited by S. Patai. Correspondence with editor and publisher. Plan of the book. (see also G.16.4.- G.16.6. for CAC's correspondence with Stewart) Folder includes correspondence with Interscience Publishers re a proposed monograph 'Recent developments in Valency Theory' to be written by CAC and Stewart in collaboration. <u>R.S. 321</u>	1962-65

BOX B.17

continued

- B.17.5. 'The meaning of resonance in quantum chemistry'. 1945-46
Ms. and typescript draft for paper, ms. drawings,
editorial correspondence.
R.S. 48
- B.17.6. 'Les liaisons localisées et non-localisées'. 1948
Autograph ms. of 2 lectures written and delivered
in French in Paris.
R.S. 90
(see also A.5.9., B.1.11., B.34.9.)
- B.17.7. 'Note on an integral of A.F. Saturno'. 1968
5 pp. manuscript.
R.S. 373
- B.17.8. 'The dissociative breakdown of negative ions'. 1969
Ms. and typescript notes and drafts.
R.S. 380
- B.17.9. 'The mathematics of quantum chemistry'. 1970
CAC's diagram for paper.
R.S. 397
- B.17.10. 'Mathematics is a "language" of physics'. (c) 1950
Ms. notes for 2 talks with this title.
Notes, quotations, press-cuttings, ms. and printed
background material.

<u>BOX B.18</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>6 folders</u>
B.18.1.- B.18.4.	<u>Valence</u> Oxford University Press (first published 1952).	1947-64
	B.18.1. Outline notes for chapters, correspondence, notes on the literature.	
	B.18.2. Correspondence with publishers and colleagues, notes for later editions and for translations, press-cuttings, working notes.	
	B.18.3. Drawings for book.	
	B.18.4. Correspondence with publishers especially <u>re</u> foreign editions, and with colleagues <u>re</u> possible amendments and new calculations for later editions.	
	<u>R.S. 134</u> (see also A.8.1., B.39.16., G.16.3.)	
B.18.5.- B.18.6.	'Carbon-carbon bonds, being a study of bonds of fractional order'. Thesis submitted for the D.Sc. degree, University of St. Andrews, 1945.	1945
	B.18.5. Ms. of thesis, chapters 1-24.	
	B.18.6. Typescript and drawings, chapters 1-24 (with note by Mrs. Coulson 'typed by CAC himself').	

<u>BOX B.19</u>	<u>SCIENTIFIC WORKING PAPERS, PUBLICATIONS</u>	<u>7 folders</u>
B.19.1.	<u>Waves.</u> Oliver and Boyd (first published in 1941). Typescript of preface and contents page, ms. list of additions and corrections for later editions. Copies of reviews. Galley proofs showing corrections to seventh edition (published 1955). Correspondence with M. Born <u>re</u> error in first edition. <u>R.S. 21</u> (see also B.35.11.)	
B.19.2.	<u>Electricity.</u> Oliver and Boyd (first published in 1948). Heavily amended and annotated galley proofs of first edition. Typescript of additions to second edition. Correspondence with publisher. <u>R.S. 81</u>	
B.19.3.	<u>The Shape and Structure of Molecules,</u> Oxford University Press (published 1973). Correspondence with colleagues and with publisher <u>re</u> CAC's contribution to undergraduate chemistry series. Correspondence <u>re</u> permission for CAC to reproduce diagrams from previously published work by others. Ms. notes and typescript outline of proposed book. Typescript draft of lecture course on 'Electrons in molecules' (probably delivered abroad). Miscellaneous ms. notes. <u>R.S. 422</u>	1971-73
B.19.4.	Discussion on a paper by W.E. Moffitt. 1 p. typescript.	(c) 1948
B.19.5.	Correspondence and papers exchanged with editors at Pergamon Press <u>re</u> numerous publications on which CAC's advice was sought. Titles include <u>Dictionary of Physics</u> , <u>Journal of Atomic and Molecular Physics</u> , <u>International Encyclopaedia of Physical Chemistry and Chemical Physics</u> .	1953-64

BOX B.19

continued

- B.19.6. 'Note on a modified Thomas-Fermi equation for molecules'. (c) 1950
4 pp. typescript.
- B.19.7. 'The long-range distribution around an impurity in a metal'. 1951
Work in collaboration with V.W. Maslen.
2 pp. typescript.

<u>BOX B.20</u>	<u>SCIENTIFIC WORKING PAPERS, LECTURES, PUBLICATIONS</u>	<u>20 items</u>
B.20.1.	<p>'Free valence paper'.</p> <p>Extensive correspondence, May-July 1950, with collaborators, H.C. Longuet-Higgins, and with R. Daudel <u>re</u> paper 'Free-valence in unsaturated hydrocarbons'.</p> <p>Typescript draft by Longuet-Higgins.</p> <p>3 pp. typescript draft by CAC 'Free valence in radical reactions'.</p> <p>Set of ms. notes 'Free valence changes due to resonance'.</p> <p><u>R.S. 113</u></p>	1950
B.20.2.	<p>'Law of alternating polarity'.</p> <p>8 pp. ms. draft 'Some notes on the law of alternating polarity'.</p> <p>Miscellaneous ms. notes.</p> <p>Correspondence, January-December 1957, with B.M. Wepster and S. Basu, on points relating to this subject.</p> <p>7 pp. untitled typescript (differs from the ms. noted above).</p> <p>N.B. This paper is believed to be unpublished.</p>	1957
B.20.3.	<p>'Two notes on the shape of charge clouds near a hydrogen atom'.</p> <p>9 pp. ms. and 9 pp. typescript draft, and some loose papers.</p> <p>Ms. notes.</p> <p>Copies of CAC's letters to W. Cochrane, 1958, <u>re</u> Cochrane's paper at a M.I.T. conference. This paper seems to have been the basis of CAC's own work on the topic. He submitted the above ms. for publication in <u>Acta Crystallographica</u>, but it does not seem to have been published.</p>	1958
B.20.4.	<p>'Calculation of the difference in the energies of the two systems in Hückel's approximation'.</p> <p>Correspondence with collaborator, J. Koutecky, 1965.</p> <p>39 pp. typescript (probably by Koutecky).</p> <p>N.B. The paper was never published.</p>	1963-65

Box B.20 continued

BOX B.20

continued

- B.20.5. 'Correspondence and working papers for possible publication on diamond'. 1964-65
Miscellaneous ms. notes.
Correspondence with others working on the subject.
- B.20.6. 'Halogens'. 1964-66
Notes on the literature.
Miscellaneous ms. notes.
Related offprints.
Correspondence with D. Mayers and L.S. Bartell.
- B.20.7. ' $B_2O_3H_2$ '. 1964-70
Ms. draft (photocopy) of 'Boron-Oxygen bonds, the case of $H_2B_2O_3$ ' sent by CAC to collaborator, J.P.M. Bailey, for comment.
Correspondence with Bailey re joint work.
Correspondence with T.W. Dingle re their earlier collaborative paper 'The B-O bond lengths in boron-oxygen compounds'.
Notes by CAC on work of others, with related correspondence.
R.S. 317, 362, 383, 398.
- B.20.8. 'Localised benzene regions in condensed aromatics'. 1967
Notes on the literature.
'Double-bond character', ms. draft.
- B.20.9. 'History of Theoretical Chemistry'. 1971
Closing speech by CAC at Fourth Canadian Symposium on Theoretical Chemistry, University of British Columbia, August 1971.
16 pp. ms. and 12 pp. typescript.
Miscellaneous ms. notes collected for speech.
Correspondence re proposal to publish the lecture.

(see also A.10.1.)
Folder also includes typescript of CAC's opening remarks at Summer School on Quantum Chemistry, Yugoslavia, 1967, and related correspondence.
R.S. 360

BOX B.20

continued

- | | | |
|----------|---|---------|
| B.20.10. | 'Problems with the helicenes'.
Carbons of 2 of CAC's letters on the subject.
Ms. notes, related offprint. | 1970-72 |
| B.20.11. | One folder of miscellaneous ms. notes, one labelled
'CAC's policy'. | n.d. |
| B.20.12. | 'The electronic structure of molecules from the
standpoint of the theory of molecular orbitals'.

Thesis submitted for the Fellowship examination
at Trinity College, Cambridge.

CAC was elected to this Prize Fellowship (his thesis
was examined by G.H. Hardy) at the same time as
Douglas Lea (see p.78 of the Royal Society <u>Memoir</u>).
CAC typed the thesis himself with numerous figures
and charts in his own hand. It was never published.

Several loose sheets have been inserted in the front
of the bound volume. These include an introductory
note to accompany the thesis on its submission to
Trinity, a list of references titled 'Electronic structure
of polyatomic molecules and valence', notes on a
paper published in <u>Modern Chemistry</u> by Linus Pauling
in 1938, and one letter (1964) loaning the thesis to a
colleague. | 1934 |

<u>BOX B.21</u>	<u>SCIENTIFIC PUBLICATIONS</u>	<u>6 folders</u>
B.21.1.	'Molecular Theory'. Article written by CAC for <u>Encyclopaedia Americana</u> . Ms. of article and figures. Editorial correspondence. The article, described by the editor as 'much admired in this office for its lucid presentation of a highly technical subject', is not listed in the R.S. <u>Memoir</u> .	1953-55
B.21.2.- B.21.3.	'Sigma bonding' and 'Pi bonding'. Chapters for <u>Physical Chemistry</u> , Vol.5: Valency (ed. H. Eyring <u>et al</u>). Working notes and papers, ms. and typescript drafts and figures. Editorial correspondence. Note: CAC's 'Chapter 4' (on sigma Bonds) became Chapter 5, and his 'Chapter 6' (on pi-Bonds) became Chapter 7, in the published work. <u>R.S. 392, 393</u> (see also B.24.3.)	1969-70
B.21.4.	'Shapes of Group IIA Dihalide Molecules'. Ms., working notes, brief editorial correspondence. <u>R.S. 431</u>	1973
B.21.5.	'Crystal growth and orientational disorder in bromoform'. Corrected typescript and figures for published paper. <u>R.S. 434</u>	1974
B.21.6.	'The Fermi hole in atoms'. Work in collaboration with Russell Boyd. First typescript version prepared by Boyd, and second ms. version by CAC. Correspondence with collaborator, continued after CAC's death with Miss R. Schwerdt. <u>R.S. 442</u>	1972-74

BOX B.22

DICTIONARY OF VALUES OF MOLECULAR
CONSTANTS

11 folders

The Dictionary was prepared in collaboration with R. Daudel and first printed in a cyclostyled version jointly by the Mathematical Institute, Oxford, and the Centre de Mécanique Ondulatoire Appliquée, Paris, in 1954. The calculations and data, however, often date from an earlier period of CAC's work. Some of the calculations in these folders were made by members of CAC's research group.

- B.22.1. Early calculations and working papers (beginning in 1937).
- B.22.2. 'Dihydroanthracene'.
Working papers and calculations.
- B.22.3. 'Polyacenes'.
Working papers and calculations.
- B.22.4. 'Polyphenyls'.
Calculations (with index).
- B.22.5. 'Structure of "diphenylene"'
Calculations, working papers, typescript draft of letter to Nature (1942).
R.S. 32
- B.22.6. 'Free valence in triphenylmethyls'.
Calculations, working papers, correspondence with collaborator J. Jacobs re paper of same title.
R.S. 60
(see also B.35.24. and C.10.12.)
- B.22.7. 'Graphite problems'.
Calculations and working papers, correspondence with collaborators, G.S. Rushbrooke and M. Bradburn.
- B.22.8. 'Graphite problems' (continued).
Typescript of paper of the same title and of paper 'Graphite crystals and crystallites', working papers.
R.S. 70, 71
(see also B.36.5.)

BOX B.22

continued

B.22.9.

'Butadiene'.

Calculations by CAC and J. Jacobs.

R.S. 105

B.22.10.

Bound notebook of work by CAC and others on
tables of integers.

B.22.11.

Set of calculations and work on integral tables
by one of CAC's research students.

BOX B.23

DICTIONARY OF VALUES OF MOLECULAR
CONSTANTS (continued)

7 folders

B.23.1.-
B.23.6.

Correspondence, ms. notes and corrected typescripts of the Introduction and Values for Volumes I-IV of the Dictionary.

B.23.1. Miscellaneous correspondence, calculations and related papers.

B.23.2. Introductions for Volumes I and II. 1948
Correspondence, ms., typescript, working papers.

B.23.3. Values for Volume I.
Correspondence, working papers, calculations, charts.

B.23.4. Values for Volume II.
Correspondence, calculations.

B.23.5. Introductions and Values for Volumes III and IV.
Correspondence, comments and evaluations from colleagues after distribution of Volume I, ms., typescript, working notes, calculations.

B.23.6. Values for Volume III.
Calculations, typescript of introduction to section.

B.23.7. Folder of correspondence, typescripts and papers re 1961-67
publication of the Dictionary by Pergamon Press
with the title Dictionary of π -electron Calculations.

CAC collaborated with A. Streitweiser on this publication.

The folder includes correspondence re grant from I.C.I. towards preparation of the Dictionary.

R.S. 327

<u>BOX B.24</u>	<u>SCIENTIFIC LECTURES</u>	<u>8 folders</u>
B.24.1.- B.24.2.	2 folders containing CAC's mss. of Summer School lecture notes. Includes: 'What is atomic theory?' 'Atomic units' 'Hydrogen atoms' 'Variation theory' 'Koopmans' theorem' 'Self-consistent fields' 'Dirac scheme' 'Excitons' 'History of Oxford' 'Effect of magnetic field on a molecule' (B.24.2. includes programmes and lists of members for the 1960-62 Summer Schools)	1954-73
B.24.3.	'Hückel theory of organic chemistry'. Ms. notes for CAC's course of lectures to second year chemists, and related correspondence. Folder includes ms. of chapter on π -bonds, published in H. Eyring's series on <u>Physical Chemistry</u> . <u>R.S. 393</u> (see also B.21.2.-B.21.3., Box B.43.)	1967-73
B.24.4.	'Problems in wave mechanics and quantum theory'. Ms. notes for course of lectures, and problems sheets for distribution to students.	1964-73
B.24.5.	Ms. notes for course of lectures on mathematics for chemists, and related correspondence.	1973
B.24.6.- B.24.8.	Ms. lecture notes for a one-year course in Wave Mechanics for M.Sc. students, Oxford.	1965-74
B.24.6.	'The hydrogen atom'	
B.24.7.	'The helium atom'	
B.24.8.	'The hydrogen molecule' (includes a set of notes taken by Elizabeth Colbourn, a student attending the course in 1973).	

<u>BOX B.25</u>	<u>SCIENTIFIC LECTURES, EXAMINING, PUBLICATIONS</u>	<u>9 folders</u>
B.25.1.	'Recent Developments in the Theory of the Wave Equations'. Extensive ms. notes for a course of 9 lectures given at King's College, London. Includes CAC's notes taken at lectures by Lennard-Jones on 'Molecular orbitals', February 1934.	1949
B.25.2.	'Introduction to Wave Mechanics'. Extensive ms. notes for courses of lectures, begun at King's College, London, and continued at Oxford, with regular up-dating and additional material by CAC. CAC's indexes of the lectures, and notes on changes to be made, are included.	1952-69
B.25.3.	'Quantum Mechanics'. Ms. notes for an extended course of lectures. The earliest drafts (for 30 lectures) are dated 1947; the index inside the front cover of the folder refers to a course of 32 lectures at Oxford 1955-56, and there are many additional pages of new material intercalated.	1947, 1955-56
B.25.4.- B.25.5.	Examination problems in Wave Mechanics and Quantum Theory.	1963-71
B.25.6.	'Lectures on Atomic Structure'. Course of 8 lectures given at Oxford. 31 pp. ms. text of lectures; miscellaneous sets of ms. notes and problems. Brief editorial correspondence and corrected typescript of paper, 1969. <u>R.S. 390</u>	1970-72
B.25.7.	'Why atoms combine'. Talk given on Granada TV 'Discovery' series. Correspondence, script of talk with ms. corrections by CAC. Miscellaneous brochures <u>re</u> series and participants.	1962

BOX B.25

continued

- | | | |
|---------|--|---------|
| B.25.8. | Miscellaneous notes, drafts, problems and correspondence re mid-sessional examinations in physics, King's College, London. | 1950-52 |
| B.25.9. | Brief correspondence re external examinations at University of Edinburgh. | 1953 |

<u>BOX B.26</u>	<u>SCIENTIFIC LECTURES AND PUBLICATIONS</u>	<u>10 folders</u>
B.26.1.	'Dynamics'. Ms. notes.	1952-54
B.26.2.	'Vectors'. Ms. notes.	1958-68
B.26.3.	'Vector operators'. Ms. notes.	1960-65
B.26.4.	'Gravitation'. Ms. notes.	1966-68
B.26.5.	'Rigid bodies'. Ms. notes.	1970
B.26.6.	'Mechanics'. Ms. notes.	1971
B.26.7.	'Vector analyses'. Ms. notes.	1965
B.26.8.	'Electricity'. Ms. notes.	1970
B.26.9.	Examination papers related to some of the above lectures.	1967, 1968
B.26.10.	Miscellaneous correspondence, recollections and material related to Memoir by CAC of <u>Samuel Francis Boys</u> for the Royal Society. <u>R.S. 429</u> (see also C.24.2., E.8.1., G.16.5.)	1972-75

<u>BOX B.27</u>	<u>SCIENTIFIC RESEARCH, PUBLICATIONS AND PROJECTS</u>	<u>7 folders</u>
B.27.1.	'A short historical survey of the discovery and manipulation of the knowledge gained from soap-bubbles and their allied forms of plane-films and capillarity'. An essay submitted for the Grenfell Essay Prize, Cambridge. 36 pp. manuscript.	1929
B.27.2.	'Gyroscopes'. An essay submitted for the Yeats Mathematics Prize, Trinity College, Cambridge. 88 pp. ms. and 3 pp. references. (see also B.4.10.)	1930
B.27.3.	Work on curve tracing. Extensive notes, class exercises, diagrams.	(c) 1929
B.27.4.	'Problems in molecular structure'. 92 pp. ms., bound up by CAC and dated 27.2.33, with a 2 pp. statement of problems to be solved, in the hand of J.E. Lennard-Jones.	1933
B.27.5.	Folder of material for a proposed book for 6th-formers, on the relations between science and religion, in the 'Gateway' series. The project was not completed. The material includes correspondence, notes, press-cuttings, questions for discussion and CAC's answers (at various conferences, discussion groups, etc.) and typescripts of various talks and broadcasts given by CAC, not all of which are listed in the R.S. <u>Memoir</u> . Various dates 1952-66 <u>R.S. 191, 219</u>	1952-66
B.27.6.- B.27.7.	'Wave mechanical theory of conjugated systems' (later 'molecules'). A proposed book, to be written in collaboration with H.C. Longuet-Higgins. B.27.6. Ms. drafts, working papers and correspondence. B.27.7. Plan of the book (9 chapters), ms. of extended version (13 chapters), and a letter <u>re</u> publication, 1974.	1951-55

<u>BOX B.28</u>	<u>EARLY RESEARCH NOTES AND PUBLICATIONS</u>	<u>13 folders</u>
B.28.1.	'First bit of research. 1927'. 3 pp. manuscript.	1927
B.28.2.	Notes by CAC on articles and/or lectures by R.A. Millikan, G.I. Taylor, H. Jeffreys, T.E. Stanton and ___ Scott.	1931
B.28.3.	'Miscellaneous early research'. Letter to R.H. Fowler, 13 March 1934, enclosing 10 pp. typescript 'Report on work done and doing since June 1933'. 'Molecular structure', 27 pp., 10 March 1933. 'On separability of wave - eq. in 1 dim. with interaction for 2 electrons', 4 pp., 31 May 1933. 'The problem of an electron in an ellipse of constant potential', 12 pp., 1 June 1933. 'Bessel Functions. Addition theorems', 27 pp. and some loose papers, June 1933. 'Two electrons with interaction in harmonic oscillator', 12 pp., 24 May 1934. 'N.I.', 4 pp., n.d. 'Exponential integral', 10 pp. and some loose papers. Numerous shorter sets of ms. notes, most labelled by CAC.	1933-34
B.28.4.	'Rochelle Salt'. Mostly notes on the literature, on colloquia talks by others or on conversations.	1932
B.28.5.	'Rotating dipoles and Rochelle salt'. Folder of ms. notes and drafts, index inside front cover. Labelled with titles and 'Opus nos.' by CAC, written November 1932 and bound up October 1933.	1932
B.28.6.	'The problems of Rochelle salt. Dielectric constant and other anomalies'. 54 pp. typescript, perhaps for paper (not published).	1932

BOX B.28

continued

- | | | |
|----------|---|------|
| B.28.7. | 'Molecular structure. Methods'. | 1933 |
| | Folder of ms. notes and drafts, index inside front cover. | |
| | Section B is carbon of a 7 pp. letter to J.E. Lennard-Jones, May 1933, 'Problems in Molecular Physics'. | |
| B.28.8. | 'Interaction Problems'. | 1933 |
| | Ms. notes, July 1933, bound up October 1933. | |
| B.28.9. | 'Interlacing spheres and cylinders'. | 1933 |
| | Extensive ms. notes, calculations and diagrams, bound up October 1933. | |
| B.28.10. | '3 atoms on a circle'. | 1933 |
| | Ms. notes, dated by CAC 'mainly September 1933'. | |
| B.28.11. | 'Problems of 2 parabolas' (unfinished) and 'Hermite polynomials'. | 1933 |
| | Ms. notes, 33 pp. and 6 pp. | |
| B.28.12. | 'Circular ideas October 1933'. | 1933 |
| | 19 pp. ms. notes. | |
| B.28.13. | 'Triatomics: linear-isosceles-equilateral'. | 1933 |
| | Miscellaneous ms. notes and drafts. | |
| | Includes introductory notes by J.E. Lennard-Jones. | |
| | <u>R.S. 2</u> | |

<u>BOX B.29</u>	<u>EARLY SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>10 folders</u>
B.29.1.	Extensive miscellaneous early calculations on wave functions, and 2s and 2p screening, concerning methane and neon, small and large separations. This is a bulky folder incorporating several folders of notes, some labelled and described by CAC, and some loose papers.	1933-36
B.29.2.	Extensive working papers and correspondence on H_3 , H_3^+ and H_3^{++} . Includes letters to H.M. James and G.S. Gordadse <u>re</u> mistake in <u>R.S. 8</u> , February 1938. <u>R.S. 2, 8</u>	1934-38
B.29.3.	'Vibrational states of methane'. Ms. notes.	(c) 1934
B.29.4.	'Stark effect'. 14 pp. ms. notes.	(c) 1933-34
B.29.5.	'Hydrogen bond?'. 4 pp. ms. notes.	(c) 1934
B.29.6.	'W.K.B. method'. Miscellaneous ms. notes. The folder includes a ms. 'poem' by CAC in the style of 'Hiawatha', thanking a friend for a sponge-cake.	1934
B.29.7.	'Comparison of Heitler-London, molecular orbital, and true wave-functions and energies'. Ms. notes and diagrams.	(c) 1934
B.29.8.	'Excited H_2 '. 7 pp. ms. notes.	1934
B.29.9.	'Hydro'. Notes and references on water flow.	1934
B.29.10.	'Exponential integrals'. Work in collaboration with W.E. Duncanson. Correspondence and working papers.	1934, 1942

<u>BOX B.30</u>	<u>EARLY SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>15 folders</u>
B.30.1.	'Numerical values of integrals'. 4 sets of ms. notes.	(c) 1935
B.30.2.	'Self-consistent field method for molecular hydrogen'. Multiple drafts (numbered 0-10 by CAC) and calculations. Includes a note by CAC 'Subsidiary calculation to help Mulliken. See correspondence Feb. 1948'. <u>R.S. 11</u>	1934-38
B.30.3.	'Lengthy calculations of beastly integrals'. Extensive notes and calculations. Includes, in separate binder, CAC's ms. 'Formulae for beastly integrals'. These notes relate to the work in collaboration with W.E. Duncanson.	(c) 1935
B.30.4.	'Kekulé patterns for finding bond orders - Fries rule - unexcited states only'. Ms. notes 18 pp. + 1 p.	1935
B.30.5.	Short note on exchange integrals.	n.d.
B.30.6.	'Maths Club'. Ms. notes for a talk to be given in collaboration with D.E. Lea, in CAC's and Lea's hands.	1934
B.30.7.	'Radiation calculations'. Work in collaboration with D.E. Lea. Correspondence and working papers. <u>R.S. 3</u>	1935
B.30.8.	'Helices'. Correspondence with G.F.C. Searle.	1935
B.30.9.	'Polarisability of H_2^+ and H_2 molecules'. 5 sets of ms. notes on the subject.	1935-40

BOX B.30

continued

- B.30.10. Thesis submitted for Ph.D., Cambridge. 1936
Plan of Thesis, chapters 1 and 2 only, autograph manuscript.
(see also A.3.3.)
- B.30.11. 'Some thoughts on H_3 Linear'. (c) 1936
4 pp. ms. notes.
- B.30.12. 'Screening constants H_2^+ and H_2' '. 1936-37
8 sets of ms. notes and drafts.
R.S. 8
- B.30.13. 'Diatomics Z_0 , Z_1' '. 1937-38
88 pp. ms. notes and drafts, and some loose pages.
- B.30.14. Early work on the Aromatic Molecules. 1936-37
10 sets of ms. notes and drafts.
The folder carries a note by R.B. Mallion dated 1975, on the historical interest and seminal ideas of these notes and papers.
R.S. 9
- B.30.15. Notes and calculations on cyclic polyenes. (c) 1936
7 sets of ms. notes and drafts.

<u>BOX B.31</u>	<u>EARLY SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>14 folders</u>
B.31.1.	'Benzene'. Work in collaboration with J.E. Lennard-Jones. Correspondence and working papers. The folder carries a note by R.B. Mallion about the content and interest of the material.	1937-46
B.31.2.	Miscellaneous ms. notes and graphs on bond-order and length.	1938-39
B.31.3.	Work 'to be done'. 3 pp. ms. notes.	n.d.
B.31.4.	2 sets of ms. notes, on the physical and biological properties of conjugated hydrocarbons, and on 'Evaluation of A_n for large n'.	(c) 1938
B.31.5.	'Wheland method for graphite'. Extensive ms. notes. Includes correspondence with G.W. Wheland, 1937, 1941, and typescript plans and drafts for two papers with the title 'The Electronic structure of graphite I and II' by CAC and J.E. Lennard-Jones. Publication of these collaborative papers was interrupted by the outbreak of war, and CAC reworked the material for later publication, in collaboration with M. Bradburn and G.S. Rushbrooke, in 1948. <u>R.S. 70, 71</u> (see also B.32.8., B.33.2.)	1937-41
B.31.6.	'Various thoughts on resonance'. Miscellaneous ms. notes.	1936-37
B.31.7.	'Notes on the doubly excited H_e atom'. 5 pp. ms. notes.	n.d.
B.31.8.	' π Electron M.O. results on chains and rings'. Working papers. Letter from J.E. Lennard-Jones.	1937
B.31.9.	'Oscillating Rotator'. 2 sets of ms. notes.	n.d.

BOX B.31

continued

- | | | |
|----------|---|----------|
| B.31.10. | 'Calculations of 3-centre integrals - numerical'.
Notebook of calculations. | (c) 1936 |
| B.31.11. | 'Bad triatomic integrals'.
Miscellaneous ms. notes. | n.d. |
| B.31.12. | 'Group theory CH ₄ etc.'
Miscellaneous ms. notes. | n.d. |
| B.31.13. | 'General theory of diatomic molecules'.
Miscellaneous ms. notes. | n.d. |
| B.31.14. | 'Electron Density. H ₂ ⁺ . Numerical'.
Extensive notes, graphs and calculations. | n.d. |

<u>BOX B.32</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>8 folders</u>
B.32.1.	'Bond orders of links in free radical chains'. Miscellaneous sets of ms. notes, paginated and titled by CAC. <u>R.S. 14</u>	1938-39
B.32.2.	'Slater's method for graphite and tight binding'. Miscellaneous ms. notes.	1936-38
B.32.3.	'Dipole moments'. Miscellaneous ms. notes.	1936-37
B.32.4- B.32.6.	'Comparison of wave functions for HeH^{++} and HeH^+ '. Work in collaboration with W.E. Duncanson for paper published in <u>Proc. R.S. Lond.</u> <u>R.S. 10</u>	1935-37
B.32.4.	This folder consists of an extended exchange of letters, in which ideas are developed, calculations undertaken and checked and the finished work prepared for publication. Meetings and some personal matters are discussed, and CAC's last letter in the folder (December 1937) refers to the religious group at Leeds in the care of Miss Eileen Burrett and adds: 'You'll meet the fair Eileen and you shall tell me if you like her as well as I do! But you'd better not!'	
B.32.5.	Correspondence with W.E. Duncanson, May-June 1938. Extensive ms. calculations for HeH^+ , pages numbered 300-621.	
B.32.6.	Further calculations for paper.	
B.32.7.	'Structure of graphite - review of existing situation'. Folder of notes, carefully indexed by CAC. (see also B.33.2.)	(c) 1938

BOX B. 32

continued

B.32.8.

'Self-consistent field for trigonal carbon in graphite'.

1938

Work in collaboration with J.E. Lennard-Jones.

Reports and letter for Lennard-Jones.

Working papers.

(see also B.31.5., B.33.2.)

<u>BOX B.33</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>19 folders</u>
B.33.1.	'Problems on hand'. Extensive folder of notes (many only 1 or 2 pages long) on problems and questions for research. (see also B.15, B.35.15, H.1.5.)	1936-48
B.33.2.	'Graphite: tight binding and loose binding'. Several sets of ms. notes. Includes letter to J.E. Lennard-Jones <u>re</u> publications on graphite, 3 July 1939. (see also B.31.5., B.32.8.)	1939
B.33.3.	'Classical lengths of links in aromatics'. Several sets of ms. working notes, with later amendments and annotations. Draft of paper 'The lengths of the links of unsaturated hydrocarbon molecules' sent to <u>Journal of Chemical Physics</u> ; it was returned with referee's comments. CAC re-wrote the paper and re-submitted. <u>R.S. 14</u> N.B. R.B. Mallion notes (1975) that this folder is of special interest.	1939
B.33.4.	'The Electronic structure of some polyenes and aromatic molecules'. Miscellaneous ms. notes, diagrams and drafts, including 'first rough draft' July 1938, and 'Revision of July 1939'. N.B. R.B. Mallion notes (1975) 'Some of the material in this apparently unpublished paper appears in paper no.14'. <u>R.S. 14</u>	1938-39
B.33.5.	'Unsaturated hydrocarbons'. Contribution to London Mathematical Society discussion, January 1939. See correspondence with W.G. Penney in B.33.7. below. 12 pp. typescript.	1939
B.33.6.	'Polarisation problems'. Ms. notes, 4 pp. and 3 pp.	(c) 1939

BOX B.33

continued

- B.33.7. Correspondence with W.G. Penney, May 1938-1938-39
February 1939 re calculation of bond orders.
Includes reference to London Mathematical Society
discussion, January 1939, at which Penney read
CAC's paper.
- B.33.8. 'Liquid sodium'. 1939
Ms. notes and draft.
Correspondence with collaborator G.S. Rushbrooke.
R.S. 15
- B.33.9. 'Note on method of molecular orbitals'. 1939
Work in collaboration with G.S. Rushbrooke.
5 pp. and 4 pp. ms. notes.
(described as 'a classic and still much-cited paper')
R.S. 18
- B.33.10. 'Notes on the calculation of the energy of unsatu- 1939
rated hydrocarbon molecules'.
13 pp. ms. draft.
R.S. 19
- B.33.11. 'Van der Waals force between H^+ and H '. 1940-41
Ms. drafts, 52 pp. and 3 pp.
R.S. 22
- B.33.12. 'Momentum in single bonds'. 1938-40
Ms. drafts, 20 pp. and 9 pp.
R.S. 23
- B.33.13. 'Anhamonic linear oscillator vibrations'. 1940
Ms. draft, 11 pp.
- B.33.14. 'Bristol Conference'. 1946
Notes of papers by M. Polanyi, J.E. Lennard-Jones,
Daudel, Gergole and others given at conference.
- B.33.15. Working papers on specific heat of mercury at 1940
constant volume.
Includes calculations by student at Dundee.

BOX B.33

continued

- B.33.16. 'Momentum in σ -p bonds'. 1940
Correspondence exchanged with collaborator,
W.E. Duncanson, July-October 1940.
Detailed comments on progress of work with some
discussion of personal matters, including CAC's
appearance before Conscientious Objectors Tribunal.
R.S. 24
- B.33.17. 'Momentum of mobile electrons'. 1939-40
19 pp. ms. draft 'Momentum of molecular orbitals'.
17 pp. ms. draft 'Case of Butadiene'.
10 pp. ms. draft 'Ethylene'.
6 pp. ms. draft 'Application to benzene'.
Letter from collaborator, W.E. Duncanson, November
1940.
R.S. 25
- B.33.18. 'Momentum distribution in many-electron systems'. 1940
Miscellaneous ms. notes.
Includes note from 'E.T.C.' (Copson).
- B.33.19. 'Colour of unsaturated compounds'. 1939-41
Miscellaneous ms. drafts and notes.

<u>BOX B.34</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>16 folders</u>
B.34.1.	'Helium'. 5 sets of ms. notes and calculations, separately paginated, and numbered 1-5, and miscellaneous untitled loose pages of notes.	1941
B.34.2.	'Electrolytes'. Work in collaboration with G.S. Rushbrooke; miscellaneous ms. notes, and 3 sets of drafts by collaborator.	(c) 1941
B.34.3.	'Electron velocities in molecular hydrogen H ₂ '. 14 pp. typescript 'Origin of the problem', addressed to (unnamed) collaborator, perhaps W.E. Duncanson. 3 sets of ms. notes, separately paginated and numbered 1-3. Miscellaneous ms. notes and calculations on the subject.	n.d.
B.34.4.	'General momentum theory'. Miscellaneous ms. notes.	n.d.
B.34.5.	'Compton line for CH ₄ , C ₂ H ₆ , C ₂ H ₄ , C ₂ H ₂ '. CAC's copies of 4 letters to W.E. Duncanson on subject, April 1941. <u>R.S. 27</u>	1941
B.34.6.	'CH ₄ various attempts and approximations' (continuation of above). Miscellaneous ms. notes and calculations, 30 pp., 11 pp. and shorter notes. CAC's copies of 3 letters to W.E. Duncanson, June 1941. <u>R.S. 27</u>	1941
B.34.7.	'Diamagnetism of Methane'. Ms. notes and drafts. Includes letter from H.S.W. Massey, April 1941. <u>R.S. 29</u>	1941

BOX B.34

continued

- B.34.8. 'Approximate molecular orbitals for 2 centres'.
Miscellaneous ms. notes variously dated 1941, 1947.
- B.34.9. 'On the relation between localised and non-localised molecular orbitals'. 1941-42
2 copies of 13 pp. typescript, with above title, submitted for publication to Royal Society of Edinburgh July 1942.
2 letters from Max Born, with criticisms of the paper, 1942.
Miscellaneous ms. notes and diagrams, 1941-42.
CAC withdrew the paper, on Born's advice, but gave a paper in French with similar title in Paris in 1948.
R.S. 90
(see also B.1.11., B.17.6.)
- B.34.10. 'Dipole moment of CH bond'. 1940-42
4 sets of extensive ms. notes and drafts.
Correspondence re publication and referees' reports, 1942.
R.S. 31
- B.34.11. 'Wave functions of Li_2 and N_2 '. 1941-42
Work in collaboration with W.E. Duncanson.
4 sets of ms. notes and drafts.
Correspondence with W.E. Duncanson October 1941-April 1942, with detailed discussion of the progress of the work.
R.S. 34
- B.34.12. 'Virial Theorem'. 1943-44
Work in collaboration with R.P. Bell.
4 sets of ms. notes and drafts.
Correspondence with R.P. Bell, June 1943-July 1944, with detailed discussion of the progress of the work.
R.S. 37
- B.34.13. 'Inorganic benzene $\text{B}_3\text{N}_3\text{H}_6$ '. n.d.
9 pp. ms. draft and miscellaneous ms. notes.

- B.34.14. 'Dipole movement of C-C bonds'. 1944
Miscellaneous ms. notes, some dated 1944.
- B.34.15. 6 sets of ms. notes and drafts on mathematical problems, probably preliminary work for paper on 'Some difficulties in teaching the D method in linear differential equations'. n.d.
R.S. 38
- B.34.16. 'Momentum in atoms'. 1942-44
Work in collaboration with W.E. Duncanson.
5 sets of ms. notes and drafts.
Extensive correspondence with W.E. Duncanson, May 1942-November 1944, with detailed discussion of the progress of the work, and some personal correspondence.
R.S. 39

<u>BOX B.35</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>25 folders</u>
B.35.1.	'Vibrational momenta'. Miscellaneous ms. notes.	n.d.
B.35.2.	'Dynamics Book'. 4 pp. ms. outline plan for book, dated August 1943. Other brief ms. notes. (Work on the book was not completed.)	1943
B.35.3.	'Activated water'. Letter from D.E. Lea on subject, July 1943, and letter from CAC on subject, July 1944.	1943-44
B.35.4.	'Molecular diamagnetism'. 3 sets of ms. notes and drafts, and copy of letter to W.E. Duncanson.	1944
B.35.5.	'Factorising wave equations and other differential equations'. 11 sets of ms. notes and drafts. 2 letters from A. Erdélyi, 1944.	1944
B.35.6.	'Errors in second-order perturbation theory'. 2 sets of ms. notes on subject.	n.d.
B.35.7.	'Energy fluctuations in bonds'. Work in collaboration with G.S. Rushbrooke. 3 sets of ms. notes and drafts. Correspondence with G.S. Rushbrooke, May 1945- March 1947, and with M.S. Bartlett, H.J. Groenewald. Includes corrected proof for published paper. <u>R.S. 40</u>	1945-47
B.35.8.	'Polarisability problems'. 4 pp. typescript 'Object of the work'. 2 sets of ms. notes.	1945

BOX B.35

continued

- B.35.9. 'C₆O₂ Lattice Energy'. 1945-46
Work in collaboration with J. Weiss.
4 sets of ms. notes and drafts, and loose pages of notes.
Correspondence with J. Weiss, October 1945-July 1946, and from 'E.T.C.' (Copson).
- B.35.10. 'Anharmonic oscillator'. 1946
Mainly correspondence with colleagues on the subject.
Includes 4 pp. note by CAC 'On the shape of potential energy curves in large molecules'.
- B.35.11. Correspondence about CAC's book Waves. 1945-46
R.S. 21
(see also B.19.1.)
- B.35.12. 'Co-operative phenomena. Time variations'. 1946
1 p. ms. notes only.
- B.35.13. 'The atomic radius of carbon'. 1946
8 pp. typescript paper contributed by CAC to Conference on Molecular Bonds, Oxford, July 1946.
CAC organised the conference, and the folder includes programme (heavily annotated), list of participants, accounts, etc.
- B.35.14. 'Representation of simple molecules by molecular orbitals'. 1946
31 pp. typescript draft and 4 pp. references.
Correspondence.
The paper was written by invitation for the first (1947) volume of Quarterly Reviews of the Chemical Society.
Folder cover carries a note 'Golden years of M.O. Theory ... Professor Coulson leads in teaching and spreading it'. (Note is by R.B. Gerber.)
R.S. 49

BOX B.35

continued

- B.35.15. 'Suggested researches'. 1946-53
Extensive lists of possible research topics for CAC and research students, various dates 1946-53, some tabulated with the names of those working on them.
The folder cover carried a note 'An amazingly broad list of subjects for his research students. List includes some topics on which Professor Coulson (and his students) made distinguished contributions (conjugated systems, for instance). Many of the subjects were not actually pursued'. (Note is by R.B. Gerber.)
(see also B.15, B.33.1., H.1.5.)
- B.35.16. Miscellaneous short notes and correspondence re 1947
various problems discussed with CAC during his consultancy with I.C.I.
(see also E.3.6.)
- B.35.17. 'On the eigenvalues and determinants of certain 1946-47
matrices'.
Miscellaneous ms. notes.
Correspondence with L. Goddard.
- B.35.18. 'The random-walk problem - Markoff's method'. 1946-47
10 sets of ms. notes and drafts.
4 pp. typescript draft for paper.
R.S. 53
(see B.35.19. below)
- B.35.19. 'Note on the random-walk problem'.
Ms. notes, calculations, notes on the literature, etc. related to above.
R.S. 53
- B.35.20. 'The electronic structure of conjugated systems 1945-47
II Unsaturated hydrocarbons and their hetero-derivatives'.
Work in collaboration with H.C. Longuet-Higgins.
Miscellaneous sets of ms. notes and loose papers.
Diagrams and typescript draft of paper.
Letter from H.C. Longuet-Higgins, 1945.
R.S. 54

- B.35.21. 'Theory of mixing'. 1946
Work in collaboration with J.M. Coulson (twin brother).
2 typescript notes by CAC, 'A theory of mixing' 9 pp., and 'An alternative theory of mixing' 7 pp.
2 sets of ms. notes.
Correspondence with J.M. Coulson January 1946-January 1947.
- B.35.22. 'Chemical reactivity'.
Folder containing several sets of work of different dates and types.
- I Heavily annotated typescript draft of paper with H.C. Longuet-Higgins on 'Recent developments in the theory of conjugated substances', with ms. notes and ms. of a paper in French on similar subject, given by CAC at Institut des Hautes Études, Bruxelles, December 1949, under the title 'Théorie des Réactivités des Molécules conjuguées et Aromatiques'. 1947, 1949
R.S. 55, 111
(see also B.37.8.)
- II 'Some theories in chemical reactivity for π electron systems'. 1962
Proposed article for Quarterly Reviews, to be written in collaboration with Brian C. Webster.
Correspondence with editors, collaborator and colleagues, continuing 1962-65.
Miscellaneous ms. notes by CAC on subject, including notes of talks or lectures by others.
- III 'Wave Mechanics of Chemical Reactions'. 1967
Course of lectures given in Michaelmas Term 1967.
16 pp. ms., with some intercalated pages.
- B.35.23. 'Radial nodes'. 1946
Work in collaboration with W.E. Moffitt.
Ms. notes, typescript draft for paper 'Position of nodes in atomic wave functions'.
Correspondence with W.E. Moffitt, 1946.
R.S. 57

BOX B.35

continued

- B.35.24. 'Free valence in triphenylmethylys'. 1947
Work in collaboration with J. Jacobs.
Miscellaneous ms. notes by CAC and by J. Jacobs.
Correspondence with J. Jacobs, 1947.
R.S. 60
(see also B.22.6.)
- B.35.25. Work on polyphenyls. 1947
Miscellaneous diagrams of molecules, sent by
R. Daudel, and carefully annotated by CAC.
Letter from Daudel 1947 proposing a collaborative
paper, with detailed reply from CAC on points of
difference.

<u>BOX B.36</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>16 folders</u>
B.36.1.	'Velocities in atoms. I (p) Curves'. Work in collaboration with W.E. Duncanson. Miscellaneous sets of notes, diagrams and drafts, some paginated. Personal and scientific correspondence with W.E. Duncanson 1945-47, and with editor <u>re</u> referee's comments on paper. <u>R.S. 64</u>	1945-47
B.36.2.	'Graphite-huge molecule approximation'. 4 sets of ms. notes on graphite, 43 pp., 55 pp., 24 pp., 4 pp. 5 pp. 'note on Riley's paper on amorphous carbon'. 2 pp. note on Pyrene. Letter on coronene from W.E. Moffitt. <u>R.S. 66</u>	1946-47
B.36.3.	'Special determinants'. Work on coupled systems with G.S. Rushbrooke. 7 sets of ms. notes. Letter from G.S. Rushbrooke, 1947. <u>R.S. 67</u>	1943-47
B.36.4.	'Method of spin states'. Miscellaneous ms. notes.	n.d.
B.36.5.	'Energy bands in graphite layers'. Work in collaboration with G.S. Rushbrooke. 5 sets of ms. notes, and loose pages. 11 pp. typescript draft of paper on 'Energies of mobile electrons in Crystallites infinite in one direction'. Correspondence with G.S. Rushbrooke 1945-46. <u>R.S. 71</u>	1945-48

BOX B.36

continued

- B.36.6. 'H excited and H^+ '. 1948
4 sets of ms. notes, and loose pages.
R.S. 72
(see B.36.7. below)
- B.36.7. 'Stark effect for H'. 1946-48
Work in collaboration with C.M. Gillam.
3 sets of ms. notes on 'Stark effect'.
Correspondence with C.M. Gillam 1946-47.
R.S. 72
- B.36.8. '5-ringed hydrocarbons'. 1948
Miscellaneous ms. notes, one bearing note by CAC
'This was agreed at Paris April 1948. To be completed Xmas 1948 if possible'.
- B.36.9. ' $V = \alpha x^4$ calculations'. 1947
Work in collaboration with R. McWeeny.
Miscellaneous ms. notes, some paginated by CAC.
R.S. 73
- B.36.10. 'Quinones, diradicals and free valencies'.
Miscellaneous sets of ms. notes, and some loose pages, various dates 1939, 1941, 1942 and many undated.
- B.36.11. 'Fulvene'. 1947-48
Work in collaboration with A. Maccoll.
Miscellaneous ms. notes by CAC and collaborator.
Corrected proof of paper.
Correspondence with A. Maccoll, 1947.
R.S. 74
- B.36.12. 'C-H bonds and C-C σ -basis type bonds'. 1946-48
Extensive ms. notes and working papers.
8 pp. typescript draft for paper 'The atomic radius of carbon'.
Correspondence 1947.
R.S. 78

BOX B.36

continued

B.36.13.

'Free radicals'.

n.d.

Work in collaboration with W.E. Moffitt.

Draft for paper.

Letter from W.E. Moffitt, n.d.

R.S. 79

B.36.14.

'Free valence'.

1947-48

5 sets of ms. notes, and some loose pages, on mutual polarisability problems, some dated 1947, 1948.

R.S. 83

B.36.15.

'Para-amino-Stilbene'.

1948-49

Work in collaboration with J. Jacobs.

Ms. notes by J. Jacobs, typescript draft of paper by CAC.

Programme of meeting of the Chemical Society at which the paper was read.

R.S. 88

B.36.16.

'Atomic wave functions'.

1942-53

Work in collaboration with W.E. Duncanson.

Miscellaneous ms. notes and calculations by CAC and collaborator.

Correspondence with W.E. Duncanson, 1942-53.

R.S. 94

<u>BOX B.37</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>15 folders</u>
B.37.1.	<p>'Bacterial variation'.</p> <p>Work in collaboration with D.E. Lea.</p> <p>Extensive ms. drafts, working papers and calculations by CAC and by Lea, most dated 1947.</p> <p>Correspondence with D.E. Lea 1947, with detailed discussion of the progress of the work.</p> <p>Correspondence with J.B.S. Haldane 1948-49 <u>re</u> publication of the work after Lea's death.</p> <p>Ms. accounts by CAC of his work with Lea, 4 pp. ms. and 6 pp. typescript (not identical texts) given as part of a discussion at King's College, London, 1950.</p> <p><u>R.S. 95</u></p>	1946-50
B.37.2.	<p>'Surface tension of liquid metals'.</p> <p>Correspondence and working papers, various dates.</p> <p>Invitation to lecture to Faraday Society on 'Existence and Energies of Surface States' 1949.</p> <p><u>R.S. 102</u></p>	1946-50
B.37.3.	<p>'Ultra-violet spectra of conjugated molecules'.</p> <p>Work in collaboration with J. Jacobs.</p> <p>Ms. notes, draft for paper.</p> <p>Extensive correspondence with colleagues.</p>	1947-49
B.37.4.	<p>'The addition of osmium tartrate to dinaphthylethylenes'.</p> <p>Miscellaneous ms. notes.</p> <p>2 pp. ms. draft for paper.</p> <p><u>R.S. 99</u></p>	n.d.
B.37.5.	<p>'Momentum functions in a central field'.</p> <p>7 pp. ms. notes.</p>	n.d.
B.37.6.	<p>'Butadiene and FMO and configuration interaction'.</p> <p>Work in collaboration with J. Jacobs and D.P. Craig.</p> <p>Ms. notes, calculations and correspondence with collaborators.</p> <p>Letter from J.E. Lennard-Jones, to whom the papers had been sent to referee, with his comments, 1950.</p> <p><u>R.S. 105, 106</u></p>	1949-50

BOX B.37

continued

- B.37.7. 'R.S. Bond Conf.'. 1950
[Royal Society Conference on Bond Energy and Bond Length, 9 March 1950].
Programme of conference.
Notes, plan of contribution, and ms. draft 'Bond lengths in conjugated molecules: the present position'.
Letter from J.E. Lennard-Jones.
R.S. 110
- B.37.8. 'Quantum mechanical account of reactivity of conjugated compounds'. 1949-55
Extensive sets of notes and calculations, including 'ideas notes' stimulated by reading, conversations, conference papers, etc.
Typescript draft of paper 'Some recent theories of chemical reactivity'.
Continuing notes and correspondence on reactivity 1955.
R.S. 111
(see also B.35.22.)
- B.37.9. 'Naphthalene-anthracene bond lengths'. 1949-50
Work in collaboration with R. Daudel and J.M. Robertson.
Miscellaneous sets of ms. notes and some loose pages.
Correspondence with collaborators detailing the progress of the work.
R.S. 112
- B.37.10. 'Structure of graphite. Review of existing information'. n.d.
Ms. and typescript notes (c) 1950.
- B.37.11. 'Linear combination of bond orbitals'. 1949-50
Extensive notes and working papers.
Correspondence with R.D. Brown, M.J.S. Dewar.

BOX B.37

continued

- B.37.12. 'Strong-field polarisability'. 1946-51
Work in collaboration with A. Maccoll and L.E. Sutton.
Extensive correspondence with collaborators.
2 corrected drafts of paper on 'Hyper-polarisability'.
R.S. 120
- B.37.13. Work on the electrostatic potential of H_2 and H_2^+ . 1951-53
Ms. notes, calculations and correspondence, on the
problem, and ms. draft of a projected paper which
was not completed.
- B.37.14. 'Factors affecting bond lengths'. 1951
Ms. notes and calculations.
Correspondence.
R.S. 121
- B.37.15. 'Carbon-carbon bond lengths in small molecules'. 1955-56
Paper read at a Meeting of European Molecular
Spectroscopists, Oxford, 7-11 July 1955.
8 pp. ms. draft for paper, + 4 pp. Appendixes.
Miscellaneous ms. notes, calculations and working
papers.
Correspondence with colleagues, including invitation
to give paper from organiser H.W. Thompson, and
re research problems preceding and arising from paper,
1955-56.

<u>BOX B.38</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>18 folders</u>
B.38.1.	<p>'Graphite momentum'. Work in collaboration with W.E. Duncanson. Ms. notes, numerous ms. and typescript drafts by CAC and W.E. Duncanson. Extensive correspondence with W.E. Duncanson, November 1945-October 1946, with detailed discussion of progress of the work, and some personal correspondence.</p> <p><u>R.S. 125</u> N.B. Many of CAC's drafts are written on the verso of his printed applications for various university posts, 1941.</p>	1941-50
B.38.2.	<p>'Coulomb effects in hybridisation'. Ms. notes.</p>	(c) 1952-54
B.38.3.	<p>'Azulene'. Ms. notes 'Wave mechanics of azulene models'. Notes for a colloquium (n.d.) Typescript of 'Alkyl shifts in absorption spectra of azulene and other aromatic hydrocarbons'. Numerous sets of ms. notes, titled 'Hyperconjugation', 'Perturbation effect', 'Azulene applications', etc.</p> <p><u>R.S. 128</u></p>	1951
B.38.4.	<p>'Cancer Review'. Ms. notes for CAC's review article 'Electronic configuration and carcinogenesis' for first volume of <u>Advances in Cancer Research</u> published by Academic Press. Editorial correspondence with Alexander Haddow.</p> <p><u>R.S. 141</u> (see also B.8.9., C.1.4., E.1.9.)</p>	1950-53
B.38.5.	<p>'Localisation energies (initial method)'. Ms. notes. Diagrams for paper on Zethrene.</p> <p><u>R.S. 143</u></p>	

BOX B.38

continued

- B.38.6. 'Diamagnetic anisotropy'. 1953
Ms. draft 'Diamagnetic anisotropy of aromatics', May 1953. Probably notes for lectures.
- B.38.7. 'Jahn-Teller effect, bond order argument'. 1953
Ms. draft 'Bond order work on benzene' with note of 'Further work'.
- B.38.8. 'Free-electron treatment for metals'. 1953-58
Numerous sets of ms. notes, many re graphite, for lectures delivered 1953-58.
Editorial correspondence with Physical Society re referee's report on CAC's paper 'Note on the applicability of the free-electron network model to metals'.
R.S. 148
- B.38.9. 'Bond-anti-bond orbitals in graphite'. 1954
Ms. notes.
- B.38.10. 'Non-additivity of interatomic forces'. 1954
Notes by CAC on paper by John Dawler and related correspondence with J.O. Hirschfelder who sent CAC the paper.
- B.38.11. 'T. Fermi relation for $V_{vo}^{1.5} = \text{const.}$ '. 1954
Ms. notes, diagrams.
Correspondence with R. Daudel, May-September 1954.
Ms. draft by CAC of note for C.R. Acad. Sci. Paris (Daudel translated it for the journal).
R.S. 159
- B.38.12. 'Quinoline, Isoquinoline, Acridine'. 1954
Ms. notes, including some on 'Mulliken's "electron density probe"' (1954).
Correspondence with A. Albert, May 1949, September-October 1954.

Box B.38 continued

BOX B.38

continued

B.38.13. 'Methyl affinity of aromatic hydrocarbons'. 1955

Ms. draft of paper, with notes for accompanying diagrams.

Various sets of ms. notes, not all by CAC. One set is titled 'Pyrene localisation energies'.

R.S. 166

B.38.14. 'The free-electron network model for metals'. 1954-55

25 pp. ms. notes on ' δ function metals' with 3 pp. 'Alternative proof of fundamental formulas'.

R.S. 173

B.38.15. 'Thomas-Fermi'. 1952-54

Ms. notes 'Teller-Pöschl formula, etc.', with later set 'a more careful analysis to repeat pp. 5a-e of previous screed, but leading to no easily managed equation. Atoms, at best, must have a finite radius'.

Folder includes set of typescript notes in which CAC describes the method of approach to the problem (probably prepared for a student).

Folder also includes paper by N.H. March 'An improved approximate analytic solution of the Thomas-Fermi equation for atoms' (see also B.38.17.)

R.S. 178

B.38.16. 'Possible f-covalency in uranium'. 1949-56

Folder of drafts and correspondence with G.R. Lester re their collaborative work.

Numerous sets of ms. notes by CAC commenting on Lester's drafts, with additional notes on the literature or on points for further investigation.

Abstracts of papers presented at Ministry of Supply Conference on Transition Metals, November 1952.

Correspondence with Lester, 1949-56, and note of Chemical Society meeting, December 1952, at which they presented a joint paper (title as above).

R.S. 187

BOX B.38

continued

B.38.17.

'Thomas-Fermi Book'.

1956-64

Heavily annotated and corrected typescript of proposed book on the Thomas-Fermi model, written in collaboration with N.H. March. The book was never published.

Drafts of:

Chapter II	Fundamental Equations
Chapter III	Atoms and Ions
Chapter IV	Molecules
Chapter V	Metals
Chapter VI	Astrophysical and Geophysical Applications
Chapter VII	Fundamental basis of method and extension of theory
Chapter VIII	Nuclei

B.38.18.

'Statistical theory of atoms and molecules'.

Set of ms. notes for course of lectures on the subject.

<u>BOX B.39</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>20 folders</u>
B.39.1.	'A comparison of the various representations of ethylene'. Ms. notes, typescript draft. Correspondence with C. Moser and F. Birss.	1955-59
B.39.2.	'Hydrogen bond ideas'. Numerous sets of notes and data assembled by CAC over the years. Many are paginated, few are dated. Typescript 'The hydrogen bond', based on a lecture before the Basler Chemische Gesellschaft, February 1963. Correspondence re lecture by CAC to the British Gelatine and Glue Research Association, 1956. Correspondence with W.N. Lipscomb, January 1957, re neutron diffraction work and on hydrogen bonding. <u>R.S. 197, 230, 231, 294</u>	1956-72
B.39.3.	'N ₂ O ₄ and related molecules'. Ms. notes, drafts, extensive correspondence with collaborator J. Duchesne. <u>R.S. 212</u>	1957-58
B.39.4.	'Chemical valency'. Ms. draft of article for Winkler-Prins Encyclopaedia. Correspondence with editor. N.B. This article is not listed in the Royal Society Memoir.	1957-58
B.39.5.	'Fundamentals of conjugation - benzene'. Ms. notes and draft, typescript of lecture delivered to Chemical Society symposium in Bristol, and transcript of discussion following CAC's paper. <u>R.S. 218</u>	1958
B.39.6.	'The dependence of electronic energy levels upon deformation in aromatic hydrocarbons'. Ms. notes, typescript of lecture delivered at symposium in Hull. Related correspondence. <u>R.S. 222</u>	1958

BOX B.39

continued

- B.39.7. 'Two notes on the shape of the charge cloud near a hydrogen atom'. 1958-60
Typescript, editorial correspondence, referee's report.
N.B. The paper was not published.
- B.39.8. 'Benzene to graphite - the change in electronic energy levels'. 1958
Ms. notes and calculations.
Ms. draft of lecture prepared for delivery at Carbon Conference in Buffalo, New York, June 1957 (CAC cancelled his visit because of ill-health).
R.S. 226
(see also A.6.6.)
- B.39.9. 'Some theoretical considerations about vibrational band intensities'. 1958
Paper delivered at Conference on Molecular Spectroscopy, London, February 1958.
Ms. notes, draft, correspondence.
R.S. 227
- B.39.10. 'Steric forces in halogen-substituted benzenes'. 1958
Ms. draft.
R.S. 245
- B.39.11. 'Thirty years of quantum chemistry'. 1958
Ms. notes, draft, correspondence.
R.S. 247
- B.39.12. 'Effect of medium on spectra'. 1958
Ms. notes, typescript of 'Theoretical considerations of the effects of the medium upon molecular energy spectra', CAC's contribution to a Royal Society discussion meeting, December 1958, on 'The effect of environment upon molecular energy levels'.
Correspondence with chairman (H.W. Thompson) re publication.
R.S. 249

- BOX B.39 continued
- B.39.13. 'On the stability of substituted diphenylenes'. 1960
Typescript draft.
R.S. 252
- B.39.14. 'Edge carbon atoms'. 1959
Ms. notes, draft, typescript of CAC's contribution
to conference on carbon, June 1959.
R.S. 253
- B.39.15. 'Lower bounds of energy - application to helium'. 1960
Ms. notes, correspondence.
R.S. 261
- B.39.16. Preparation of diagrams for 2nd edition of Valence. 1961
R.S. 134
(see also B.18.1.-B.18.4.)
- B.39.17. 'Bond lengths in the cyclo-octatetraene dianion 1960
 $C_8H_8^{--}$ '.
Ms. notes, draft, typescript, related correspondence.
R.S. 264
- B.39.18. 'The electronic spectra of π -electron molecules'. 1960
Ms. notes, draft, typescript of CAC's contribution
to meeting of Photoelectric Spectrometry Group,
February 1960.
R.S. 265
- B.39.19. 'Maximum overlap orbitals'. 1961
Ms. notes, related correspondence.
R.S. 273
- B.39.20. CAC's comments on papers by G. Klopman, (c) 1962
D. Peters and R. Pauncz, with replies from the
authors.
N.B. See note by R.B. Mallion on folder cover.

<u>BOX B.40</u>	<u>SCIENTIFIC RESEARCH, PUBLICATIONS AND LECTURES</u>	<u>15 folders</u>
B.40.1.	'Crossing of potential energy curves'. Ms. notes, and offprint of 'Internal conversion and the crossing of potential energy surfaces'. <u>R.S. 284</u>	1961
B.40.2.	'Forces between non-banded atoms'. Ms. notes on miscellaneous papers and lectures by others as assembled by CAC. Typescript of paper by CAC with above title. <u>R.S. 291</u>	1962-63
B.40.3.	'Carbon valence orbitals. S.C.F. calculations'. Ms. notes and draft. Correspondence with D. Mayers. Includes ms. and typescript drafts of 2 papers by CAC: 'd-orbitals in carbon' and 'X-ray levels in sulphur'.	1960-64
B.40.4.	'Bond angles in nitrogen heterocyclic molecules'. Ms. notes and draft. <u>R.S. 308, 333</u>	1963-65
B.40.5.	'Lower bounds for H_2^+ '. Ms. notes, drafts. Correspondence with collaborator, B.P. Johnson. <u>R.S. 315</u>	1962-64
B.40.6.	'Introduction to the density matrix'. Ms. notes for lectures.	1964
B.40.7.	'Vacancies in graphite'. Ms. notes, draft of 'Calculations of the formation energy of vacancies in graphite crystals'. <u>R.S. 322</u>	1964

BOX B.40

continued

- B.40.8. 'Perturbation theory for atoms ($1/Z$)'. 1962-65
Ms. notes, draft of 'A note on non-orthogonal Hartree-Fock functions.'
R.S. 330, 331
N.B. Folder includes a typescript draft of an unpublished manuscript entitled 'Perturbation theory and quantum-mechanical sum rules'.
- B.40.9. 'The Z-expansion of unrestricted Hartree-Fock atomic orbitals'. 1963-66
Ms. notes, draft, correspondence.
Draft of 'Note on the saddle-point character of Hartree-Fock wave functions'.
R.S. 318, 340, 348
- B.40.10. 'Electron in dipole field'. 1966-67
Ms. notes.
R.S. 347
- B.40.11. 'Graphite lecture'. 1967-70
Ms. notes for lectures delivered on two occasions at Imperial College, London.
Correspondence re arrangements for delivery.
- B.40.12. 'Sulphur'. 1965-68
Ms. notes, drafts (one entitled 'Inner-shell double ionization and chemical bonding, Part I Auger electrons').
Correspondence with F.A. Gianturco (collaborator), photographs.
R.S. 368, 369
- B.40.13. 'Bond length changes on ionization'. 1967-68
Ms. notes, drafts.
Correspondence with collaborator, Z. Luz.
R.S. 372

BOX B.40

continued

- B.40.14. 'Note on Kohl with Bonham's integrals'. 1967-68
Ms. notes, draft.
Correspondence with R.A. Bonham and D. Kohl.
R.S. 375
- B.40.15. One folder of miscellaneous ms. notes by CAC on (c) 1968
publications or lectures by others.

<u>BOX B.41</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>15 folders</u>
B.41.1.	'Group III-V compounds'. Ms. notes, some perhaps taken by CAC on lectures by others. <u>R.S. 376</u>	1968-69
B.41.2.	'Keys-mathematical problem'. Notes, diagrams, correspondence. Drafts for paper published as 'How many different keys?' <u>R.S. 377</u> (see also B.10.8.)	1968
B.41.3.	'Jahn-Teller effect in vanadium tetrachloride'. Ms. draft by B.M. Deb. <u>R.S. 385</u>	1968
B.41.4.	'Tricycloquinazoline'. Computer output, correspondence, typescript draft by J.P.M. Bailey sent to CAC for comment. <u>R.S. 399</u> (see also B.20.7.)	1969
B.41.5.	'Electronic structure of triapentafulvalene'. Notes, ms. draft. Extensive correspondence with numerous collaborators and colleagues. Contents of the folder are listed on the cover, with note from M.D. Poole (1975) inside. N.B. This paper was never published.	1965-69, 1975
B.41.6.	Notes on commutation and hypervirial-type of relations. Includes copy of letter to J.G. Taylor, October 1970.	1970
B.41.7.	Lecture notes on simple linear geometry and related topic in projective geometry.	(c) 1970

BOX B.41

continued

- B.41.8. 'Charge distribution around a terminal atom'. 1968-69
Ms. draft of lecture at Harwell, 1968.
Ms. draft of 'Molecular objectives in elastic neutron scattering'.
R.S. 391
- B.41.9. 'Chemical bonds and complex wave functions'. 1969
Ms. notes.
Correspondence with collaborator, R.J. White.
R.S. 396
- B.41.10. 'Recent developments in valence theory'. 1969-70
Ms. draft and galley proofs of lecture delivered at Symposium on 'Fifty Years of Valence Theory' held in Australia, 1969.
R.S. 401
(see also A.10.5.)
- B.41.11. 'Ring current calculations on decacyclene and related molecules'. 1969-70
Ms. notes, correspondence.
- B.41.12. 'Variation in an operator' and 'Gradients and curvature of a function in Hilbert space'. 1968-71
Ms. notes and drafts with suggestions for further work.
- B.41.13. 'Recent work on molecular structure calculations'. 1970
Ms. notes and draft of paper for publication, based on a lecture given at the Atomic and Molecular Physics Conference, Manchester, April 1969.
R.S. 404
- B.41.14. 'Magnetic properties of molecules and interpretations of N.M.R. data'. 1970-71
Correspondence with R.B. Mallion.
- B.41.15. 'Further hypervirial ideas'. 1971
Ms. notes.

<u>BOX B.42</u>	<u>SCIENTIFIC RESEARCH AND PUBLICATIONS</u>	<u>12 folders</u>
B.42.1.	'Generalized uncertainty relations'. Ms. notes and draft, correspondence.	1971-72
B.42.2.	'Notes on the two-particle density matrix in π -electron theory'. Ms. draft. <u>R.S. 413</u> (see also C.12.9.)	1971
B.42.3.	'Energy values of the occupied molecular orbitals in H_2O_2 '. Ms. notes, correspondence.	1970-71
B.42.4.	'Vacancy centres in the diamond lattice: a critique of current theoretical treatments'. Ms. and typescript drafts. <u>R.S. 420</u>	1972-73
B.42.5.	'Calculations of hyperpolarizabilities using Hartree-Fock techniques'. Ms. notes (not all in CAC's hand). Correspondence with R.P. Hurst.	1970-71
B.42.6.	'Calculation of zero-field splitting molecular integrals'. Notes and drafts for paper submitted to <u>Theoretica Chemica Acta</u> . The paper reached page-proof but was withdrawn by CAC in February 1972 for further investigation; it was not re-submitted. After CAC's death Dr. Roger Mallion took advice of colleagues about publication of the paper and this correspondence is enclosed in the folder.	1971-77
B.42.7.	'The inverted pendulum'. Notes and correspondence <u>re</u> paper by M.B. Glauert.	1971-72
B.42.8.	'Bond additivity and the Compton profile for molecules'. Ms. draft. <u>R.S. 425</u>	1973

BOX B.42

continued

- B.42.9. 'A theory of the broadening of the infrared absorbtion spectra of hydrogen-bonded species'. 1973
Notes, correspondence, page-proof.
R.S. 441
- B.42.10. 'An investigation of the short-range interactions between atoms and molecules using the Hellmann-Feynman theorem: I. Three-body forces in hydrogen and helium'. 1973-74
Ms. notes and draft by CAC, ms. draft by collaborator, D. Makin.
N.B. This paper was never published.
- B.42.11. 'On the question of paramagnetic "Ring currents" in pyracylene and related molecules'. 1971-76
Posthumous publication with R.B. Mallion.
Photocopies of CAC's correspondence exchanged with R.B. Mallion and of Mallion's correspondence exchanged with colleagues after CAC's death.
R.S. 446 *
- B.42.12. 'Ring magnetic susceptibilities in conjugated hydrocarbons'. 1971-76
Posthumous publication with J.A.N.F. Gomes and R.B. Mallion.
Photocopies of CAC's correspondence exchanged with R.B. Mallion and of Mallion's correspondence exchanged with colleagues after CAC's death.
R.S. 447 *

* Continuation of Royal Society Memoir numbering of bibliography to those papers described on p.134 as being in course of preparation.

BOX B.43

HÜCKEL THEORY FOR ORGANIC CHEMISTS

One box of material assembled by Dr. R.B. Mallion and Dr. B.L. O'Leary in preparing a book based on the course of lectures delivered by CAC to Oxford undergraduates on the subject of 'Hückel theory of organic chemistry'. (See B.24.3 for CAC's manuscript notes and drafts of lectures for this course.) CAC gave the course in the academic years 1967-73; the book is based on a transcript of tape-recordings taken in Hilary Term, 1971.

Publication is by Academic Press, London 1978 and the authors have contributed all royalties to the Coulson Memorial Fund (see A.19.7).

The box includes:

- tape-recordings of the 8 lectures delivered by CAC in the Inorganic Chemistry Laboratory, Oxford, 21 January - 11 March 1971.
- transcripts of these lectures, prepared by Dr. O'Leary.
- one file of correspondence, 1974-78, re writing and publication of the book. A list of correspondents is included with the file.
- photocopy of early draft of preface and foreword to the book.

SECTIONS C AND G CORRESPONDENCE

44 and 22 BOXES

Contents of the correspondence

The correspondence is exchanged between CAC and scientific colleagues in UK and abroad, his own research students, visiting scholars in Oxford or elsewhere, editors and publishers, scientific and academic administrators and members of the general public. The matters dealt with include:

- Programmes and subjects for research
- Problems, working notes and reports on research in progress
- Arrangements for conferences, meetings, visits
- Comments and revisions on drafts of papers for publication by CAC and collaborators
- Editorial arrangements for publications
- Recommendations for awards, scholarships, academic appointments
- Administrative arrangements for university admissions, degrees, salaries
- Research grants, applications and awards.

All the folders relating to CAC's research students or to visiting scholars from overseas also include arrangements for accommodation, finance, travel and personal matters, and attest the pains he took to ensure the well-being of newcomers for whom he felt responsibility. Religious and personal matters are also dealt with, in accordance with CAC's refusal to separate scientific from other activities.

A short note has been made of material of particular interest or importance, and when the work refers to ascertainable specific publications the relevant number of the Royal Society Bibliography is given, in the form R.S.

continued

SECTIONS C AND G continued

Presentation of the material

C.1 - C.22 and G.1 - G.21. These are individual named folders as kept by CAC for his more frequent and extensive correspondence with scientific colleagues: see note on the content above. All the folders are dated, and all correspondents appear in the general index.

C.23 - C.38. These are CAC's 'miscellaneous files' of his shorter correspondence in which more than one correspondent is included in a folder. The content covers personal and religious as well as scientific matters, no segregation being made: see note on p.154. All correspondents appear in the general index.

C.39 - C.44. These are brief exchanges of letters, both scientific and personal, and are not indexed: see note on pp. 173 - 174.

Many of CAC's copies of his letters, in all sections of the correspondence, are written or typed by himself on the back of incoming letters, invitations, drafts, course notes and the like. Although many of these are of considerable interest in themselves, it has not been possible to make a note of such cases, or to index the individuals or organisations concerned.

<u>BOX C.1</u>	<u>CORRESPONDENCE</u>	<u>18 folders</u>
C.1.1.	ALLEN, Leland Cullen <u>R.S. 394</u>	1958-70
C.1.2.	ASTON, John (Jack) G.	1954-73
C.1.3.	ATKINS, Peter W.	1966-74
C.1.4.	BADGER, Geoffrey Malcolm <u>R.S. 141</u>	1948-55, 1964
C.1.5.	BALDOCK, Gordon R. <u>R.S. 102</u>	1948-54
C.1.6.	BAUGHAN, E. Christopher	1941, 1948, 1963-68
C.1.7.	BERRONDO, Manuel	1969-73
C.1.8.	BLINDER, Seymour Michael	1961-72
C.1.9.	BLOOR, John E.	1956-69
C.1.10.	BLYHOLDER, George <u>R.S. 349, 366</u>	1964-70
C.1.11.	BORN, Max with a note by Mrs. Coulson that CAC especially asked that this folder should be preserved	1941, 1949, 1955 1957-58
C.1.12.	BOOTH, F.	1948-50
C.1.13.	BOWEN, Edmund John	1943-55, 1968
C.1.14.	BRACKMAN, Wim	1952-54
C.1.15.	BRADLEY, Christopher John	1959-67, 1973
C.1.16.	BURTON, Ronald E.	1961-73
C.1.17.	BURNELLE, Louis A. T. <u>R.S. 196, 226</u>	1955-63
C.1.18.	BASTIANSEN, Otto	1948-65

<u>BOX C.2</u>	<u>CORRESPONDENCE</u>	<u>8 folders</u>
C.2.1.	CANNON, Peter	1964-65
C.2.2.	CARBONELL-VILA, Juan Luis	1955-56
C.2.3.	CHERRY, (Edward) Colin	1948-50
C.2.4.	CHESTER, Geoffrey V.	1950-54
C.2.5.	CHIRGWIN, Brian H. <u>R.S. 97</u>	1947-57, 1966
C.2.6.	CLARKE, Donald D. <u>R.S. 380</u>	1966-67
C.2.7.	CLAR, Eric	1948-70
C.2.8.	COLEMAN, A. John	1965-73

<u>BOX C.3</u>	<u>CORRESPONDENCE</u>	<u>5 folders</u>
C.3.1.	COPPENS, Philip <u>R.S. 358</u>	1966-74
C.3.2.	COSTA NETO, Claudio	1964-68
C.3.3.	COHAN, Norah Violetta <u>R.S. 189, 336, 337</u>	1954-74
C.3.4.	CRAWFORD, Victor Arthur <u>R.S. 84, 144</u>	1946-66
C.3.5.	CURL, Robert Floyd <u>R.S. 326</u>	1963-67

<u>BOX C.4</u>	<u>CORRESPONDENCE</u>	<u>11 folders</u>
C.4.1.	DAILEY, Benjamin Peter	1956, 1962-65, 1970
C.4.2.	DANIELSSON, Ulf <u>R.S. 154, 155</u>	1949-57
C.4.3.	DAVIES, Brynmor L.	1965-66
C.4.4.	DAVIES, Peter L. <u>R.S. 127, 133</u>	1947-63
C.4.5.	DEMPSTER, Michael A. H.	1966
C.4.6.	DECIUS, John (Jack) Courtenay	1954-60
C.4.7.	DINGLE, Thomas W. <u>R.S. 362</u>	1964-67
C.4.8.	DITCHBURN, Robert William	1950-54
C.4.9.	DODSON, Charles Leon	1971-73
C.4.10.	DUNCAN, Albert B. F.	1953-71
C.4.11.	DUNITZ, Jack David	1949-71

<u>BOX C.5</u>	<u>CORRESPONDENCE</u>	<u>6 folders</u>
C.5.1.	EILERS, James Edward	1972-73
C.5.2.	EISENBERG, David <u>R.S. 336, 337, 300</u>	1960-68
C.5.3.	ELTON, Lewis Richard Benjamin	1950-57
C.5.4.	EMERSON, Donald <u>R.S. 434</u>	1970-73
C.5.5.	ENDERBY, John Alfred	1948-55
C.5.6.	EPSTEIN, Saul Theodore <u>R.S. 396</u>	1969-73
 <u>BOX C.6</u>	 <u>CORRESPONDENCE</u>	 <u>9 folders</u>
C.6.1.	FERNÁNDEZ-ALONSO, José Ignacio	1951-72
C.6.2.	FISCHER-HJALMARS, Inga <u>R.S. 87</u>	1948-66
C.6.3.	FISHER, Michael Ellis	1951-54
C.6.4.	FLURRY, Robert L.	1967-69
C.6.5.	FLURRY, Robert L.	1969-70
C.6.6.	FORSLIND, Erik (see also C.4.2.)	1949, 1953
C.6.7.	FOSTER-JAKOB, R.	1957-69
C.6.8.	FUKUI, Kenichi	1953-54
C.6.9.	FYFE, William Sefton <u>R.S. 50</u>	1951-55

<u>BOX C.7</u>	<u>CORRESPONDENCE</u>	<u>10 folders</u>
C.7.1.	GAINES, A. F.	1951
C.7.2.	GEE, Geoffrey	1945-65
C.7.3.	GERGELY, John	1948-50
C.7.4.	GLAESER, Robert Martin <u>R.S. 323</u>	1962-68
C.7.5.	GLOCKLER, George <u>R.S. 292</u>	1953, 1955, 1963
C.7.6.	GOŁEBIEWSKI, Alojzy <u>R.S. 256, 257, 273, 278</u>	1959-72
C.7.7.	GOODWIN, Thomas H. <u>R.S. 280, 283, 295, 307, 309</u>	1952-69
C.7.8.	GRAY, Louis Harold (Hal) includes note on mss. of Douglas Lea, and draft of CAC's memorial tribute to Gray published in <u>British J. Radiol.</u> 1965. Not listed in <u>R.S. Memoir.</u> (see also D.2.7.)	1947-65
C.7.9.	GREEN, Albert Edward	1949-68
C.7.10.	GREEN, Michael	1960-64

<u>BOX C.8</u>	<u>CORRESPONDENCE</u>	<u>13 folders</u>
C.8.1.	GREENWOOD, H. H. (Tim) <u>R.S. 68</u>	1948-72
C.8.2.	GRIFFITH, John S. includes correspondence and material gathered by CAC in preparation of obituary of Griffith for <u>Nature</u> , 1972. Not listed in <u>R.S. Memoir</u> . (see also E.7.7.)	1952-56, 1965, 1972
C.8.3.	GRIMISON, Alec <u>R.S. 293</u>	1966-72
C.8.4.	GRUBB, Anthea	1961-65
C.8.5.	GUSEINOV, I. I.	1969-72
C.8.6.	HADDOW, Alexander includes correspondence <u>re</u> Rutherford's interest in biology	1948-50, 1970
C.8.7.	HALPERN, Vivian Morris	1961-65
C.8.8.	HAMILTON, Walter C.	1953-73
C.8.9.	HAMMERSLEY, John M. <u>R.S. 262</u>	1953-65
C.8.10.	HANDLEY, Barbara	1949-50
C.8.11.	HAO, Vo-The	1959
C.8.12.	HARTREE, Douglas Rayner	1949-56
C.8.13.	HAWGOOD, John	1952-62

<u>BOX C.9</u>	<u>CORRESPONDENCE</u>	<u>6 folders</u>
C.9.1.	HERRAEZ, Miguel Angel <u>R.S. 186, 339</u>	1955-64
C.9.2.	HEY, Donald Holroyde <u>R.S. 166</u>	1950-60
C.9.3.	HIBBERT, Alan <u>R.S. 348, 352, 382, 390</u>	1964-69
C.9.4.	HIGASI, Ken-iti	1953-68
C.9.5.	HIGGS, Peter W.	1950-65
C.9.6.	HIRSCHFELDER, Joseph O. <u>R.S. 2, 8, 127, 133, 151, 267, 277, 288</u>	1935-74

<u>BOX C.10</u>	<u>CORRESPONDENCE</u>	<u>16 folders</u>
C.10.1.	HOCHMAN, Petr	1964
C.10.2.	HOLT, Anthony R.	1961-67, 1973
C.10.3.	HORNIG, Donald F.	1951-68
C.10.4.	HORVÁTH, John I.	1957-65
C.10.5.	HOWLETT, Jack	1963, 1969
C.10.6.	HUDSON, Robin L.	1963-65
C.10.7.	HUNTER, Geoffrey	1964-65
C.10.8.	HURLEY, Andrew C. <u>R.S. 288</u>	1953-66
C.10.9.	HUTCHINSON, Douglas A.	1960-67
C.10.10.	INGOLD, Christopher Kelk	1940-66
C.10.11.	IRIBARNE, Julio V.	1951
C.10.12.	JACOBS, Juliane <u>R.S. 88, 91, 105, 106</u> (see also in general index)	1950-56
C.10.13.	JAMIESON, John B. <u>R.S. 198</u>	1954-57
C.10.14.	JEACOCKE, John E.	1959-64
C.10.15.	JOHNSTONE, Derek F.	1952-56
C.10.16.	JORTNER, Joshua <u>R.S. 274</u>	1961-64, 1973

<u>BOX C.11</u>	<u>CORRESPONDENCE</u>	<u>11 folders</u>
C.11.1.	KARPLUS, Martin <u>R.S. 11, 197</u>	1953-73
C.11.2.	KASHA, Michael	1959-73
C.11.3.	KITZ, N.	1953
C.11.4.	LAFORGUE, Alexandre L. V.	1949-59
C.11.5.	LAIDLAW, William G.	1963-70
C.11.6.	LEFEBRE, Roland	1951-2, 1961
C.11.7.	LOEBL, Ernest Moshe	1962-72
C.11.8.	LONSDALE, Kathleen	1949-60
C.11.9.	LOOYENGA, Hans <u>R.S. 308, 333, 371</u>	1958-72
C.11.10.	LÖWDIN, Per-Olov (includes photograph) <u>R.S. 52, 97, 105, 106, 108, 340, 351</u>	1949-73
C.11.11.	LUZ, Zeev <u>R.S. 350, 372</u>	1965-68

BOX C.12

CORRESPONDENCE

20 folders

N.B. The contents of this box are not in alphabetical order.

C.12.1.	MACDONALD, David Keith Chalmers	1953-54
C.12.2.	MACIAS, Antonio	1962-63, 1968
C.12.3.	MACGILLIVRAY, Archibald Dean	1971
C.12.4.	MACKEY, G. W.	1965-67
C.12.5.	McGOWAN, John C. <u>R.S. 54</u>	1948-49
C.12.6.	MACKAY, Donald M.	1950-61
C.12.7.	MAGAT, Michel (see also A.13.18.)	1948-49
C.12.8.	MANN, David E.	1948-49
C.12.9.	MACLAGAN, Robert G. A. R. <u>R.S. 413</u>	1968-73
C.12.10.	McMURRY, Henry Lewis	1956-70
C.12.11.	MANGINI, Angelo	1950-70
C.12.12.	MARQUARDT, Lutz	1968-70
C.12.13.	MATSEN, Frederick Alfred	1950-63
C.12.14.	MAYERS, David F. <u>R.S. 318</u>	1964-71
C.12.15.	MEHLER, J. R.	1958-59
C.12.16.	MOFFITT, William E. the later correspondence deals with the various obituaries, appreciations and memorial volumes which appeared after Moffitt's death in 1958 <u>R.S. 56, 57, 66, 79, 85</u> (see also C.18.4. correspondence with J. Wilson)	1945-60
C.12.17.	MILNER, Eric C.	1949-51
C.12.18.	MORDAUNT, G. Robert	1964-66
C.12.19.	MULLER, Norbert	1952-59
C.12.20.	MURRELL, John N.	1966-72

<u>BOX C.13</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
C.13.1.	NAGAKURA, Saburo	1951-74
C.13.2.	NEBBIA, Giorgio	1948-52
C.13.3.	NEILSON, Alasdair Hewitt <u>R.S. 271, 297</u>	1958-68
C.13.4.	NEWTON, Marshall D. <u>R.S. 371</u>	1965-72
C.13.5.	OLEARI, Luigi	1959-68
C.13.6.	OLIFF, Raymond Walter	1965-72
C.13.7.	ORGEL, Leslie Eleazer <u>R.S. 171</u>	1951-57

<u>BOX C.14</u>	<u>CORRESPONDENCE</u>	<u>11 folders</u>
C.14.1.	PARKER, Kenneth	1950-54
C.14.2.	PALMER, Arthur	1950
C.14.3.	PAULING, Peter	1950
C.14.4.	PILAR, Frank L.	1962-63
C.14.5.	PIMENTEL, George C.	1954-58
C.14.6.	PINCHERLE, Leo	1948-56
C.14.7.	PITTS, Eric	1948-52
C.14.8.	POLANSKY, Oskar E.	1957-69
C.14.9.	POTTS, Alexander Desmond	1965-72
C.14.10.	PRICE, William C. <u>R.S. 286, 341</u>	1946-72
C.14.11.	PRYCE, Maurice Henry Lecorney	1947-56

<u>BOX C.15</u>	<u>CORRESPONDENCE</u>	<u>12 folders</u>
C.15.1.	RANDIĆ, Milan	1960-74
C.15.2.	RICHARDS, W. Graham	1972
C.15.3.	RIDEAL, Eric Keightley	1951-54
C.15.4.	RILEY, Harry Lister <u>R.S. 70, 71</u>	1942-48
C.15.5.	RISSER, William Leigh	1963-68
C.15.6.	RITER, John R.	1970-71
C.15.7.	RIVAIL, Jean-Louis	1965-73
C.15.8.	ROBB, Michael A.	1969-71
C.15.9.	ROBERTS, John D.	1952-54, 1961
C.15.10.	ROBERTSON, Gerald N. van der	1964-68
C.15.11.	ROBERTSON, Gerald N. van der <u>R.S. 441, 444</u>	1969-74
C.15.12.	ROBERTS, P. John	1965-71

<u>BOX C.16</u>	<u>CORRESPONDENCE</u>	<u>12 folders</u>
C.16.1.	ROBERTSON, Harry H.	1947-56
C.16.2.	ROBERTSON, John Monteath <u>R.S. 58, 112</u>	1944-64
C.16.3.	ROBINSON, H. R.	1949-50
C.16.4.	ROBINSON, Peter David <u>R.S. 216</u>	1956-74
C.16.5.	ROE, Edna M. F.	1947-53
C.16.6.	ROGERS, Max A. T. <u>R.S. 268</u>	1958-64
C.16.7.	ROLLETT, John Sydney <u>R.S. 438, 439</u>	1955-73
C.16.8.	ROSENBAUM, Robert A.	1958-66
C.16.9.	ROSS, D. K.	1971
C.16.10.	ROSSINI, Frederick D.	1951-54
C.16.11.	ROUVRAY, Dennis H.	1970-73
C.16.12.	RUTHERFORD, Daniel E.	1939-67

<u>BOX C.17</u>	<u>CORRESPONDENCE</u>	<u>8 folders</u>
C.17.1.	SALEM, Lionel <u>R.S. 30, 278</u>	1960-73
C.17.2.	SCHAAD, Lawrence Joseph <u>R.S. 226, 266</u>	1955-73
C.17.3.	SCHMID, E. D.	1964-65
C.17.4.	SCHMIDT, Gerhard M. J.	1952-53
C.17.5.	SCHNEPP, Otto	1958-61
C.17.6.	SCHOONMAKER, Richard C.	1965-73
C.17.7.	SCHWARTZ, Maurice E.	1964-73
C.17.8.	SENENT, Salvador <u>R.S. 168, 169, 186</u> (see also C.18.1.)	1951-64
<u>BOX C.18</u>	<u>CORRESPONDENCE</u>	<u>9 folders</u>
C.18.1.	SENENT, Salvador <u>R.S. 339</u> (see also C.17.8.)	1962-73
C.18.2.	SEWELL, Geoffrey L.	1948-72
C.18.3.	SHERRY, Peter Burum <u>R.S. 193</u>	1954-58
C.18.4.	SKANCKE, Per Njal <u>R.S. 281</u>	1959-66
C.18.5.	SKINNER, H. A. <u>R.S. 78</u>	1948-51
C.18.6.	SLATER, John C. <u>R.S. 108, 189</u>	1952-62, 1973
C.18.7.	SLATER, Noel B.	1943-62
C.18.8.	SMITH, Darwin Waldron	1958-68
C.18.9.	SOLYMAR, L.	1966-68

<u>BOX C.19</u>	<u>CORRESPONDENCE</u>	<u>17 folders</u>
C.19.1.	STAMPER, John Geoffrey <u>R.S. 304</u>	1959-63
C.19.2.	STEPHEN, Michael John <u>R.S. 190, 194</u>	1954-67
C.19.3.	STRACHAN, Charles	1949-68
C.19.4.	STRAUSS, Herbert L. <u>R.S. 286</u>	1960-74
C.19.5.	STREITWIESER, Andrew <u>R.S. 327</u>	1956-59
C.19.6.	STYLE, D. W. G.	1949-66
C.19.7.	SUTHERLAND, Gordon B. B. M. <u>R.S. 183</u>	1948-56
C.19.8.	TAYLOR, Aaije	1949-65
C.19.9.	TAYLOR, Atu Mensa	1962-70
C.19.10.	TAYLOR, Robert A. <u>R.S. 124, 126</u>	1948-59
C.19.11.	THOMPSON, Harold Warris (Tommy)	1959-64
C.19.12.	THORSON, Walter R. (see also G.21.9.)	1966-67
C.19.13.	TOMITA, Kazuhisa	1952-72
C.19.14.	TROTTER, James	1960-72
C.19.15.	TUDOR-JONES, Goronwy	1964-67
C.19.16.	TURNER, Almon George	1970-72
C.19.17.	TURNER, G. A.	1949

<u>BOX C.20</u>	<u>CORRESPONDENCE</u>	<u>10 folders</u>
C.20.1.	VACIAGO, Alessandro <u>R.S. 424</u>	1959-73
C.20.2.	WAGNER, Edward Lewis	1959-62
C.20.3.	WALSH, Arthur Donald	1940-68
C.20.4.	WASSERMANN, Arthur	1951
C.20.5.	WAUGH, W. A. O'N.	1952-56
C.20.6.	WEBSTER, Brian C.	1961-73
C.20.7.	WEINHOLD, Frank Albert	1967-72
C.20.8.	WEISS, Joseph J. <u>R.S. 61, 105, 143, 171, 179</u>	1948-67
C.20.9.	WEISS, Joseph J.	1955-59
C.20.10.	WESTWOOD, Judith	1958-70

<u>BOX C.21</u>	<u>CORRESPONDENCE</u>	<u>8 folders</u>
C.21.1.	WHITE, Ronald Joseph <u>R.S. 396</u> (see also C.17.2. correspondence with R.G. Parr)	1966-73
C.21.2.	WIEBENGA, E. H.	1953-68
C.21.3.	WILLE, Franz <u>R.S. 134, 343</u>	1963-71
C.21.4.	WILLE, Franz correspondence and working papers <u>R.S. 325</u>	1966-67
C.21.5.	WILLE, Franz correspondence and working papers <u>R.S. 343</u>	1964-65
C.21.6.	WILSON, E. Bright	1949, 1952, 1958, 1966
C.21.7.	WISWESSER, William J.	1948-52
C.21.8.	WOLLENBERG, Lionel S.	1964-73

<u>BOX C.22</u>	<u>CORRESPONDENCE</u>	<u>4 folders</u>
C.22.1.	WULFMAN, Carl Eugene <u>R.S. 346</u>	1964-72
C.22.2.	WYLLIE, George	1946-54
C.22.3.	YOSHIZUMI, Hiroyuki	1953-70
C.22.4.	ZALEWSKI, Kacper <u>R.S. 284</u>	1960-70

BOXES C.23 - C.38. SHORTER SCIENTIFIC AND PERSONAL CORRESPONDENCE

These boxes contain scientific and personal correspondence, presented alphabetically. The exchanges of letters are in most cases relatively brief, several individuals being grouped together in one numbered folder; the names of all correspondents appear in the general index. When the material is more extensive, or of particular scientific or personal interest, it has been dated and marked with an asterisk in the list below.

CONTENT OF THE CORRESPONDENCE

The scientific correspondence is similar to that in C.1 - C.22 and Section G. It includes requests to work in CAC's departments, requests for meetings, talks, articles, discussions on research in progress or papers for publication, comments on papers or theories submitted for evaluation, etc. The numerous exchanges with scientists working abroad show CAC's care for workers struggling to pursue research in developing countries or in difficult surroundings.

Many of the letters refer to research or publications by CAC, but it has not been practicable, in the case of these shorter exchanges, to provide references to the Royal Society Memoir as was done with the more extensive correspondence in C.1 - C.22 and Section G, or to supply cross-references to conferences or lectures listed in other sections of the collection.

The personal correspondence includes letters from scientists, publishers, organisations, etc. and also many members of the general public who read CAC's books or heard his broadcasts or sermons, and who wrote to him for personal guidance. Many schoolmasters, parents, or young people also asked for advice in the choice of careers and subjects of study, information about colleges, universities, curricula, etc.

CAC handled these requests with great care, and many of his replies on the religious life, the efficacy of prayer, and general principles of conduct have considerable intrinsic value as well as attesting the exceptionally wide influence CAC's work had on schools, institutions and individuals.

BOX C.23 SHORTER CORRESPONDENCE

8 folders

- C.23.1. ABRAHAM, Sidney C. ACOBYAN, Raymond H.
 ADAMS, A. ADAMS, James A. ADAMS, Walter H.
 ADDISON, C.C. AHRENS, L.H. AITKEN, A.C.
 AKAIDA, Seiji AKAMATU, H.
- C.23.2. *ALBERT, Adrien 1949-56 ALDRIDGE, W.
 ALLINGER, Norman L. ALLMAND, A.J. ALLSOPP, Cecil B.
 AMAKO, Yoshito AMOS, A. Terence ANANTAKRISHNAN, S.V.
 ANDERSON, William ANDRADE, E.N. da Costa
- C.23.3. AQUILAR, Mariano ARAKI, Gentaro ARENTS, John
 *ARIYAMA, Kanetaka 1954 ARONSZAJN, N.
 ATIYAH, Michael Francis *AUGOOD, Derek R. 1950-55
 AVERY, James E. AYLETT, Bernard J.
- C.23.4. *BACON, George E. 1958-65 *BADER, R.F.W. 1968-72
 BAGUS, Paul S. *BAK, Børge 1947-64 *BAKER, J.W. 1947-51
 *BAKER, Wilson 1942-64
- C.23.5. *BALABAN, A.T. 1959, 1968 BALDWIN, M.T.M.
 BALLHAUSEN, C. J. *BANYARD, Kenneth E. 1963-73
 BARKER, William F. *BARNETT, Leonard P. 1969
 *BARROW, Richard F. 1949-63 BARROWMAN, Thomas J.
 *BARTELL, L. S. 1963-69 BARTLETT, M.S.
- C.23.6. BASSOMPIERRE (CAC's carbon only) *BATEMAN, Arthur B. 1956-65
 BATEMAN, J.B. BATTERSBY, Alan Rushton BAUER, P.T.
 BAUR, Werner H. BAXTER, Arthur H.Y. BAXTER, Ian F.G.
 BAYLISS, Noel S. BAZLEY, Norman W.

Box C.23 continued

BOX C.23 continued

- C.23.7. BEAGLEY, B. BECK, Dieter BELL, F. *BELLAMY, L.J. 1958-63
 BENESCH, Robert BENFEY, E. Theodore
 W.A. BENJAMIN INC. and others 1962-63 re proposed collected
 volume of papers of Sir John Lennard-Jones
- C.23.8. BENNET-CLARK, T.A. BENT, Henry A. BERG, T.G. Owe
 BERG, W.F. BERLIN, Theodore H. BERSOHN, R. (CAC's
 carbon only) BERNSTEIN, H.J. BERTHIER, G.

BOX C.24 SHORTER CORRESPONDENCE

7 folders

- C.24.1. BHATNAGAR, Jagdish N. BHATTACHARYA, G.C.
 BIJL, Dirk BILLIG, E. BIRTWISTLE, D. BISHOP, E.O.
 *BLACKMAN, Moses 1955 BLAUNSTEIN, Robert P.
 BLISS, Kathleen BLOOMER, Thomas BLUM, L.
- C.24.2. BOCKRIS, John O'M. BOLLAND, J.L. *BOLTON, H.C. 1951-60
 BORGEN, Peder BOSANQUET, C.B. BOSE, A.M.
 BOSWORTH, R.C. BOUMAN, T.D. (CAC's carbon only)
 *BOURNE-AYRTON, A.T. 1957 BOVEY, René BOWMAKER, Graham
 *BOWMAN, Roger 1967 *BOYD, Donald B. 1969-72
 *BOYLAND, E. 1947-50 BOYLE, Hugh *BOYS, S. Frank 1953-72
- C.24.3. BRADBURN, Mary BRADFIELD, G. BRAGG, Sir (William) Lawrence
 BRANDÅS, Erkki *BRAUDE, E.A. 1949-55 BREMNER, J.G.
 BRENNER, Robert O. BREWER, Richard G. BRESCIA, Frank
 *BRIGHT, Father Laurence 1954 BRISTOL, George, Bishop of
 BRITISH TRANSPORT COMMISSION BRITTON, F.R.
- C.24.4. BROWN, David A. BROWN, Michael G. BROWNE, P.F.
 *BROWNING, Hedley C. 1955 BRUNDLE, C.R. BRYAN, Monk
 BRYANT, W.M.D. BRYCE-SMITH, D. BUCKINGHAM, A. David
 BUCKINGHAM, Richard A.
- C.24.5. BUENKER, Robert J. BULLEN, A.G. BU'LOCK, J.D.
 BUNN, C.W. BURAWOY, A. BURHOP, Eric H.S.
 BUTLER, Philip H. *BUTTERFIELD, Herbert 1951
 *BYERS BROWN, William 1951, 1966-71 *BYKOV, G.V. 1960-74
- C.24.6. CABRERA, Nicolas CADE, J.A. CADE, Paul E.
 *CALVERT, Ian 1960 CALVET, Raoul CAMPBELL, Neil
 CARERI, Giorgio CARRA, S.
- C.24.7. CASTELL, Lutz CATCHESIDE, D.G. CAUCHOIS, Y.
 CAUTE, David CAVA, M.P. CAVALLI, Luigi CAYREL, R.

BOX C.25 SHORTER CORRESPONDENCE

6 folders

- C.25.1. *CHAKRAVARTY, Ardhendu S. 1967-69 CHAKRAVARTY, N.K.
 *CHALKLIN, F.C. 1949 *CHANDRASEKHAR, S. 1944-47
 CHAPMAN, N.B. CHAPMAN, Sydney (CAC's recollections
 of Chapman for 80th birthday volume)
- C.25.2. CHARNEY, Elliot *CHERRY, E. Colin 1948-53
 *CHONG, Delano P. 1966-69
- C.25.3. CHOUDHURY, M.H. CHRISTOFFERSEN, Ralph E. (CAC's
 carbons only) CHRISTOPHERSON, Derman G. CISEK, J.
 CIVIL SERVICE COMMISSION CLAASSEN, Howard H.
 *CLARK, C.H. Douglas 1939 CLARK, Dave T.
 CLARK, Robert E.D. CLARKE, Donald D.
- C.25.4. CLAXTON, Thomas H. (CAC's carbon only) *CLEMENTI, Enrico 1961-71
 CLEWS, C.J. Birkett
- C.25.5. COADE, T.F. *COCHRAN, William 1948, 1953, 1958
 COLEGROVE, R.K. COMPTON, Arthur H.
 CONDON, E.O. (CAC's carbon only) *CONNICK, Rev. W. 1957
 CONWAY, B.E. COOLIDGE, Albert Sprague COON, Jesse B.
 COOPER, J.R.A. COOPER, Malcolm J. CORRADINI, Paolo
- C.25.6. COTLAR, Mischa COTTRELL, Thomas COUTTS, Frederick
 *CRAWFORD, Bryce L. 1948-56 CROMBIE, Alistair C
 CROSS, B.C. CROUCH, E.G.H. CRUICKSHANK, Arthur J.O.
 CUNDY, H. Martyn CURTIS, Lionel CUSACHS, L. (CAC's
 carbon only)

BOX C.26 SHORTER CORRESPONDENCE

8 folders

- C.26.1. DAHL, J.P. DAINTON, Frederick S. DALE, J.
DALGARNO, Alec DALLINGA, G. (CAC's carbon only)
DARDARIAN, Gabriel *DARLINGTON, H.S. 1969
DARLINGTON, T.W. DAUBEN, Hyp J. DAWSON, B.
DAWSON, Peter DAY, Colin DEAN, P.G.
- C.26.2. DE BOER, J.H. DEJAK, Camillo DEL RE, Giuseppe
DELVES, L.M. DENMAN, Harry *DEPARTMENT OF TECHNICAL
CO-OPERATION 1962 DESLATTES, R.D.
- C.26.3. DE WET, Jack S. DIAMOND, Richard M. DICKEY, O.B.R.
*DIENES, G. Jay 1953, 1961, 1966
- C.26.4. DODD, R.E. DOERING, William von E. DOMB, Cyril
DOMNITZ, Myer *DONNAY, Gabrielle 1971-73 D'OR, L.
DOUGLAS, H.W. *DOUTZARIS, Panos 1954-56 DOW, Alistair
- C.26.5. DUBS, Homer H. DUKE, A.J. DUNCAN, James F.
DUNHILL, Rosemary DUNLOP, Colin DUNNING, N.J.
DURANT, N.J.
- C.26.6. EADES, M. EARL, J.C. *EDELSTEIN, L.A. 1957-63
EDWARDS, Allen E. EDWARDS, S. Michael EHRENREICH, Henry
EKEHORN, Gosta ELEY, Dan D. ELIEZER, Isaac
ELLISON, Frank O.
- C.26.7. *ELLIS, Edith M. 1954-59 (on pacifism, world fellowship
and similar activities)
- C.26.8. EMELEUS, K.G. EMMET, Dorothy EUROPEAN PHYSICAL
SOCIETY (CAC's carbon only) *EVANS, Griffith 1955-60
EVANS, Meredith Gwynne EVANS, Monroe V. EXLEY, Kenneth D.
EYRING, Henry

BOX C.27 SHORTER CORRESPONDENCE

8 folders

- C.27.1. FAIRBAIRN, J. Kingsley *FAJANS, Kasimir 1948, 1960-65
FARNELL, G.C. FARNSWORTH, H.E. FELDMAN, T.
FELDMAN, William R. FELL, Honor Bridget
*FELLGETT, Frank E. 1957 FERGUSON, John FERNANDO, B.E.
FERRÉ, Nels F.S. *FERREIRA, Ricardo 1961-68 FIELD, Stanley J.J.
- C.27.2. FIGGIS, Patrick FILMER, W.E. FIMPLE, William R.
FINCH, G.I. (CAC's carbon only) FINE, N. FINNEY, D.J.
FISCHER, E. FISHER, Hellen E. FISK, J.B.
*FOOT NASH, David (Committee on Ministers and the Teaching
Profession) 1961 FORD, W.P.J. FOSTER, David B.
*FOSTER, Michael Beresford 1955, 1962-64 FOX, Kenneth
- C.27.3. FRANK, Harry S. FREEMAN, Richard M. FREUNDLICH, E. Finlay
FRIEDEL, J. FRIEDEL, Robert A. FRIPIAT, J.J.
FROESE, Charlotte FUMI, Fausto G. FÜRTH, R.H.
- C.27.4. GABRIEL, J.R. GAGE, George GARNER, W.E. (includes
note by CAC on Lennard-Jones's contribution to work on molecular
structure) GENT, W.L.G. GERJUOY, Edward GERO, Alexander
*GERRISH, F. 1969 GIBB, Thomas R.P. GILBERT, Thomas L.
GILES, Charles H. GILL, E.W. GILLESPIE, R.J.
GILLESPIE, Ronald J. *GILLESPIE, Ewen 1965
- C.27.5. GIRIFALCO, L.A. GOLD, Victor GOLDEN, Sidney
GOODEVE, Charles
- C.27.6. GOODMAN, Colin H.L. GOODWIN, E.T. GORDASE, G.S.
GORDON, M. GORDY, Walter GOROFF, Iza GOUARNÉ, René
GOUTERMAN, Martin
- C.27.7. GRANACHER, Iris GRANT, Ian P. GRAVELEY, F.H.
GREEN, Louis C. GREENE, Frederick D. GREGORY, C.C.L.
GREGORY, N.L. GREIG, James GRENE, Marjorie
- C.27.8. *GRIFFITHS, H.B. (CAC's carbon only) 1966 GROENEWOLD, H.J.
GROVES, George E. GRUBB, A.C. GRÜNFELD, Ana Veronica
*GUGGENHEIM, Edward Armand 1948, 1958 GUY, H.A.
GUY, J. *GWILLIAM, F.H. 1963

BOX C.28 SHORTER CORRESPONDENCE

9 folders

- C.28.1. HADDOW, Alexander HADZI, D. HÄFELINGER, Günter
 HAFNER, Klaus HAINES, D.R. HALEVI, E.A. HALL, E.J.
- C.28.2. HALLA, Franz HAMEKA, H.F. HAMILTON, S.
 HAMMICK, D.LI. *HAN, Duk Su (CAC's carbon only) 1969
 HANSON, John W. HARDING (CAC's carbon only)
 HARRIS, Frank E. HART, R.W. HARTLEY, Harold
 HAVINGA, E. HAWKEY, David
- C.28.3. HEATON COOPER, Ophelia HECHT, Charles E. HEDGES, Sid G.
 *THOMAS HEDLEY & CO. LTD. 1960-61 HEILBRONNER, E.
 *HEINE, Volker 1962-63, 1967-68 HEISENBERG, Werner (CAC's
 carbon only)
- C.28.4. HELSDEN, R.M. HENDERSON, J. HERBSTEIN, Frank
 HERRING, Joyce *HERZBERG, Gerhard 1940-73
 HEWSON, Leslie A.
- C.28.5. *HIGHAM, Thomas F. 1954 HILL, F.R. HILL, G.F.S.
 HILLIER, Douglas V. HILLIER, Ian H. HILLMAN, John
 HINDLE, Alan HINSHELWOOD, Cyril Norman
 *HIRSHFELD, Fred 1954, 1963, 1973 HISATSUNE, I. Clarence
- C.28.6. HODGKIN, Dorothy Crowfoot (CAC's carbon only)
 HODGSON, Herbert H. HOFFMANN, Roald
 HOLLAND, W. Philip 1970-71 HOLLOWAY, John H.
 HOLSIEN, Erling HOLSINGER, E.C.T. HOLT, D.B.
 HOLT, Michael
- C.28.7. HOPPE, Rudolf HORÍÉ, T. *HOWE, E. 1957 HOWE, Gunter
 HOWELL, K.M. HOWLETT, Jack HUANG, R.S.
 HÜCKEL, Erich HUETT, Basil

Box C.28 continued

BOX C.28 Continued

- C.28.8. *HUGHES, A.L. 1938-43 HUGHES, H.A. HUGHES, J.W.B.
 HUME, George C. HUNTER, Robert F. HUNTLEY, H.E.
 HURST, Robert P.
- C.28.9. HUTCHEON, J.M. HUZINAGA, Sigeru HYDE, Anthony J.
 HYLLERAAS, Egil A.

BOX C.29 SHORTER CORRESPONDENCE

7 folders

- C.29.1. *IBALL, John 1953-58, 1969 IDYLL, C.P. IHAYA, J.Y.
 *ING, Thomas Alfred 1958 INOKUTI, Mitio
- C.29.2. INUI, T. INSTITUTE OF INDUSTRIAL ADMINISTRATION
- C.29.3. JACOBS, P.W.M. JACKS, M.L. JAFFÉ, Hans H. JAHN, H.J.
 JAMES, Hubert M. JAMES, Ioan JANKOWSKI, K.
 JANSEN, L. JAPAN SOCIETY OF MATHEMATICAL EDUCATION
- C.29.4. JAPOLSKY, N.S. JATKAR, S.K. Kulkarni JEFFERY, G.A.
 *JEHLE, Herbert 1950-57 JENNINGS, Keith R.
 JENNINGS, Reginald JENNINGS, W.W. Roy
 *JOHNSON, Keith H. 1972-74 JOHNSON, W.A.
- C.29.5. JOHNSTONE, Derek F. JOLIOT-CURIE, Frédéric
 JONES, R. Norman *JØRGENSEN, Christian Klixbüll 1961-69
 JOY, Hubert W. JUCYS, Adolphas Prano JUDD, Brian R.
 JULG, André
- C.29.6. *KAPP, Reginald O. 1951-52 KARDOS, Gilbert
 *KASHA, Michael 1948-59 KASTELYN, P.W. KASTLER, Daniel
 KATRIEL, Jacob KAUFMAN, Joyce J. KEDRO, Martin
 KELLY, A. KELLY, Brian T.
- C.29.7. *KENDALL, David G. 1946-73 KERN, C.W. KETELAAR, J.A.A.
 KHUBCHANDANI, P.G. KICINSKI, F.P. KILPATRICK, John E.
 KIRKPATRICK, Harry A. KIRKPATRICK, Paul KITCHENER, J.A.

BOX C.30 SHORTER CORRESPONDENCE

7 folders

- C.30.1. KLEINMAN, Leonard KLEVENS, H.B. *KLUG, Aaron 1948-49
 KLYNE, W. (CAC's carbon only) KNOTT, C.W.
 KOBAYASHI, Takeshi KOLOS, Włodzimierz KOOSE, Werner O.B.
- C.30.2. KOOYMAN, E.C. KRAUSS, Morris KREBS, Hans
 KRISHNAN, R.S. KŘIVOHLAVÝ, Jaro
- C.30.3. KRUGLYAK, Y.A. KRYNAUW, G.N. *KUHN, Hans 1949-56
 KUMLER, W.D. KWAME NKRUMAH UNIVERSITY
- C.30.4. *LABARRE, Jean-François 1965-73 LACK, David Lambert
 LADD, R.A. (CAC's carbon only) LAMBERT, R.N.
 LANCZOS, Cornelius LANDSBERG, Peter T. LANG, Andrew R.
 LAPWOOD, Ralph LAYZER, David LEDERBERG, Joshua
- C.30.5. LEHRER-ILAMED, Yehiel LEMAN, G.A. LEMBERG, R.
 LEVY, Maurice (CAC's carbon only) LEWIS, David T.
 *LEWIS, Greville P. 1953 LEWIS, J.C.
- C.30.6. LI, W.K. LIDE, David R. LINDBERG, Bernt LINDERBERG, Jan
 LINDHOLM, Einar LINDSAY, Donald LIPPERT, Ernst
 LITTLEWOOD, D.E. LITTLEWOOD, John E.
 *LOFTHOUSE, W.F. 1958-59 LONDON, Fritz (CAC's carbons only)
 LONG, Derek A.
- C.30.7. LORQUET, J.C. LOWRY, H.V. LUCK, Werner
 *LUDLOW, Peter 1960 LUFT, Norbert W. LUKES, T.
 LUMBROSO, H. LUNIAK, Bruno LÜTTKE, Wolfgang
 LYNCH, Brian M. LYNDEN-BELL, Ruth M., and Donald
 LYNESS, R.C.

BOX C.31 SHORTER CORRESPONDENCE

8 folders

- C.31.1. MA, James MA, S.T. McCLURE, Donald S.
 McCUBBIN, W.L. McDOWELL, Charles A. McGEE, George I.
 *McINTOSH, Harold V. 1958-72 MACKAY, Donald M.
- C.31.2. McKERRELL, Archie McLACHLAN, Andrew D. McLAREN, Bruce
 McLEOD, J. Bryce MACMILLAN, Noel G.
 *McNAMEE, J.M. 1961 McOMIE, John F.W. McWILLIAMS, D.
- C.31.3. *MAGEE, John L. 1971-72 MAGOR, Glanville T.
 MAHANTY, J. MAJID ULLAH, Shamshad MAJORY, T.G.
 MALLONE, Ronald S. (The Fellowship Party) MANDELBROTE, Benoit B.
- C.31.4. MANN, C. Donald MANN, W.R. MANNEBACK, C.
 MANNING, P.P. MANWELL, A. Raymond MARGENAU, Henry
 MARKEY, P. MARQUARD, C.D. MARSDEN, Arthur
- C.31.5. *MÅRTENSSON, Oille 1970-71 MARTIN, D.
 *MARTIN, R.H. 1954, 1960, 1968 MARXHEIMER, René B.
 *MASIH, Jacob 1961-64 MASLEN, Edward N.
- C.31.6. MASON, Edward A. MASON, Fred MASON, John
 *MASON, Ronald 1955-70 MASSE, J.L. MASSE-BÄRLOCHER, Maria
 MASSEY, Harrie M. MATHER, Salya Haran
- C.31.7. MATHEW, N.T. MATSEN, F.A. MATSUBARA, Takeo
 *MATSUMOTO, Takeo 1957, 1966 MAXWELL, I. Robert
 MAXWELL, Winifred
- C.31.8. MAY, F.V. MAYERS, David F. MEARS, Adrian
 MEATH, W.J. (CAC's carbon only) MEIR, J.A.
 MENDELSON, Lawrence B. MENDOZA, E. MERER, Anthony J.
 MERTZ, Joseph H. METZGER, Jacques

BOX C.32 SHORTER CORRESPONDENCE

9 folders

- C.32.1. MIDTDAL, John MILLEDGE, H. Judith MILLER, Harold
 MILLER, J.C.P. MINTON, Laurie MIRRELES, James A.
 MITCHELL, E. William J. MOELWYN-HUGHES, E.A.
 MONROE, Elizabeth MOODY, Gordon E. MORICONI, Emil J.
- C.32.2. MORRIS, Denis *MROZOWSKI, S. 1950-61 MUCKLOW, E.E.
 MÜLLER, A.M. Klaus MULLIGAN, Joseph F. MUNSON, R. John
 MURRELL, John N.
- C.32.3. MURTY, J.S. *MUSHER, Jeremy I. 1961-72
- C.32.4. NABARRO, Frank R. NAGAHARA, Sigeru NAGAMIYA, T.
 NAIR, P. Madhavan NAKAJIMA, Takeshi NARASIMHAN, P.T.
 NASH, T.
- C.32.5. *NEEDHAM, Kenneth 1959 NELSON, K. LeRoi NESBET, Robert K.
 NEUBERGER, Albert NEWMAN, F.T.
- C.32.6. NIIRA, Kazuo NIKITINE, S. NISHIKAWA, Tetsuji
 NISHIWAKI, Jane and Yasushi *NOLLER, Carl R. 1950-52
 NORMAN, Richard O.C. NOWACKI, W. NUKASAWA, Ka
 NYBERG, Stanley C.
- C.32.7. OBI, Chike O'BRIEN, Mary *OGAWA, Iwao 1953
 OGSTON, A.G. OHKI, Kosuke
- C.32.8. ONSAGER, L. (CAC's carbons only) ORR (CAC's carbon only)
 OOSTERHOFF, L.J. OSBORN, Byrle Jacob OSBORN, Mary
 OSBORN, S.B. OSBORNE, Denis Gordon
- C.32.9. OSTER, Gerald OWEN, Alan J. OWEN, D. OWEN, John

BOX C.33 SHORTER CORRESPONDENCE

8 folders

- C.33.1. PADDOCK, Norman L. PAHARI, S. *PAILIN, David A. 1969
PALMER, Michael H. PALMER, W.G. PANETH, F.A.
PAOLONI, Leonello
- C.33.2. PARKER, Keith PARROTT, J.E. PARRY, R.W. PARSON, A.L.
PATEL, Jashbai C. PATTERSON, Donald *PATTON, A. Rae 1959-60
*PAUL, Burton 1967
- C.33.3. *PAUNCZ, Ruben 1953-73 PEACOCKE, Arthur R.
*PEARCE, John 1970 PEARSON, W.B. PEAT, F. David
PEIERLS, Rudolf Ernst (CAC's carbon only) *PEKERIS, C.L. 1968-69
PELZER, H.
- C.33.4. PERKINS, Peter G. PHILLIPS, Eric PHILLIPS, Glyn O.
PHILLIPS, James C. PHILLIPS, S.E.L.
- C.33.5. PHILPOT, J.St.L. PHYTHIAN, J. Edward PICKERING, Judith
PICKUP, Barry T. PINCHERLE, Leo PINNINGTON, John
PIRIE, Antoinette PITT, G.J. PITT, Philip PITTS, James N.
PITTWELL, Laurence R. PITZER, Kenneth S.
- C.33.6. PLATT, John R. PLUVINAGE, Philippe *POLANYI, Michael 1950, 1952
POLLARD, William G. PONDY, P.R. PORTER, George
POTEAT, William H. POTIER, A. POWELL, J.L.
- C.33.7. PRATT, Claire PRESENT, Richard PRESTON, G.D.
PREUSS, H. PRICE, A.J. PRICE, A.T. PRICE, Charles C.
PRIMAS, H. (CAC's carbon only) PRINGLE, G.E.
- C.33.8. *PRITCHARD, Huw O. 1953-56, 1963, 1973 PROUT, C. Keith
PROWLES, David PRÜCKNER, Franziska PRUDEN, D.C.
QUENOUILLE, M.H. QUINN, James

BOX C.34 SHORTER CORRESPONDENCE

7 folders

- C.34.1. RADCLIFFE, J. Max RAGG, John R.G. RAI, D.K.
 RAMAGE, G.R. RAMAMURTY, S. (CAC's carbons only)
 RAMSEY, Ian
- C.34.2. RANDALL, John Turton RANSIL, Bernard J.
 RAO, D.V.G.L. Narasimha RAO, K. Rangadhama
 RAO, N. Rajeswara
- C.34.3. RAVEN, Charles E. RAYNOR, J.B. READ, John
 REAM, William G.B. REDGRAVE, Vanessa REDLIH, Selma
 REID, C. REIMAN, A.L. REINER, John M.
- C.34.4. REISS, Howard REMICK, A.E. RICHARDS, W. Graham
 RICHARDSON, L.F. RIDLEY, Richard O.
- C.34.5. RIGG, Martin RILEY, D.P. ROBERTS, Gwilym O.
 ROBERTSON, F.C. Ford ROBERTSON, John H. ROBINSON, David Z.
 ROBINSON, Preston, ROBINSON, Robert ROCHE, Anne Lise
 RODDA, S.
- C.34.6. ROGOSWKI, Fritz ROLLETT, A.P. ROOTHAAN, Clemens C.J.
 *ROSE, T.A. 1958-60 ROSENBAUM, Robert
- C.34.7. ROSS, D.M. ROTHEN, Alexandre ROWLAND, P.R.
 RUDOLPH, H.D. RUEDENBERG, Klaus RUPP, E. Gordon
 RUSSELL, E. John RUSTON, W.R. *RYAN, Francis J. 1950-51

BOX C.35 SHORTER CORRESPONDENCE

9 folders

- C.35.1. SACK, Henri SADDINGTON, Denis SADLER, D.H.
 SAHNI, Roop Chand SÁNDORFY, Camille SANE, K.V.
 SANNIGRAHI, A.B. SANTOS, Emilio SAPUNOV, Georgi Ivanovitch
- C.35.2. SARGANT, Tom SARMA, C.R. SATURNO, Antony F.
 SAWYER, Warwick SCARF, Frank SCHAFFNER, Kenneth F.
 *SCHERR, Charles W. 1957-64
- C.35.3. SCHIFF, B. SCHLAPP, Robert (Robin) SCHMID, E.D.
 SCHMID, Gerhard M.J.
- C.35.4. SCHNEPP, Otto SCHNURMANN, Robert SCHOENTAL, R.
 SCHOFIELD, R. Kenworthy SCHOMAKER, V. (CAC's carbons only)
 SCHRAUZER, G.N. SCHULTZ, G.V. SCOTT, D. Bernard
 SCOTT, W.T. (CAC's carbons only) SCRIBNER, John
 ŠCRIBNER, J.D. (CAC's carbon only) SEAMAN, C.R.
 SEDDON, K.R. SEKI, Syûzô
- C.35.5. SEKIYA, Paul M. SETTON, Ralph SEWELL, M.J. SEYMOUR, R.C.
- C.35.6. SHARMAN, R.V. SHAW, Ronald SHAYER, M. SHELTON, H.S.
 SHIDA, Shoji SHKLARSKY, E. SHOPPEE, C.W.
- C.35.7. SHORIGIN, P. *SHUKLA, Awaneesh Chandra 1962-69
 SHULL, Harrison SIDMAN, Jerome W.
- C.35.8. SILVERMAN, Jeremiah N. SIM, A.C. SIMON, Francis
 SIMON, J. SIMONETTA, Massimo SIMPSON, J.C.E.
 SIMPSON, William T. SINANOĞLU, O. SINGH, Lakhbir
- C.35.9. SISLER, Harry H. SKINNER, H.A. SKELL, Philip S.
 SKLAR, A.L. SLATER, Noel B. SMILJANSKI, Smiljana
 SMITH, Cedric A.B. SMITH, C.J. SMITH, E.A.
 SMITH, Frederick A. SMITH, Grant Gill *SMITH, John 1955
 SMITH, J.W. SMITH, Kenneth *SMITH, Valerie 1961
 SMOKER, Paul

BOX C.36 SHORTER CORRESPONDENCE

6 folders

- C.36.1. SNEDDON, Ian Naismith SOKOLOV, Jack SONDHEIMER, Franz
 SOUTHLANDS TRAINING COLLEGE SPARNAAY, M.J.
 SPEAKMAN, J.C. SPEISER, Rudolph SPENCER, M.
- C.36.2. SPONER, H. STACHNIEWSKI, J.A. STAINIER, F.C.
 STAMPS, Jeffrey STANSFIELD, Roger G. STAPLETON, H.E.
 STEAD, Peter A. STEARE, C. STEIN, Gabriel
- C.36.3. STEPHEN, Richard O. STEPHENS, E.J. STEPHENS, J.F.
 STEVENSON, David P. STOECKLI, H.F.
- C.36.4. STONE, Antony P. STONEHAM, A.M. (CAC's carbon only)
 STONER, Edmund Clifton *STOPES-ROE, Harry V. 1968
 STRACHAN, Charles STRATTON, Julius A.
 STRONG, Laurence (CAC's carbons only)
- C.36.5. SUCHET, Jacques P. SUNDERLIN, C.E. (CAC's carbon only)
 SUTCLIFFE, Brian SUTHERLAND, Gordon B.B.M.
 SWAINGER, Keith H. SYKES, Keith W.
- C.36.6. *SYMONS, Martyn C.R. 1966-70 SZASZ, George
 SZENT-GYORGYI, Albert SZIGETI, B. (CAC's carbon only)
 *SZWARC, Michael 1947-71

BOX C.37 SHORTER CORRESPONDENCE

9 folders

- C.37.1. TABOURY, F.J. TAFT, Robert W. TAGG, Donovan
 TANIMOTO, I. *TARRANT, Gerald T.P. 1957, 1965-68
- C.37.2. TAYLOR, A. *TAYLOR, Rev. Alfred E. 1953
 *TAYLOR, Arnold 1969-70 TAYLOR, John G. TAYLOR, W.H.
 TAYLOR, William J. TEMPERLEY, Hugh Neville V.
 *TER HAAR, Dirk 1951, 1958-60 THAKUR, S.N.
- C.37.3. THIRUNAMACHANDRAN, T. THOMAS, Iran L.
 *THOMAS, John M. 1964-73 THOMAS, N. THOMAS W.J. Orville
 THOMPSON, Harold Warris (Tommy) THOMSON, Colin
 THOMSON, Sydney
- C.37.4. THORPE, Edith *THORPE, W.H. 1956 THROWER, Peter A.
 THURAIRAJAN, P. THYAGARAJAN, B.S. TIBBS, Stanley R.
 *TILNEY, A.G. 1958-60 TODD, W.R.
- C.37.5. TOMBE, Stanislaus Awad TOMPA, Hans TORKINGTON, P.
 TOWNSEND, Bill B. TRELOAR, L.R.G. TRENDALL, E.R.
 TRICKER, R.A.R. TRINAJSTIĆ, N.
- C.37.6. TRURO SCHOOL TSUDA, Keishiri TUBIS, Arnold
 TULINSKY, Alexander TURNBULL, Herbert W. TURNER, David
 TWINING, R.H. TWINN, Kenneth
- C.37.7. UBBELOHDE, A.R. (Paul) UMEDA, Kwai *UNWIN, P.C. 1955-68
 URI, N.
- C.37.8. VAN ARTSDALEN, E.R. VAN DER NEUT, R.N. VAN HOVE, Léon
 VAN RHIJN, P.J. VAN RYSELBERGE, Pierre VARGHESE, V.C.
- C.37.9. VELLER, Alfred VENABLES, John A. VENKATESAN, K.
 VERHOOGEN, J. VERMEULEN, Leon A. VERNEY, Stephen E.
 VIDWANS, D.H. VIRDEN, Jonathan J. VLIEGENHART, J.A.

BOX C.38 SHORTER CORRESPONDENCE

9 folders

- C.38.1. WAACK, Richard WAHL, Arnold Christian WAKINSHAW, W.H.
WALKER, Gavern T. WALKER, S. WALLACE, Philip R.
WALTER, Robert I. WARHURST, E. WARREN, J.W.
WASSERMAN, E. (CAC's carbon only) WATERS, W.A.
- C.38.2. WATKINS, George D. WATKINS, Margaret WEARING, H.
WEAVER, Warren WEINSTEIN, Alexander WEISS, R.J.
WELLINGTON, John H. WEPSTER, B.M. WERKHEISER, Anne H.
WERTZ, John E. *WEST, Jennifer (Sister Mary Jennifer) 1968
- C.38.3. WHEATLEY, P.J. WHEELER, T.S. WHELAND, G. William
WHIFFEN, David H. WHITELEY, A.J. WHITTAKER, Edmund
WILKES, Maurice V. WILLIAMS, Robert J.P.
- C.38.4. WILLIS, Roy F. WILSON, Alan H. WILSON, E. Bright
WILSON, J. WILSON, Katharine M. WILSON, N.
WINCKLER, W.G. WIRTZ, Karl WISE, M.E. WITKOWSKI, Andrzej
- C.38.5. WOHLFARTH, E.P. WOODRUFF, Harold A. WOODS, S. Derek
WOODWARD, Ida *WOOLLEY, R. Guy 1972-74
- C.38.6. WOOLNOUGH, Brian E. *WORMELL, R.L. 1957-72
WORRALL, A. Stanley WORSLEY, Beatrice H.
- C.38.7. WORT, Richard WRAY, James G. WREN-LEWIS, John
WRIGHT, David WRIGHT, George F. WRIGHT, Hugh
- C.38.8. *WYBOURNE, Brian G. 1972-73 YAMAGUCHI, Tasuku
YATES, E. Leighton *YEAXLEE, Basil A. 1955-64
- C.38.9. YONEDA, Hayami ZAHRADNIK, R. ZENER, Clarence
ZIMAN, John M. ZUBAY, Geoffrey ZUCKER, I.J.
ZUNGER, Alex

BOXES C.39.-C.40 MISCELLANEOUS SCIENTIFIC CORRESPONDENCE

These folders are presented in alphabetical order, and are not indexed.

They contain requests for information, permission to quote or reproduce material written or received by CAC; brief courtesy letters on receipt of or to accompany complimentary copies, preprints, etc.; requests to comment on or to forward mss. for publication; requests for information on appointments or career prospects; invitations to lecture or attend conferences, etc.

Many notifications of appointments or changes in staffing of departments and laboratories in U.K. and overseas occur in these documents.

C.39

9 folders

- | | |
|----------|----------|
| 1. A | 6. G |
| 2. B | 7. H |
| 3. C | 8. I - J |
| 4. D | 9. K |
| 5. E - F | |

C.40

8 folders

- | | |
|----------|--------------|
| 1. L | 5. R |
| 2. M | 6. S |
| 3. N - O | 7. T - U - V |
| 4. P - Q | 8. W - Y - Z |

BOXES C.41.-C.42 MISCELLANEOUS PERSONAL CORRESPONDENCE

These folders are presented in alphabetical order, and are not indexed.

They contain requests for guidance on careers, help with publication of tracts and other writings, financial assistance, support for religious or charitable groups and functions, pressure groups, overseas students, deserving causes; information and references in sermons, quotations and texts; thanks for ideas or advice put forward by CAC in talks, broadcasts, etc.

C.41 7 folders

- | | |
|----------|--------------|
| 1. A | 5. F - G |
| 2. B | 6. H |
| 3. C | 7. I - J - K |
| 4. D - E | |

C.42 7 folders

- | | |
|----------|----------|
| 1. L - M | 5. S |
| 2. N - O | 6. T |
| 3. P - Q | 7. W - Y |
| 4. R | |

BOXES C.43, C.44

2 boxes of miscellaneous correspondence from eccentrics.
Not indexed.

SECTION D RELIGIOUS, HUMANITARIAN, PACIFIST WRITINGS 12 BOXES

This section includes approximately 500 lectures, reviews, sermons and addresses, broadcasts and television talks and discussions, some fully prepared for publication, others in manuscript or note form. Though some of the major invitation lectures, or addresses given to formal religious gatherings, are recorded in the Bibliography of the Royal Society Memoir, a great many more either were unpublished or appeared in small journals and newsletters with limited circulation. As one example, Box D.2 ('Minor Works') alone contains 71 published items, only 5 of which are listed in the Memoir. Similarly, Box D.6 contains 66 envelopes of sermons and addresses, many delivered on 10-15 occasions. Although none of these addresses are officially recorded, the numerous letters from members of congregations to whom CAC preached amply testify to the far-reaching influence of this one facet of his life.

Box D.9 contains 200 published book reviews, on both scientific and religious subjects. Mrs. Coulson very kindly undertook the task of compiling a list of these reviews; it has not been practicable to itemise them in this hand-list but the list is included in the box and will be a useful tool for scholars working on the collection.

Many of the entries in this section note the existence of 'background material' which was assembled by CAC in the course of writing his lectures and articles. Boxes D.10 and D.11 consist entirely of this sort of material culled from a variety of sources (newspapers, journals, books, conversations, correspondence, lectures and broadcasts by others). See D.5.7 - D.5.9, D.12.3 - D.12.6 and F.1.4. for similar material.

Although the material in this section is closely linked to Section F (Religious, educational, humanitarian organisations), even a cursory glance at the titles listed overleaf (e.g. 'The way to God through science', 'The influence of science on the Christian faith', etc.) will reveal CAC's fundamental belief in the unity of science and religion. Section B (Scientific working papers and writings) should also be consulted for several items in which CAC expands and elaborates this theme of unity. See especially B.5.1 - B.5.4, B.6.1 and B.27.5.

BOX D.1

LECTURES, BROADCASTS, PUBLICATIONS

14 folders

D.1.1.

Miscellaneous articles and talks, mainly on science and religion in the atomic age:

'The moral responsibility'	4 pp. ms.	n.d.
'Prospect for the future'	4 pp. typescript	1957
'Prelude to the atomic age'	2 pp. ms.	n.d.
'Christianity and the control of power'	9 pp. typescript	1957
'Peaceful uses of atomic energy'	4 pp. ms.	1956
'Science and the control of power'	4 pp. typescript	n.d.

D.1.2.

'Science and religion - a changing relationship' 1954

The Rede Lecture - Cambridge University, May 1954

Manuscript and corrected typescript with extensive background notes and correspondence. Folder includes working notes for a similar earlier lecture given to the Bristol Theological Society on 'Relation of religion to science' in 1953 on which CAC based his Rede Lecture.

R.S. 164

(see also D.2.10. and D.3.6. for other lectures with the same title)

D.1.3.

'Some problems of the atomic age' 1957

The Second Scott Lidgett Memorial Lecture, sponsored by the Free Church Federal Council, Bristol, March 1957.

Manuscript and corrected typescript, correspondence. Folder includes correspondence with the editor of The Nation for whom CAC wrote an article 'Moral responsibilities in the atomic age'; the article was never published.

R.S. 209

(see also D.2.6.)

Box D.1 continued

BOX D.1

continued

D.1.4. 'Science and the idea of God' 1958

The 11th Arthur Stanley Eddington Lecture,
Cambridge University, April 1958.

Working notes, corrected typescript and correspondence.

R.S. 217

D.1.5. 'Nuclear knowledge and Christian responsibilities'

Background material, plan of lectures, manuscripts,
and corrected typescripts for publication as:

(1) a lecture to the World Methodist Church at
Lake Junaluska, North Carolina, U.S.A. 1956

R.S. 192, 195
(see also A.6.9.)

(2) a series of articles in the Methodist Recorder. 1957

(3) a book for the Epworth Press (see also E.13.3.) 1958

R.S. 214

(4) a shorter version in the London Quarterly and
Holborn Review. n.d.

D.1.6. 'Fundamental belief' 1958

Transcript of discussion with H.C. Longuet-
Higgins, broadcast on the BBC Home Service,
June 1958.

D.1.7. 'The Church in the world' 1962

Peter Ainslie Memorial Lecture, Rhodes University,
Grahamstown, South Africa.

Working papers and text.

R.S. 289
(see also A.7.1.)

Box D.1 continued

BOX D.1

continued

- D.1.8. 'The family - a part of God's creative plan' 1966
Lecture to the World Methodist Conference on
Family Life, London.
Working papers, correspondence, transcript of
lecture.
- D.1.9. 'This war can be won' 1966
Address to OXFAM Conference at Sibford School.
Manuscript and working papers.
- D.1.10. 'Should I work or not?' 1973
Article published in the P.H.P. International
Magazine, Japan.
Manuscript, extensive manuscript notes on books
read, correspondence, printed version.
- D.1.11. 'Science and society' 1973
Notes for a planned series of lectures at Warwick
University which had to be cancelled owing to ill-health.
- D.1.12. 'God and things' 1963
Manuscript of address to World Council of Churches,
New York, and shorter version as published in
Christian Education.
Transcript of last sermon, with same title, 1973
preached at Wesley Church, Cambridge, October 1973.
This Church was where CAC preached many of his
early sermons as a graduate student and Fellow of Trinity
College 1931-36.
- D.1.13. 'Is there a science of man?' 1955, 1962
CAC's notes and draft, background material.
- D.1.14. 'The Scientist's Responsibility in Society' 1970
The Heriot-Watt University Lecture.
26 pp. manuscript draft.

R.S. 399

(see also D.12.10.)

BOX D.2

'MINOR WORKS'

10 folders

The description 'Minor Works' was adopted for these writings by CAC himself. They consist of manuscripts, typescripts or printed versions of short articles, sometimes with related correspondence and background material. Many are expositions of the relationship of science and religion. Most are published, but very few are listed in the Royal Society Memoir.

10 folders presented in chronological order with cross-references where necessary.

D.2.1.

1951-52

'Science and religion in partnership', in Life and Work, Church of Scotland magazine. 1951

'All or Nothing', review of J. Bronowski's book The Common Sense of Science, published in Religion in Education: typescript and printed version. 1951

'God the Creator', in Church of England Youth Council Newsletter. 1951

R.S. 139

'Why maths?' in Gartree High School magazine Pythagorean: typescript. 1952

'How can Christian doctrines about miracles be true after all we learn from modern science?', in book Moral Problems: typescript. 1952

'Continuous creation', paper read at meeting of the Victoria Institute, London, with related correspondence: typescript. 1952

'Note on Professor H.C. Longuet-Higgins', published in Nature on his appointment to the Chair of Theoretical Physics at King's College, London (Longuet-Higgins was CAC's successor at King's). 1952

'A Christmas Sermon', published in The Scouter. 1952

Box D.2 continued

BOX D.2

continued

D.2.2.

1953-55

Notes on Professor Sydney Chapman, FRS (on his retirement from the Sedleian Chair of Natural Philosophy at Oxford) and on Professor George Temple (on his election to the Sedleian Chair) as published in Nature. Includes later correspondence, 1964. 1953

'Science and Religion', published in View-Review. 1953

'The Gospel in a scientific age', address at School of Adult Education and Evangelism, Penarth. 1953

'How old is the universe?', published in World Digest. 1953

'Science and Religion', published in The Daystar. 1954

'Christianity and the scientist', published in Cherwell. 1954

'Building a New World', address to Methodist Conference, published in Reconciliation. 1954

'Oxford's first Chancellor', published in Oxford Mail: typescript. 1955

D.2.3.

1956-58

'Ban Big Scale Atomic Bomb Tests?': typescript and version as published in Together. 1956

'Science is not enough', for Sunday Times: typescript, correspondence. 1956

'You and the H-bomb', in Rally. 1957

'Born for this hour', in Methodist Church magazine Cannock Chase and in Tadworth magazine: typescript and published versions. 1958

'Facts - some of the data', in Anglican monthly Prism. 1958

'Life or death?', for peace magazine Reconciliation: ms., correspondence. 1958

R.S. 237

BOX D.2

continued

D.2.4.

1959

'A word from a scientist', in Methodist Church magazine, Cornwall. 1959

'Science and faith', in The Layman. 1959

'A Ciência e a fé, in Portugal Evangelico. 1959

'Greetings from the Vice-President', short note published in Over to You. 1959

'Science and/or Christianity', published in The Leader: ms. 1959

'Chemistry on a calculating machine', in Hull University Chemical Society Journal: correspondence, typescript. 1959

D.2.5.

1960

'Are we outgrowing religion?', in The Christian Replies. 1960

'God's whole world', in Methodist Church (Exeter Circuit) Quarterly Bulletin. 1960

'Prospect for the future', in Methodist Recorder: typescript. 1960

'New Year message', in Joyful News. 1960

'Science - is it a friend or foe?', in Methodist News: typescript and published version. 1960

'Christmas in a scientific world', in Leicester Mayflower Messenger: correspondence, ms., published version. 1960

'But Charles Darwin did not deny a Creator', in Salvation Army magazine Vanguard. 1960

'Optimist or pessimist?', in Irish Advocate: typescript, published version. 1960

BOX D.2

continued

D.2.6.

1961-62

'Oslo and Delhi - why?', in Laymen Write to Laymen: 1961
typescript.

'Some Problems of the Atomic Age', in The London 1961
Churchman and Review: typescript, published version.

R.S. 246

(see also D.1.3. for an earlier version)

'Moral responsibilities in a scientific age', in 1961
Livingstonian: typescript, published version.

'Science tells us - how much?', in London: National 1961
Society, Society for the Promotion of Christian Know-
ledge: typescript.

R.S. 263

'The work of the layman', in The Old Palace. 1962

'The university as a promised land', sermon at St. Mary 1962
the Virgin Church, Oxford, as a dedication of the
academic year, published in Light and Salt Periodical.

'The Earth is the Lord's', in Christian Education. 1962

D.2.7.

1963-65

'A communion meditation', printed copy of sermon 1963
preached at Duke University, U.S.A., with letter
from the Chaplain who called it 'The finest meditation
I have ever heard'.

(see also A.8.4., papers re CAC's visit to Duke)

'Is God dead?', in Science Review. 1964

'Awareness of God through science': ms. 1963

'Cybernetics - what is it?', in Methodist Recorder 1963
Science Supplement: typescript.

(see also F.4.6.)

'Dr. L.H. Gray - the Cambridge period', tribute to 1965
Gray published in British J. of Radiol.

(see also C.7.8.)

BOX D.2 continued

D.2.8. 1966-67

'The rim of Hell', chapter in The Challenge, 1966
Australian Council of Churches: typescript.

'A scientist's view of the "Honest to God" debate', 1966
in Impetus.

R.S. 335
(see also D.6.14.)

'The Public Schools Commission', Kingswood School 1966
Magazine: typescript.

'Science and creation', ms. of talk recorded on a 1966
gramophone set, issued by the Church of Scotland
Youth Department.

'Both timid and generous', comment on the Vatican II 1966
Decree on the Apostolate of the Laity, in Bulletin
of the Department on the Laity, World Council of
Churches.

'Nineteen Eighty-three to Five', address at Association 1966
of Head Mistresses' Conference.
(see also A.9.1.)

'Science and scripture', in Special Bulletin of Ceylon 1967
Bible Society: ms., typescript, published version.

'Luther and science', in Methodist Recorder: typescript. 1967

'Sir John Cockcroft F.R.S.', obituary published in 1967
Methodist Recorder: typescript.

'Science and the supernatural', sermon preached at 1967
Great St. Mary's University Church, Cambridge:
correspondence, duplicated typescript.

D.2.9. 1968-69

'Moral teaching without religious belief', published 1968
as 'Human Nature and Moral Rule', in New Christian:
ms., typescript, correspondence, published version.

'Old and new in the twentieth century', in Outlook 1968
Westminster Central Hall magazine: ms., typescript,
published version.

D.2.9. continued

BOX D.2

continued

D.2.9.
continued

'Mission for the month - Uppsala 1968', in The Norman Arch. 1968

'Man using', for a service at Redfield Methodist Church, Bristol: ms., typescript, correspondence. 1968

'Change', the Inaugural Lecture delivered at Luton Industrial College, 28 September 1968: autograph manuscript. 1968

R.S. 378
(see also F.4.3.)

'Science and pacifism', address given to Methodist Peace Fellowship, Oxford: ms., typescript. 1969
(see also F.4.5.)

'Giving and receiving', for Sheffield University magazine Target: typescript. 1969

D.2.10.

1970-73

'Science and faith - a changing relationship' and 'Technology and the Christian faith', duplicated typescript of two lectures delivered at Canterbury. 1970

'The welcome', in P.H.P. International Magazine, Japan: ms. and correspondence. 1971

'The role of science in developing countries', in Zenith: typescript. 1971

Notes upon a book being given to the Revd. Dr. Eric Baker to mark his retirement; typescript. 1971

'Live easily as the leaves grow on the tree', in P.H.P. International Magazine, Japan: correspondence, ms. and published version. 1972

'Mathematics and biology', Introductory Remarks at Conference on Dynamics of Biological Problems: page proof. 1973

<u>BOX D.3</u>	<u>SERMONS, LECTURES, PUBLICATIONS</u>	<u>10 folders</u>
D.3.1.	'The way to God through science'. Sermon broadcast from Wesley Memorial Church, Oxford, 7 February 1954, and later published in <u>The Listener</u> , <u>The National Message</u> and by the Layman Publishing Co.	1954
	Drafts of sermon, arrangements for broadcast and publication, ensuing extensive correspondence with members of the public. As always, CAC replied to their various doubts and queries with patience and kindness. This sermon was based on a talk given on the BBC overseas service in 1952: a copy of that broadcast is included in the folder.	1952
	<u>R.S. 149</u>	
D.3.2.	'Conflict, coexistence and cooperation', ms. and typescript. 'Miracles and visions': ms. and typescript for CAC's contribution to book edited by R. Selby Wright <u>Asking them Questions</u> (published 1972).	n.d. 1969
	<u>R.S. 415</u>	
	'Must the scientific ethic be based on religion?': manuscript.	1950
D.3.3.	'Moral responsibility in the atomic age': manuscript.	1956
	'Science and religion': typescript.	n.d.
	'Some notes on worship in the twentieth century', talk to Conference Committee on Worship, May 1960: typescript.	1960
	'Science and religion - teamwork or tug-of-war', article published in the <u>Methodist Recorder</u> : typescript.	1961
	Review of <u>The Firmament of Time</u> by Loren Eisely (2 versions, one for a BBC broadcast): ms., typescript.	1961

Box D.3 continued

BOX D.3

continued

- D.3.4. Miscellaneous shorter talks and prayers (all are typescript): n.d.
- 'Praying hands'
- 'St. Christopher'
- 'Work - Bach'
- 'Christ of the every-road'
- 'Christ and Easter'
- D.3.5. 'Science, religion and education', talk given at Young Schoolmistresses Conference, January 1955: 2 versions, plus questions and answers following lecture. 1956
- R.S. 181
- 'Science and religion', evening discourse for the British Association, September 1954: draft, printed version, with CAC's letter to Dr. Archie Clow outlining his plan for the talk. 1954
- (see also E.1.2.)
- 'Science and religion', expanded version of talk given to the British Association, 1954. 1954
- R.S. 158
- D.3.6. 'The age of the universe': typescript of 2 versions. 1958
- R.S. 219, 235
- 'Scientific humanism', address delivered at Oxford Ecumenical Methodist Conference, September: typescript. 1951
- (see also D.3.9.)
- 'The natural sciences': typescript of article published in An Approach to Christian Education. 1956
- R.S. 182
- Untitled talk on science in relation to the wider cultural outlook: typescript. n.d.
- 'Science and religion - a changing relationship', Commemoration Address, Handsworth College, Birmingham: typescript and printed version. 1952
- (see also D.1.2.)

BOX D.3

continued

- | | | |
|--------|---|------|
| D.3.7. | 'Science without God': ms., typescript. | n.d. |
| | 'Case history in Hell', in <u>The Preacher's Quarterly</u> : typescript. | 1956 |
| | <u>R.S. 184</u> | |
| | 'Social science and other science', in <u>Methodist Recorder</u> : typescript. | n.d. |
| D.3.8. | Review of <u>The Scientific Adventure</u> by Herbert Dingle, published in <u>The Modern Free Churchman</u> : typescript, published version. | 1952 |
| | Introduction to a lecture by D.M. Mackay on 'From Mechanism to Mind': typescript. | n.d. |
| | 'Atomic energy: the moral issue', paper read at conference convened by Institute of Biology and Atomic Scientists' Association: typescript. | 1952 |
| | <u>R.S. 130</u> | |
| | 'The star of Bethlehem': typescript. | n.d. |
| | 'Can science do everything?', draft for contribution to series 'New Thinking on old problems', in <u>News Chronicle</u> . | 1950 |
| | 'The bearing of the natural sciences on the nature of man': ms.
(see also D.6.54.) | n.d. |
| D.3.9. | 'Prolegomena for series on sanctity' (probably for a broadcast): duplicated typescript. | n.d. |
| | 'The Christian religion and contemporary science': typescript. | 1950 |
| | <u>R.S. 100</u> | |
| | 'The place of science as a cohesive force in modern society': typescript, corrected proof. | 1951 |
| | <u>R.S. 104</u> | |
| | 'The new cosmology', published in <u>The Frontier</u> . | n.d. |

D.3.9. continued

BOX D.3

continued

D.3.9.
continued

'Some reflections on the significance of the new cosmology': lecture to Conference of Educational Associations: offprint. 'Cosmology and Christianity': published report on this lecture.

1950

R.S. 107

'Some aspects of scientific humanism', paper read at Southlands Conference: typescript, printed version. (see also D.3.6.)

1951

'Education': ms. notes for talk at the Methodist Conference, Sheffield.

1951

'Science and religion', Friday Evening Discourse, Royal Institution, 24 February 1967: ms. notes and transcript of lecture.

1967

R.S. 355

D.3.10.

Misc. ms. notes by CAC for short talks, sermons, addresses, discussion contributions.

BOX D.4

INVITATION LECTURES

11 folders

D.4.1.-D.4.2.

'Science and the Christian'.

1955-57

Series of 3 lectures delivered at Manchester University under the auspices of the Student Christian Movement in the autumn of 1956: 'Science and Creation', 'Science and an Industrial Society' and 'Christian Hope in a Troubled World'. The correspondence suggests that the lectures were published but this is not recorded in the Bibliography of the Royal Society Memoir. The first lecture, 'Science and Creation', is substantially the same as CAC's contribution to a collective book titled The Debate between Science and Religion (ed. J. Wren-Lewis).

D.4.1. Mss. typescripts, transcripts, background information.

D.4.2. Correspondence re arrangements for delivery and publication of lectures. The folder includes CAC's correspondence with N.F.S. Ferré re Science and Christian Belief.

N.B. This series differs from the series of lectures of the same name in D.7.1.

D.4.3.-D.4.4.

'Christian Belief in the Modern World'.

1956

The Firth Lectures, University of Nottingham, October-November 1956.

This was a series of 5 lectures based on the Riddell Lectures given in Newcastle in 1953 (see D.11.1). CAC re-wrote and greatly expanded the original material. The Firth Lectures were to be published by the Student Christian Movement Press, but CAC never completed the ms. for publication.

D.4.3. Background material and notes assembled for the lectures.

D.4.4. Correspondence with University officials and SCM Press re arrangements for delivery and publication of lectures. Folder also includes CAC's correspondence with officers of numerous religious and scientific societies who invited him to speak during his stay at the University.

1956-64

Box D.4 continued

BOX D.4

continued

D.4.5.-D.4.9. 'The influence of science on the Christian faith'. 1962-67

The Sir D. Owen Evans Lectures, University College of Wales, Aberystwyth, April 1966.

This was a series of 3 lectures with the titles 'The world of things - creation', 'The world of history - evolution' and 'The world of people - redemption'. The lectures were to have been published with the Fremantle Lectures (see below) but the ms. was never prepared for publication.

D.4.5. Typescript (34 pp.) of lectures.

D.4.6. Ms. draft of Lecture I. Background material, including typescript of several earlier lectures by CAC on similar topics.

D.4.7. Ms. drafts of Lectures II and III.

D.4.8. Folder of extensive bibliographic material assembled by CAC.

D.4.9. Correspondence with the University re arrangements for delivery of lectures. Invitations to speak to numerous religious and scientific societies and to preach at the local Methodist Church.

(see also A.20.2., tape of these lectures)

D.4.10.-D.4.11. 'Science and faith'. 1968

The Fremantle Lectures, Balliol College, Oxford, February 1968.

This was a series of 4 lectures which used substantially the same material as the earlier lectures in Aberystwyth (D.4.6. and D.4.7. contain drafts labelled 'Fremantle'). CAC added one additional lecture for the Oxford series which he titled 'The world of the future'.

D.4.10. Correspondence with the Master of Balliol 1961-68 in 1961 who asked CAC to suggest names of possible lecturers for the series and in 1965-68 re arrangements for CAC's own lectures.

D.4.11. Ms. draft and extensive background material for Lecture IV.

BOX D.5

PACIFISM

9 folders

- D.5.1. 'Science and Life - The Ultimate Responsibility'. 1952

Broadcast by CAC, 1 January 1952, with later broadcast of discussion between CAC and Professor K. Mather on the same subject, 15 January 1952.

Typescripts and transcripts.

- D.5.2. 'The morality of atomic warfare'. 1954

Ms. and typescript of CAC's contribution to special issue of Atomic Scientists' Journal.

Editorial correspondence, some printed material on the subject.

R.S. 162

- D.5.3. 'Living in an Atomic Age'. 1956

Ms. notes, supporting material and typescripts of lecture by CAC to Birmingham Teachers' Annual Conference, April 1956. (One typescript is perhaps a transcript, while the other is for publication.)

R.S. 191

- D.5.4. 'Creation, the Expanding Universe and the Christian'. 1954

Lengthy (20 pp.) ms. of contribution to book on science and religion (probably never published).

Related correspondence.

- D.5.5. Shorter talks, addresses, sermons, writings, on pacifism, social responsibility of science, etc.:

'The Magnitude of our Task' (c) 1954

'What does a Christian Pacifist Want to Do?', 1954
address at Kingsway Hall.

'Moral Responsibility of Science' 1954

'Scientific Curiosity and Christian Belief' (c) 1955

'The Atomic Age' (c) 1954

'Atomic Quest', introduction to book of the 1956
same title by A.H. Compton.

'Christianity and an Atomic Age', various sets
of notes for talks delivered on numerous occasions.

BOX D.5

continued

D.5.6.

'Contributions of science to peace'.

1953

Alex Wood Memorial Lecture, London, 1953,
sponsored by the Fellowship of Reconciliation.

Working notes, background material, manuscript.
Folder includes copies of Alex Wood Memorial Lectures,
delivered in 1952 by Canon C.E. Raven and in 1954 by
Kathleen Lonsdale.

(see also F.1.3., folder of correspondence with and re
Fellowship of Reconciliation and p.77 of the Memoir
which quotes extracts from this lecture describing Wood's
influence on CAC during his undergraduate days at
Cambridge)

R.S. 142

D.5.7.-D.5.9.

3 large folders of printed material (press-cuttings,
articles from journals, brochures, pamphlets, etc.)
assembled by CAC for his writings on pacifism, social
responsibility of science, humanitarian and educational
causes.

D.5.7. includes numerous sets of ms. and typescript
notes by CAC with such titles as 'History and a way out for
Europe', 'Conflict in Europe', 'Can America Keep out of
the War?', 'My philosophy of peace', 'Function of the
League', 'Spiritual basis of new peace movement'. These
were prepared by CAC for talks and addresses delivered
during his visit to the U.S.A. in 1937 to speak for the
Emergency Peace Campaign.

(see also A.13.3.)

BOX D.6

SERMONS AND ADDRESSES

66 envelopes

One box of 66 envelopes, each bearing title, dates and place of delivery; many with related correspondence and background material, and some containing more than one address. See also A.19.4.

D.6.1.	'Mission notes'	1962-64
D.6.2.	'Problems of the atomic age'	1959-63
D.6.3.	'The Bible - why bother about it?'	1957
D.6.4.	'Science as a religion'	1956
D.6.5.	'Science and preaching'	1956-57
D.6.6.	'What do people think?'	1963
D.6.7.	'Opening a new school'	1963
D.6.8.	'Talk to parsons - this world and preaching'	n.d.
D.6.9.	'Influence of science on young people's minds'	1957
D.6.10.	'Baden-Powell'	1957
D.6.11.	'Ideality and reality'	n.d.
D.6.12.	'Responsibility to God'	1955
D.6.13.	Untitled talk on science and religion	n.d.
D.6.14.	'Scientist's view of Honest to God debate' (see also D.2.8.)	1964-69
D.6.15.	'Looking into the future'	1958-69
D.6.16.	'Food to feed the world'	1969
D.6.17.	'Do science and religion give different answers to the same questions?'	1959-65
D.6.18.	'Scientists' responsibility in society'	1969-70
D.6.19.	'Non-violent revolution'	1970
D.6.20.	'Is science an art?'	1955-72
D.6.21.	'Is God dead?'	1964, 1972

BOX D.6

continued

D.6.22.	'Faith in a secular university'	1972
D.6.23.	'100 years of science-religion controversy'	1957
D.6.24.	'Science and society'	1968-70
D.6.25.	'Is God a physicist?'	1956-73
D.6.26.	'Is Christianity any good to a scientist?'	1971
D.6.27.	'God and things' (see also D.1.12.)	1963-73
D.6.28.	'What have Christians to give to the Third World?'	1973
D.6.29.	'The idea of a university'	1963
D.6.30.	'Materialism and science'	1964
D.6.31.	'Science and Christian living in the future'	1955-60
D.6.32.	'Finding a centre of gravity'	1961, 1964
D.6.33.	'Wasted resources'	1956, 1959
D.6.34.	'Is the universe running down?'	1960
D.6.35.	'Salvation'	1961
D.6.36.	'One religion is as good as another'	n.d.
D.6.37.	'Anglican-Methodist conversations'	1959, 1963
D.6.38.	'Role of mathematics'	1961-65
D.6.39.	'Education in a technological age'	n.d.
D.6.40.	'Nature and purpose of liberal education'	1956-58
D.6.41.	'Christian education'	1959-61
D.6.42.	'Why morals?'	1961
D.6.43.	'What is the point of being a Christian?'	1965
D.6.44.	'Worship - why bother?'	n.d.
D.6.45.	'A scientist asks - answers'	1964, 1968
D.6.46.	'Scientific responsibility (e.g. space research)'	1969

BOX D.6

continued

D.6.47.	'Physical and chemical bases of life'	1958-66
D.6.48.	'John Smith - lay reader'	1958-59
D.6.49.	'Science, civilisation and religion' (see also D.7.5.)	1963
D.6.50.	'Man's control over the physical world'	1967
D.6.51.	'Student activism and the Christian'	1968
D.6.52.	'Then and now'	1967-68
D.6.53.	'Education in a technocracy'	1968
D.6.54.	'The bearing of the natural sciences on the nature of man' (see also D.3.8.)	1950
D.6.55.	'A scientist looks at modern poetry'	1967
D.6.56.	'The church - inward or outward looking?'	1967
D.6.57.	'Why the church' and 'Church and frontier'	1967
D.6.58.	'God - an unnecessary hypothesis'	1959-60
D.6.59.	'Christian politics'	1963
D.6.60.	'Science, technology and human values'	1961
D.6.61.	'Universe revealed by physical science'	1956-62
D.6.62.	'The Christian in the modern world'	1962
D.6.63.	'Seek good and not evil'	1966
D.6.64.	'The windbloweth where it listeth' (and others)	1956-61
D.6.65.	'The Christian in the world of growing knowledge'	1964
D.6.66.	'What is a human being?'	1969-73

BOX D.7

SCIENCE AND RELIGION

9 folders

D.7.1.

Typescript of four short talks or broadcasts to schools on: Windscale; motorcars, market research; international problems.

n.d.

'Chance and necessity', sermon preached at Great St. Mary's Church, Cambridge, May 1973: duplicated typescript.

1973

'Caught up in a world of revolution', talk for World Council of Churches Assembly, Uppsala, and other material relating to W.C.C.

1968

'Science and the Christian': series of 6 lectures with the titles 'The Conflict', 'Reasons for Conflict', 'Faults on both sides', 'Is there a boundary between science and religion?', 'The personal element in science' and 'Synthesis - seeing big'.

n.d.

D.7.2.

'The British Association 1951. A Preview': typescript.

1951

'The place of science in the Christian faith': two printed copies of address by CAC to meeting of Research Scientists' Christian Fellowship during British Association meeting, 1951, with correspondence.

1951

R.S. 115

'Can a scientist be a Christian?': typescript and ms. notes.

n.d.

'The H-bomb tests and their possible effects', lecture in Newcastle, May: typescript.

n.d.

'Christians and the hydrogen bomb': typescript of article for publication in a Japanese periodical.

n.d.

'H-bombs and the Christian - No': typescript.

n.d.

'Christianity in an atomic age': manuscript.

n.d.

'A scientific autobiography by Max Planck', broadcast by CAC based on the book: typescript.

1950

Box D.7 continued

BOX D.7

continued

- D.7.3. Series of three lectures: typescripts. 1964
- 'What is science?' 21 April 1964
- 'Can a scientist believe in God?' 22 April 1964
- 'Christian faith in an atomic age' 23 April 1964
- D.7.4. 'Science and the idea of God': manuscript. n.d.
- 'The Modern World and the Gospel of Christ', 3 versions:
- (1) typescript of address delivered in Washington, D.C., 1958, and published in God's Good News. 1958
R.S. 220
- (2) shorter version published in The Layman. 1959
R.S. 239
- (3) same as (2) published in The Adult Student. 1960
- (see also A.6.2.)
- 'Life in a test-tube: so what?': ms., typescript. 1959
R.S. 238
- 'Scientific development and Christianity': manuscript. 1957
R.S. 206
- 'Science and management', lecture to British Institute of Management Course, Wadham College, Oxford: ms., correspondence. 1956
- 'Whither?', in Broadsheet: typescript. n.d.
- D.7.5. 'Science and technology in the twentieth century': (c) 1950 typescript.
- 'Finding God in science': ms., typescript. 1959
R.S. 236
- 'A word from a scientist': typescript. n.d.
- 'Civilization, science and religion': ms. notes. n.d.
- (see also D.6.49.)

D.7.5. continued

BOX D.7

continued

- D.7.5. continued 'Recent developments in science and their implication to theology': ms., 2 typescripts (which are different versions), with related correspondence. 1958-59
R.S. 233
- D.7.6. Australian Broadcasting Commission.
Correspondence with the A.B.C. re CAC's talks in the series 'Plain Christianity' and resulting correspondence from the public. 1954-55
Scripts of 'Christianity in an Age of Science' (May 1964) and 'God's World' (June 1964). These were recorded during CAC's visit to Australia 1964
Folder also includes ms. of CAC's talk 'A.D. 2000' (which he made the basis of his May broadcast) and the scripts of 2 other talks in the 'Plain Christianity' series by Professors F.H.T. Rhodes and L.C. Birch.
(see also A.9.4.)
- D.7.7. 'Mathematics is a language' and 'Mathematics and beauty' in BBC Third Programme Series 'How Mathematicians Think': drafts, notes, background material and correspondence with members of the public. 1949-50
Copies of talks as published in The Listener and copies of talks by George Temple in the same series.
- D.7.8. 'I speak for myself' in English Half Hour for the Far East, 18 December 1950: typescript, script. 1950
'Freedom in science' in BBC Third Programme Series, 21 December 1950: script, typescript. 1950
'Science Review' in English Half Hour for the Far East, 3 January 1951: script. 1951
- D.7.9. 'Science and religion', BBC Home Service, 15 January 1951: transcript of discussion between CAC and Canon I.T. Ramsey, with reference to issues raised by Fred Hoyle, John Rickman and J.Z. Young. Correspondence and notes for discussion. 1951
R.S. 117
(see also A.2.4.)

BOX D.8

BROADCASTS ON SCIENCE AND RELIGION

11 folders

- D.8.1. 'Miracles' in BBC Home Service for Schools, Religion and Philosophy Series, Summer and Autumn Terms, 1951 (2 different talks): typescripts, scripts, copy as published in *Religion and Education*, 1952. Copy of letter sent by CAC to all listeners who wrote him after the broadcasts. 1951
- D.8.2. 'Christianity in an age of science', North American Service, 22 February 1952: typescript. 1952
R.S. 135

'Science and the Christian faith': typescript of sermon which is very similar to 22 February talk. n.d.
(see also D.8.7.)
- D.8.3. Script and notes for TV Epilogue, 25 October 1953 and ensuing correspondence from listeners with CAC's replies. 1953
- D.8.4. Broadcast answers to listeners' questions in BBC Series, 'The Faith in the West' and ensuing correspondence. 1954-55
Transcripts of 2 other 'Faith in the West' discussions in which CAC participated, 2 February 1954 and 20 January 1955.
- D.8.5. 'The scientific interpretation of the universe' in BBC Home Service for Schools, Religion and Philosophy Series, Spring Term 1954. 1954

Transcripts of CAC's three talks: 'The atom and the stars', 'Life' and 'The role of man'.

Includes scripts of other talks in the series and the final discussion programme between CAC and Dr. F.A. Cockin, the Bishop of Bristol, on 'One universe'. Correspondence with producers and listeners.
- D.8.6. 'Science and Christianity', 10 July 1955: typescript and script. 1955

'Questions on the air': discussion, 3 August 1955: ms. script. 1955

'Marxist and Western account of molecular resonance' in series 'Frontiers of Knowledge' BBC-European Service, 7 February 1956: script. 1956
(see also A.11.1.)

BOX D.8

continued

- | | | |
|---------|---|---------|
| D.8.7. | 'Science and the Christian faith', sermon in the series 'Christians look at the news', 10 February 1957: transcript of service conducted by CAC, as broadcast from BBC Birmingham studios, script of sermon, correspondence with producers. | 1957 |
| D.8.8. | 'What I believe', transcript for London Calling Asia Series, 1 July 1956. Same title: transcript with annotation 'General distribution BBC January 1957'. | 1956 |
| | 'Science and the good life': typescript of same talk as above. | 1957 |
| | 'Men talking', Midland Home Service, 29 March 1957: script of discussion, ms. of CAC's contribution. | 1957 |
| | 'Chemistry by computation', script of discussion programme chaired by CAC, Third Programme, 14 August. | 1957 |
| D.8.9. | 'Problems of power', Midlands Home Service Series, 9 February 1958: transcript of discussion. | 1958 |
| | 'It's my belief', People's Service Series, 27 July 1958: script. | 1958 |
| | 'Whose Responsibility?' in series 'Viewpoint', 23 March 1960: script and correspondence. | 1960 |
| | 'In my opinion' in Woman's Hour, 19 December 1960: script. | 1960 |
| | 'Responsibility in science' in BBC Home Service for Schools, 'The Christian Religion and its Philosophy', 10 January 1961: script and typescript. | 1961 |
| | 'Science, society and religion', in BBC Overseas European Service, Good Friday, 1963: script. | 1963 |
| | 'Ten to Eight talk', 23 February 1967: transcript. | 1967 |
| D.8.10. | 'One world' discussion chaired by CAC in series 'Meeting Point', 22 October 1961: lengthy correspondence, scripts, ideas for discussion, evaluation of the discussion. | 1961 |
| D.8.11. | Folder of miscellaneous correspondence with the BBC <u>re</u> broadcasts by CAC, ideas for new programmes, suggested topics for discussion. | 1948-69 |
| | Brief correspondence with Granada TV <u>re</u> CAC's contribution, 'Why atoms combine' in <u>Discovery</u> series. | 1964 |

BOX D.9

BOOK REVIEWS

200 items

1945-74

One box containing a collection of over 200 book reviews 1946-74. The reviews are of scientific and religious books, and were written for technical journals, national and local, daily or weekly newspapers, etc.

Some of the reviews are accompanied by correspondence.

A detailed chronological list, giving the date, title and author, and place of publication of the reviews was kindly compiled by Mrs. Coulson, and is enclosed with the box.

BOX D.10

SCIENCE AND RELIGION

6 folders

Miscellaneous background material and notes assembled for works on science and religion: press-cuttings, quotations, notes on books and articles; some folders include correspondence.

BOX D.11

SCIENCE AND RELIGION

4 folders

As D.10: background material and notes assembled for lectures and writings on science and religion.

D.11.1. refers especially to Riddell Lectures, Newcastle, 1953 on 'Christianity in an age of science'.

BOX D.12

SCIENCE AND RELIGION

10 folders

- D.12.1. Science and Christian Belief, McNair Lectures, 1954
Chapel Hill, North Carolina, April 1954: bibliographical material and notes assembled for the Lectures.

R.S. 165
(see also A.5.5.)

- D.12.2. Science and Christian Belief 1954-57
Typescript as prepared for first edition, 1955.
Correspondence with publishers, 1954-57.

- D.12.3. Manuscript and printed material on social responsibility of science.

- D.12.4. Manuscript and printed material on social responsibility of science.

- D.12.5. Background material and correspondence for lectures on science and religion, philosophy of education, etc.

- D.12.6. Material on moral values in broadcasting. Folder 1955
includes copy of interview of CAC by W.E. Sengster re power of television and its effect on morals and church life.

- D.12.7. 'Science and religion: some philosophical questions', 1957
course of lectures in Oxford, Trinity Term 1957 with Canon I.T. Ramsey: notes and correspondence.

- D.12.8. 3 pp. ms. list by CAC entitled 'Papers, lectures, broadcasts, etc. that might conceivably make up a book'. The list gives reprint number, title and date for each entry.

- D.12.9. 'Responsibility' 1965
The Second Tawney Memorial Lecture, Christian Socialist Movement, London, February 1965.
Notes, background material, ms. and typescript draft, version as prepared for publication.
(see also B.14.1.)

Folder includes copies of other lectures by CAC which he compiled when writing the Tawney Lecture ('Moral responsibility in a scientific age' and 'Responsibility in science').

Box D.12 continued

BOX D.12

continued

D.12.10.

'Technology and Humanity'

1972

Summary of lecture delivered by CAC at a Study Week held in 1972. Folder includes related material, including notes by CAC ('Scientist's Responsibility in Science' and 'The Church in a Technological Society').

SECTION E

SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS,
CONFERENCES

13 BOXES

The material is presented alphabetically as far as possible.

The conferences, lecture-tours and addresses organised or given by CAC which are listed in this Section are those of the UK and thus complement the overseas 'Travel arrangements' folders in Boxes A.5 - A.11.

The organisations, publications and journals listed in this Section include both UK and overseas sources.

See also A.13.4 - A.13.12, A.13.15.

<u>BOX E.1</u>	<u>SCIENTIFIC COMMITTEES, SOCIETIES AND JOURNALS</u>	<u>9 folders</u>
E.1.1.	<u>Acta Crystallographica</u> Correspondence <u>re</u> manuscripts refereed by CAC, or submitted by him for publication.	1948-72
E.1.2.	<u>The British Association for the Advancement of Science</u> Correspondence <u>re</u> invitations to address meetings, publication of addresses, etc. (see also B.3.13., B.10.9., D.3.5. and D.7.2.)	1948-63
E.1.3.	<u>The British Council</u> Correspondence <u>re</u> lecture tours by CAC and his reports on them. Reports on British Council students studying with CAC. Arrangements for foreign scientists visiting the UK. See also those folders in Section A which relate to CAC's visits abroad on behalf of the Council.	1949-70
E.1.4.	<u>British Empire Cancer Campaign</u> Correspondence <u>re</u> grant to CAC for calculating machine for work on carcinogenic hydrocarbon molecules, and his report on the work, 29 January 1949. (see also B.1.12.)	1948-52
E.1.5.	<u>British Iron and Steel Research Association</u> Minor correspondence and reports.	1947-52
E.1.6.	<u>British Rubber Producers' Research Association</u> Correspondence <u>re</u> research supervised by CAC and <u>re</u> his appointment as consultant to the Association.	1947-53
E.1.7.	<u>Cambridge Philosophical Society</u> Correspondence <u>re</u> manuscripts refereed by CAC or submitted by him for publication in <u>Proc. Camb.Phil.Soc.</u>	1948-71
E.1.8.	<u>Canadian Journal of Chemistry</u> Correspondence <u>re</u> manuscripts refereed by CAC.	1962-65
E.1.9.	<u>Cancer Research</u> Correspondence <u>re</u> manuscripts refereed by CAC. (see also B.38.4.)	1954-60

BOX E.2 SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS 11 folders
AND CONFERENCES

E.2.1.-E.2.2. The Chemical Society 1948-66

Correspondence re manuscripts refereed by CAC or submitted by him for publication in the Journal of the Chemical Society. CAC's reports as referee contain extensive discussion of scientific material. Some of the correspondence deals with editorial policy as CAC was a member of the Publications Committee.
(see also A.13.6.)

E.2.3. Valence and Relativity 1966-68

Discussion meeting sponsored by the Chemical Society, under CAC's initiation and organization, in Oxford, 9-11 January 1968.

Extensive correspondence with participants, copy of abstracts, committee papers, circular letters and replies, list of participants, brochure, draft of note for publication in Nature.

E.2.4. Theoretical Chemistry Group of the Chemical Society 1972

Committee papers, correspondence.

E.2.5. Chemical Physics Letters 1966-74

Extensive correspondence with editors and publishers and with contributors, which is of interest for the scientific information it contains.

CAC was a member of the Advisory Editorial Board from its inception.

E.2.6. Chemical Physics 1973

Correspondence re establishment of journal (see also E.2.5.).

E.2.7. Chemical Bond Approach Project 1961-63

Correspondence, draft chapter for school's textbook, with CAC's comments.

E.2.8. Commonwealth Fund 1956

Correspondence re review of Fellowships offered.

BOX E.2

continued

- | | | |
|---------|--|---------|
| E.2.9. | <u>Council of Education in the Commonwealth</u>
Correspondence. | 1960 |
| E.2.10. | <u>Council of Science and Technology Institutes</u>
Correspondence.
CAC was Chairman of the Board in 1973. | 1972-74 |
| E.2.11. | <u>Conference of Professors of Applied Mathematics</u>
Miscellaneous minor correspondence. | 1973 |

<u>BOX E.3</u>	<u>SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS AND CONFERENCES</u>	<u>7 folders</u>
E.3.1.	<u>The Faraday Society</u> Minor correspondence re Symposium on Molecular Quantum Mechanics, Royal Institution, December 1968. (CAC served on the organizing committee.) (see also A.13.9.)	1968
E.3.2.	<u>Hospital Physicists' Association</u> Papers and correspondence, mainly re administra- tion of Douglas Lea Memorial Fund. (see also E.6.4.)	1962-71
E.3.3.	<u>International Business Machines Corporation</u> Correspondence re invitation to CAC to be 'Spokesman for England' for IBM World Trade - IBM Research Fellowship Program, recommending scientists for periods of work in IBM Laboratory, San Jose, California.	1968-72
E.3.4.-E.3.5.	<u>IBM Research Fellowship</u> (tenable at Oxford University) CAC served as Chairman of the appointing committee. 2 folders of correspondence re establishment of Fellowship and appointment of Fellows: E.3.4. 1962-64 E.3.5. 1965-67	1962-67
E.3.6.	<u>Imperial Chemical Industries Limited</u> Correspondence re CAC's appointment as con- sultant to ICI for three years 1949-51, and 1957-59, and his subsequent comments on research reports. Notes and reports of meetings: includes corres- pondence on academic freedom and industrial support. (see also B.35.16.)	1949-51, 1956-61
E.3.7.	<u>The Independent University</u> CAC was a member of the Academic Advisory Committee of the University. Correspondence and papers re planning of the University.	1971-74

BOX E.4

SCIENTIFIC COMMITTEES, SOCIETIES AND JOURNALS

4 folders

E.4.1.-E.4.2.

Institute of Mathematics and its Applications

1959, 1964-73

CAC served as its President 1972-73.

Committee papers and related correspondence; correspondence re CAC's Presidential Address 'Mathematics and the Real World'; correspondence re the Institute's membership, publications, conferences, etc. Copy of CAC's address on 'Mathematics and Biology'.

R.S. 419

(see also A.13.11., B.10.4.)

E.4.3.

Institute of Physics and the Chemical Society

1969-70

Correspondence re the organization of a joint conference on photo-electron spectroscopy, Oxford, 14-16 September, 1970.

(see also A.13.8.)

E.4.4.

International Academy of Quantum Molecular Science.

1967-73

Correspondence re meetings and symposia, award of Academy's annual prize.

BOX E.5

INTER-UNIVERSITY COMMITTEE ON COMPUTING 7 folders

CAC was Oxford University's representative on this Committee, which was established in 1957 to advise the Committee of Vice-Chancellors and Principals. CAC chaired several meetings and took the initiative in corresponding with other members of the Committee re filling the offices of Chairman and Secretary when vacancies occurred. (During CAC's service on the Committee the office of Chairman was held successively by D.R. Hartree, W. Jackson and D.G. Christopherson while the office of Secretary was held by A.S. Douglas, J. Howlett and D.C. Gilles.) CAC resigned from the Committee in December 1963, his place being taken by Professor L. Fox, Director of the Oxford University Computing Laboratory.

This box contains official papers, reports and memoranda of the Committee and its Sub-Committees; CAC's notes of meetings and discussions; correspondence with Committee officers and members, and with colleagues in other universities.

The topics include: the financing and replacement of computers, charging for computer time in universities, relations with the Universities Grants Committee, reports from various university computing laboratories on their facilities and services, the composition of the Committee, drafts of the Committee's report.

Seven folders presented in chronological order:

E.5.1.	1957
E.5.2.	1958
E.5.3.	1959
E.5.4.	1960
E.5.5.	1961
E.5.6.	1962
E.5.7.	1963-64

(see also H.6.1.-H.6.5.)

<u>BOX E.6</u>	<u>SCIENTIFIC COMMITTEES, SOCIETIES AND JOURNALS</u>	<u>7 folders</u>
E.6.1.	<u>International Journal of Quantum Chemistry</u> CAC was a member of the Editorial Advisory Board. Correspondence <u>re</u> refereeing of papers and CAC's reports.	1967-71
E.6.2.	<u>Joint Mathematical Council of the United Kingdom</u> Correspondence, committee papers.	1964, 1972-73
E.6.3.	<u>Journal of Chemical Physics</u> CAC was an Associate Editor. Correspondence <u>re</u> manuscripts refereed by CAC, whose reports contain extensive discussion of scientific subjects.	1957-70
E.6.4.	<u>Douglas Lea Memorial Lecture Fund</u> CAC was a Trustee of the Fund. Correspondence <u>re</u> invitations to lecturers, management of the Fund, accounts. (see also E.3.2., Hospital Physicists' Association)	1948-72
E.6.5.	<u>Lennard-Jones Society</u> Correspondence <u>re</u> proposed formation of theoretical chemistry group.	1968-69
	<u>Lindemann Trust Fellowship</u> Correspondence, committee papers.	1971-72
E.6.6.	<u>London Mathematical Society</u> CAC served as Associate Editor for its <u>Bulletin</u> . Correspondence <u>re</u> refereeing of papers, editorial policy, CAC's reports, monthly statements of papers accepted for publication.	<u>1961-73</u>
E.6.7.	<u>Mathematical Association</u> CAC was the first Chairman of the Oxford Branch, established in 1959, and was President of the Association in 1968-69. Committee papers and related correspondence, correspondence <u>re</u> arrangements for 1965 conference in Oxford and <u>re</u> the Centenary Appeal.	1959-72

<u>BOX E.7</u>	<u>SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS AND CONFERENCES</u>	<u>10 folders</u>
E.7.1.	<u>Mathematics in Education</u> Miscellaneous correspondence and duplicated material on the teaching of mathematics in schools by radio or TV, and with various committees and institutions concerned. Correspondence re submissions on Mathematics to the Robbins Committee on Higher Education, Oxford Committee for the Advancement of Mathematical Broadcasting and Television, and School Mathematics Project.	1961-62
E.7.2.	<u>Medical and Technical Publishing Co. Ltd. (MTP)</u> CAC agreed to edit Vol. II of the MTP <u>Review of Theoretical Chemistry</u> . Correspondence with contributors and publishers. (The editorship was taken over by Professor A.D. Buckingham after CAC's death.)	1972-74
E.7.3.	<u>Molecular Crystals</u> CAC served on the Editorial Advisory Board from the founding of the journal in 1965. Editorial correspondence.	1965-72
E.7.4.	<u>National Coal Board</u> Correspondence re possibility of instituting a Research Fellowship on 'Study of theoretical problems on coal structure' under direction of CAC at Oxford, to be supported by the NCB.	1952, 1960-62
E.7.5.	<u>National Physical Laboratory (Mathematics Division)</u> CAC was Chairman of the Mathematics Divisional Panel. Correspondence re CAC's visits to Mathematics Division and his reports.	1959-63
E.7.6.	<u>National Research Development Corporation</u> Miscellaneous reports and correspondence, mainly on automation, computer application and other NRDC projects.	1950-62

BOX E.7

continued

E.7.7.

Nature

1950-73

Correspondence re articles etc. submitted to CAC for references, reviews by CAC of publications; obituaries or tributes by CAC of Sir John Lennard-Jones, Dr. Linus Pauling, Professor John Griffith.

(see also C.8.2., G.11.3.)

E.7.8.

Naval Attaché's Office, US Navy

1948-58

Correspondence re exchange of publications.

E.7.9.

New Scientist

1957-68

Correspondence re reviews by CAC and re biographical profile of CAC.

E.7.10.

Quantum Chemistry Conference, Oxford, April 1961
(organized by CAC)

1961

Programme, list of participants, invoices, correspondence, application for grants, report by CAC of conference.

<u>BOX E.8</u>	<u>SCIENTIFIC COMMITTEES, SOCIETIES AND JOURNALS</u>	<u>6 folders</u>
E.8.1.	<u>'Variational Methods in Quantum Mechanics'</u> Quantum Theory Conference, Oxford, 1-3 October 1969: programme, brochures, information for participants, list of members, invitations and correspondence with speakers, accounts and invoices.	1968-69
E.8.2.	<u>Philosophical Magazine</u> Correspondence <u>re</u> refereeing of papers.	1949, 1969-72
E.8.3.-E.8.6.	<u>The Physical Society</u> (The Institute of Physics and the Physical Society) Correspondence <u>re</u> refereeing of papers. 4 folders in chronological order:	1949-73
E.8.3.		1949-55
E.8.4.		1955-65
E.8.5.		1965-68
E.8.6.		1968-73

BOX E.9 SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS 8 folders
AND CONFERENCES

E.9.1.-E.9.4. Rencontre for Mathematicians and Chemists, Oxford, 1971-73
6-8 April 1973, organized by CAC and funded by
the SRC.

E.9.1. Correspondence with administration
of SRC re application for grant and
subsequent organization of rencontre.

E.9.2. Invitations to mathematicians and
chemists and their replies (not indexed).

E.9.3. List of acceptances. Correspondence
with participants and with Oxford Uni-
versity re accommodation and programme.

E.9.4. Letters of comment from participants
following the rencontre (indexed).

E.9.5.-E.9.8. Miscellaneous reports on research projects under contract:

E.9.5. 'The Electronic Theory of Transition 1958-59
Metals' (CAC and Altmann), Progress
Reports 1, 2, 3.

E.9.6. 'Studies of Bonds Involving Fluorine' 1963-64
(CAC and Caldow), Contract PD/57/08/R1
Progress Reports 1 and 2.

E.9.7. 'The Electronic Theory of Transition 1961-63
Metals' (CAC, Hume-Rothery, Altmann)
Contract 13/5/165/1065. Technical
Reports 1, 2, 4-9.

E.9.8. 'Electronic Structure of Zirconium and 1957
Titanium Metals' (CAC, Altmann and
Cohan). Progress Report no.4

<u>BOX E.10</u>	<u>SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS AND CONFERENCES</u>	<u>10 folders</u>
E.10.1.	<u>Pugwash Group</u> Committee papers and announcements (very little correspondence).	1963-74
E.10.2.	<u>Quantum Theory Conference, Oxford, 26-28 September 1973, organized by CAC.</u> Programmes and brochures, list of participants, invitations and correspondence with participants, correspondence with Oxford University re organization of conference, accounts and invoices.	1971-74
E.10.3.	<u>Radar Research Establishment</u> Newsletters for 1950-51, 1953-54, 1956-62, minor correspondence.	1950-62
E.10.4.	<u>The Royal Society</u> Correspondence re papers refereed by CAC or submitted by him for publication in <u>Proc.Roy.Soc.A.</u> Correspondence re overseas visiting professorships (with special reference to CAC's term at University of East Africa 1968-69 (see also A.10.3. and A.10.4.)) Correspondence re CAC's service on Royal Society committees.	1967-74
E.10.5.	<u>Science for Peace</u> Bulletins and printed matter, correspondence re policy.	1951-57
E.10.6.	<u>Science Progress</u> Correspondence re publications and reviews.	1948-72
E.10.7.	<u>Scientific Computing Service</u> Minor correspondence and printed matter.	1942-55

Box E.10 continued

BOX E.10

continued

- | | | |
|----------|---|---------------|
| E.10.8. | <u>Società Italiana di Cancerologia</u> | 1957-58, 1974 |
| | CAC was elected a foreign member in 1957. | |
| | Minor correspondence. | |
| E.10.9. | <u>Society for Freedom in Science</u> | 1951, 1962 |
| | Correspondence <u>re</u> goals of the Society. | |
| E.10.10. | <u>Society for the Protection of Science and Learning</u> | 1968 |
| | Correspondence <u>re</u> expansion of membership. | |

BOX E.11

SCIENTIFIC SOCIETIES

7 folders

E.11.1.-E.11.6. Society for Social Responsibility in Science, USA. 1949-71

CAC was a member of the Council from the Society's foundation.

Constitution, and other papers re foundation of the organization, very full sets of committee papers, memoranda, financial reports, correspondence, lists of members, newsletters and publicity items.

6 folders in chronological order:

E.11.1. 1949-52

E.11.2. 1953-55

E.11.3. 1956-60

E.11.4. 1961-65

E.11.5. 1966-69

E.11.6. 1970-71, miscellaneous newsletters.

E.11.7. British Society for Social Responsibility in Science and Oxford Society for Social Responsibility in Science. 1969-70

Committee papers and correspondence.

<u>BOX E.12</u>	<u>SCIENTIFIC COMMITTEES, SOCIETIES, JOURNALS AND CONFERENCES</u>	<u>5 folders</u>
E.12.1.	<u>Solvay Conference</u> Correspondence re a possible contribution by CAC (never completed).	1949-50
E.12.2.	<u>Theoretica Chimica Acta</u> Correspondence re papers refereed by CAC and those submitted by him for publication.	1963-73
E.12.3.-E.12.4.	<u>University of Botswana, Lesotho and Swaziland</u> Arrangements for CAC to act as External Examiner in Mathematics 1969-72, reports and related correspondence, including invitation to visit University of Witwatersrand, Johannesburg. Examinations papers and results.	1969-72
E.12.5.	<u>Zeitschrift für Naturforschung.</u> Correspondence.	1948-49

BOX E.13

CORRESPONDENCE

10 folders

One box of shorter correspondence with publishers and editors. The correspondence deals with:

- requests to write reviews (see D.9) and articles,
- refereeing of manuscripts submitted for publication,
- advice re new series, journals or books,
- replies to questionnaires,
- sponsorship of student magazines,
- requests for interviews.

As in the other sections of the collection, many of the letters contain interesting autobiographical recollections, statements of CAC's religious and moral beliefs and of his standards of academic excellence.

10 folders presented in alphabetical order:

E.13.1.	Academic Press	1954, 1957, 1962 1968-69
	<u>Advances in Chemistry Series</u>	1966
	Aldus Books Ltd.	1968
	George Allen and Unwin	1970
	American Scientific Affiliation	1962
	Bailey Bros. and Swinfen Ltd.	1959
	Blackwell Scientific Publications	1958
	<u>British Journal for the Philosophy of Science</u>	1958
	<u>British Weekly</u>	1958
	Butterworths (review of <u>Grundriss der Quanten- chemie</u> , by H. Preuss)	1956, 1962, 1971
E.13.2.	Calcutta Mathematical Society	1958
	<u>Carbon</u>	1965-70
	Chemical Society of the USSR	1968
	Chemisches Zentralblatt	1955
	<u>Chemistry in Britain</u>	1969
	<u>Cherwell</u>	1955-67
	Churchill and Benjamin Ltd.	1968
	<u>Colliers Encyclopaedia</u>	1961

E.13.2. continued

<u>BOX E.13</u>	<u>continued</u>	
E.13.2. continued	<u>Computer Physics Communications</u>	1970
	<u>Cooperation Canada</u>	1973
	<u>Croatica Chemica Acta</u>	1960, 1973
	Delisle Ltd.	1964
E.13.3.	Paul Elek Ltd.	1973
	Elsevier Publishing Co.	1967-68
	<u>Endeavour</u>	1956
	<u>Experientia</u>	1951
	<u>Expository Times</u>	1958-59
	Victor Gollancz Ltd.	1958, 1966
	<u>Handbook of Physics</u>	1952-53
	George G. Harrap and Co. Ltd.	1960
	Hodder and Stoughton Ltd.	1960-61
	Holden-Day Inc.	1961
E.13.4.	<u>Inorganica Chemica Acta</u>	1967, 1972
	<u>International Journal of the Physics and Chemistry of Solids</u>	1961, 1971
	Interscience Publishers Ltd.	1954
	<u>Isis</u>	1966-67
	<u>Journal of the American Chemical Society</u>	1962-65
	<u>Journal of the Chemical and Physical Society</u>	1956
	<u>Journal of Inorganic and Nuclear Chemistry</u>	1955, 1959
	<u>Journal of Natural Sciences and Mathematics</u>	1966
	<u>Journal of Theoretical Biology</u>	1965
E.13.5.	Logos Press Ltd.	1967
	<u>Los Angeles Times</u>	1969
	McGraw-Hill	1957-59
	Macmillan	1955-56, 1960, 1970
	<u>Mathematical Gazette</u>	1949, 1969
	<u>Mathematika</u>	1971
	Methuen	1966

<u>BOX E.13</u>	<u>continued</u>	
E.13.6.	<u>der Monat</u>	1954
	<u>Near and Far East News</u>	1960
	Thomas Nelson and Sons Ltd.	1965-66
	<u>Nigerian Journal of Science</u>	1965
	North-Holland Publishing Co.	1964
	<u>Il Nuovo Cimento</u>	1971-72
E.13.7.	Oliver and Boyd Ltd. (see also A.2.3.)	1961
	<u>Organic Mass Spectrometry</u>	1973
	<u>Oxford Magazine</u>	1955-57
	<u>Oxford Mail</u>	1954
	<u>Oxford Times</u>	1955
	<u>Philosophy</u>	1956
	<u>Physica Status Solidi</u>	1968
	<u>Physics Letters A</u>	1968-69
	Plenum Publishing Co. Ltd.	1969
E.13.8.	Quantum Chemistry Program Exchange	1965
	<u>Quarterly Journal of Mathematics</u>	1955-56
	<u>Quarterly Journal of Mechanics and Applied Mathematics</u>	1954-61
	<u>Reader's Digest</u>	1959-60
	<u>Research</u>	1949
	<u>Reviews of Modern Physics</u>	1973
	Routledge and Kegan Paul Ltd.	1963
E.13.9.	<u>Science for Non-Scientists</u>	1962
	<u>Scientific American</u>	1963
	<u>Scientific Monthly</u>	1955
	<u>Scope</u>	1955
	Society for Industrial and Applied Mathematics	1969
	Society of Chemical Industry	1955-57
	<u>Spectrochimica Acta</u>	1967
	Vincent Stuart Publishers Ltd.	1958

E.13.9. continued

BOX E.13

continued

E.13.9.
continued

Sunday Telegraph

1962

Tetrahedron

1959

Time and Tide

1965

Transworld Student Library

1972

E.13.10.

University Tutorial Press

1953

Van Nostrand Reinhold Co.

1969

John Wiley and Sons Ltd.

1954, 1964,
1971

World Science Review

1957

Zenith (magazine of the Oxford University Scientific
Society)

1964-68

(see also D.2.10.)

SECTION F

RELIGIOUS, EDUCATIONAL AND HUMANITARIAN
ORGANISATIONS

7 BOXES

Although CAC was known as a convinced Methodist and pacifist throughout his life, these folders show the full range of his humanitarian interest, expressed in religious, educational, political and social activities. In some of these he played a public and major role (for example, as Chairman of OXFAM, as Vice-President of the Methodist Conference or as a member of the Central Committee of the World Council of Churches), but others are less well known. To all he brought his distinctive power of personal involvement; many of the relatively routine letters in the folders contain thoughtful material of considerable biographical and general interest.

Most of the material in this Section consists of correspondence, reports, committee and organisational matters relative to institutions and to meetings, conferences and publications sponsored by them.

With the exception of Box F.7, the material is not in alphabetical order; for ease of reference, an alphabetical index to all the organisations in this Section is provided overleaf, and cross-referenced to related material in other sections of the collection are given where possible.

Alphabetical Index to Organizations in Section F

Aldermaston March Committee	F.7.1.
Alliance	F.3.1.
Amnesty International	F.7.1.
Anglican-Methodist Student Visitation	F.7.1.
Anglo-American Theological Conferences (Oxford Institute of Methodist Studies)	F.3.2., F.3.3.
<u>Approach</u>	F.7.1.
Asia Christian Colleges Association	F.7.1.
Bertrand Russell Peace Foundation	F.7.1.
Birmingham Central Mission	F.7.1.
Bradford University - Chair of Peace Studies Appeal	F.7.1.
British Council for Peace in Vietnam	F.7.1.
British Council of Churches	F.3.4.
British Peace Committee	F.1.5.
British Social Biology Council	F.7.1.
Campaign for Nuclear Disarmament	F.3.5.
Canadian Peace Research Institute	F.7.2.
<u>Cassowary</u>	F.7.2.
Central Council for the War on Want	F.3.6.
Christ and Unemployment Crusade	F.2.3.
Christian Action	F.1.6.
Christian Education Movement	F.3.7.
Christian Frontier Council	F.7.2.
<u>Christian News-Letter</u>	F.7.2.
Christian Peace Conference	F.7.2.
Christian Science Publishing Society	F.7.2.
Clifton College	F.3.8.
Committee for the Reprieve of The Mosul Prisoners	F.7.2.
Committee on Science and Freedom	F.7.2.
Council for Academic Freedom and Democracy	F.7.2.
Council for Education in World Citizenship	F.7.2.
Council for Volunteers Overseas	F.3.9.
Council of Christian Pacifist Groups	F.1.1.

Crux Press	F.7.2.
Cuban Defence Committee	F.7.2.
Czechoslovak News Agency	F.7.2.
Czechoslovak Trade Unions	F.7.2.
<u>Daily Worker</u>	F.7.2.
Emergency Committee for World Government	F.7.2.
Epworth Press	F.7.3.
Fellowship of Reconciliation	F.1.3.
Fellowship of the Kingdom	F.7.3.
The Fellowship Party	F.7.3.
Fund for Human Need	F.4.1.
<u>Hastings Encyclopaedia of Religion</u>	F.7.3.
Hydrogen Bomb Committee	F.7.3.
Institute of Christian Education	F.4.2.
Institute of Christian Education at Home and Overseas	F.2.5.
International Council for Christian Leadership	F.7.3.
International Preparatory Committee	F.7.3.
International Voluntary Service for Peace	F.1.7.
International War Crimes Tribunal	F.7.3.
Japan Council against Atomic and Hydrogen Bombs	F.7.4.
John Wesley Society	F.7.4.
Korean University	F.7.4.
Luton Industrial College	F.4.3.
Medical Aid Committee for Vietnam	F.7.4.
Methodist Church - VIth Formers Conference	F.4.4.
Methodist Education Committee	F.7.4.
Methodist Peace Fellowship	F.4.5.
<u>Methodist Recorder - Science Supplement</u>	F.4.6.
Methodist Spiritual Healing and Psychological Committee	F.4.8.
Methodist Student Work Committee	F.4.7.
Ministerial Training Committee	F.7.4.
Mongrels	F.7.5.
National Association for Teachers of Religious Knowledge	F.4.9.

National Campaign for the Abolition of Capital Punishment	F.6.1.
National Center of Communication	F.7.5.
National Council for Abolition of Nuclear Weapons Tests	F.7.5.
National Council for Civil Liberties	F.7.5.
National Peace Council	F.7.6.
<u>New Directions</u>	F.7.6.
Nuffield Foundation	F.7.6.
Order of Unity	F.7.6.
Oxfam	F.5.1.-F.5.10.
Oxford Christian Movement	F.6.2.
Oxford City Labour Party	F.7.6.
Oxford Committee (Area Campaign) for the Abolition of Nuclear Weapons Tests	F.7.6.
Oxford Committee for Community Relations	F.7.6.
Oxford Committee for Racial Integration	F.7.6.
Oxford Council of Churches	F.6.3.
Oxford House	F.7.6.
Oxford Overseas Students' Hostel	F.6.4.
Oxford Pastorate	F.6.5.
<u>Peace News</u>	F.7.6.
Peace Pledge Union	F.7.6.
Present Question Conference	F.6.6.
<u>Pulpit Digest</u>	F.7.6.
Queen's College, Taunton	F.7.6.
Queenswood School	F.7.7.
Regent's Park College, Oxford	F.7.7.
Rencontre pour la Détente Internationale	F.7.7.
St. George's House, Windsor	F.6.8.
St. George's House, Wolverhampton	F.6.7.
St. Martin-in-the-Fields Discussion Group	F.7.7.
St. Paul's College, Cheltenham	F.6.13.
Scientific Research Committee of the Churches' Fellowship for Psychical and Spiritual Studies	F.7.7.
Society for Anglo-Chinese Understanding	F.6.9.

Society for Cultural Relations with USSR	F.7.7.
Society for International Development	F.6.10.
Society for the Promotion of Christian Knowledge	F.7.7.
Society of Friends' Peace Conference	F.7.7.
<u>Spectator</u>	F.7.7.
Standing Joint Pacifist Committee	F.6.11.
Student Christian Movement	F.7.8.
<u>Survey Magazine</u>	F.7.9.
<u>Together</u>	F.7.9.
Union of Democratic Control	F.7.9.
<u>Universities Quarterly</u>	F.7.9.
Urban Theology Unit	F.6.12.
Vereinigungen des Verfolgten des Naziregimes	F.7.9.
William Temple College, Rugby	F.6.14.
Women's Strike for Peace	F.7.9.
<u>World Christian Digest</u>	F.7.9.
World Constitutional Convention	F.7.9.
World Council of Churches	F.7.10.
World Methodist Council	F.7.10.
World Refugee Year	F.7.10.
World's Student Christian Federation	F.7.10.

NOTE: CAC was Senior Treasurer of JACARI (Joint Action Committee Against Racial Intolerance) from about 1956 until his death. Material relating to this movement, and CAC's involvement with it, is currently in the library of Professor Kenneth Kirkwood, Rhodes Professor of Race Relations, Oxford University.

BOX F.1

PACIFISM

7 folders

F.1.1.

Council of Christian Pacifist Groups

1933-34

Correspondence, programme, copies of addresses delivered at public meeting held in Central Hall, Westminster, 9 November 1934, on 'Christ's Call to Make Peace'. Ms. and typescript of CAC's contribution. Copy of Manifesto issued by Council. (CAC was Chairman of the Youth Section - see correspondence in F.1.3.)

'Cambridge Group'

Numerous drafts of 'Peace Pamphlet' written by four members of the Cambridge Group Movement, and correspondence between members re pamphlet.

(see also A.15, A.16, A.17, D.5.3-D.5.7)

F.1.2.

One file of extensive, thoughtful correspondence on pacifism, conscientious objection, use of the atom bomb. Many of the letters are from members of the Cambridge Group Movement. Letters include references to the 'Peace Pamphlet' and to the 1934 Christian Pacifist Groups meeting.

1933-36,
1940-45

F.1.3.

Fellowship of Reconciliation

Correspondence re meetings of The Fellowship and re establishment of a Youth Section of the Council of Christian Pacifist Groups.

1934-36

Misc. correspondence re various activities of the Fellowship (meetings, journal, Oxford University branch, etc.). Includes a substantial amount of correspondence with Japanese scientists and other interested parties re possible BBC feature on effects of atomic bomb on births in Japan.

1953-57

(see also D.5.6, CAC's Alex Wood Memorial Lecture, 1953)

BOX F.1. continued

- F.1.4. Extensive background material (press cuttings, poems, official letters, notices of meetings, etc.) on pacifism and conscientious objection, as assembled by CAC. 1934-41

Includes ms. and typescript notes by CAC from the current literature, typescript of 3 articles or notes by CAC 'Something to Do', 'The Undergraduate and War' and 'Conscription of Women', and copies of 2 letters sent out by CAC to members of the Cambridge Group. Related correspondence.

Note: The material in this folder is very closely linked to the other papers in Box F.1 and therefore has been left in sequence although it more properly belongs in Section D.

- F.1.5. British Peace Committee 1951-53

Correspondence with members and officers re various appeals, international congresses, publications of the Committee. Includes numerous printed documents issued by the committee and comments by CAC on J.D. Bernal's pamphlet 'Disarmament' (1952).

The correspondence especially relates to the Vienna Peace Congress, 1951-53. CAC was asked to be one of the sponsors of the 1952 Congress but declined. He drafted a letter to the Times (which was to be signed by several other invited sponsors) setting out their reasons for not participating. CAC's correspondence with the officers of the British Peace Committee and with Canon L.J. Collins (a signatory of the letter to the Times) exhibits the same thoughtful, careful concern which is such a feature of the documents preserved in this section of the collection.

- F.1.6. Christian Action 1958-69

Correspondence and printed material re work of the organization, especially re the Defence and Aid Fund. Includes drafts of pamphlet on 'Nuclear deterrent and Christian conscience'.

- F.1.7. International Voluntary Service for Peace 1958-67

CAC was a Vice-President for several years.

Correspondence with members and officials of the organization, especially re establishment of a branch in Oxford.

<u>BOX F.2</u>	<u>PACIFIST, EDUCATIONAL AND HUMANITARIAN ACTIVITIES</u>	<u>5 folders</u>
F.2.1.	<u>Cambridge Sunday Schools</u> Reports by CAC (typescript and ms.) on the work of the Sunday Schools in the Cambridge area.	1935-37
F.2.2.	<u>'The Christian View of the Family'</u> Document prepared for the Methodist Conference. Annotated and amended drafts and 2 pp. typescript comments by CAC.	1936
F.2.3.	<u>'Christ and Unemployment Crusade'</u> Printed matter and correspondence re arrangements for CAC to speak at Leys School, Cambridge, 1936.	1936-39
F.2.4.	Correspondence re German refugees whom CAC tried to assist, mainly through the Social Welfare Depart- ment of the Methodist Church.	1939
F.2.5.	<u>Institute of Christian Education at Home and Overseas</u> Printed material and copy of note by A. Comfort for publication in <u>Christian News-letter</u> . Annotated by CAC.	1949-54

9 folders

1957-61

Correspondence and printed papers.

1956-69

These conferences grew out of discussions at the 1956 World Methodist Conference at Lake Junaluska (see A.6.9.). They were held in Oxford in the summers of 1958, 1962, 1965 and 1969. CAC handled all the practical details for organizing and booking the conferences, which used Lincoln College as a base.

2 extensive folders of correspondence and printed matter:

F.3.3. 1960-69

1955-69

Committee papers, correspondence, summary of CAC's address at the Conference on Scientific and Technological Education, London, March 1955.

1958-70

CAC was one of the sponsors of the organization.

Correspondence re aims, activities and publications.
Extensive printed material, issued by the organization.
Committee papers.

The folder includes papers relative to the Oxford Branch of C.N.D. and to the Christian Group of C.N.D.

1958

CAC was a patron.

Minor correspondence (2 letters only).

BOX F.3 continued

F.3.7. Christian Education Movement 1970-73

CAC was a Vice-President.

Minor correspondence.

(see also F.7.8, one folder of correspondence re
Student Christian Movement)

F.3.8. Clifton College 1957-71

CAC's school. He was a Governor of the College.

Correspondence, agenda and notices of meetings.

F.3.9. Council for Volunteers Overseas 1969-71

CAC was member of the Council from 1969.

Minor correspondence, reports, printed matter.

BOX F.4

PACIFIST, EDUCATIONAL AND RELIGIOUS
ORGANIZATIONS

9 folders

F.4.1.

Fund for Human Need

1960-67

CAC was a patron of the Fund.

Misc. correspondence, charter, arrangements for conference, newsletters.

F.4.2.

Institute of Christian Education

1955-56

Minor correspondence, numerous memoranda for discussion at conference, outline for a proposed book to be published by the Institute. (Folder consists almost entirely of printed matter.)

F.4.3.

Luton Industrial College

1972-74

CAC was its Honorary President from 1972.

Correspondence, printed material re the College.

(see also D.2.9. for copy of Inaugural Lecture delivered at the College, 28 September 1968, by CAC)

F.4.4.

Methodist Church - VIth Formers Conference

1955-69

CAC attended many of these annual conferences over the years.

Correspondence with organisers and participants.
1 p. note by CAC re conferences.

F.4.5.

Methodist Peace Fellowship

1954, 1956-58,
1962-73

Mostly committee papers and printed matter, with some related correspondence.

F.4.6.

Methodist Recorder - 'Science Supplement'

1959-73

CAC helped to plan and launch the Supplement and was a frequent contributor.

Correspondence re planning and publication (the first issue was in November 1959), with the editor (Professor David Wright) re suggestions for articles and/or contributors.

The folder also contains numerous letters and mss. relative to a special issue of the Supplement which was

BOX F.4 continued

F.4.6

(continued)

devoted to psychical research. 7 pp. ms. and 3 pp. typescript of CAC's contribution 'Some comments by a scientist'. Comments by the contributors on each other's mss.

(see also the numerous items in Section D, pp. which were published in the Methodist Recorder)

F.4.7.

Methodist Student Work Committee

1969

Correspondence and papers re survey on Methodist-Anglican Union.

F.4.8.

Methodist Spiritual Healing and Psychological Committee

1953-56

Correspondence re methods of nomination to committees and re proposed International Christian House in Oxford.

F.4.9.

National Association for Teachers of Religious Knowledge (NATORK)

1967-68

Correspondence and news-letters.

BOX F.5

OXFAM (Oxford Committee for Famine Relief)

10 folders

CAC was elected to membership of the Council of Management in 1960 and was elected Chairman in December 1965. He served as Chairman until 1971.

One box of correspondence, printed material on OXFAM's activities, notes for speeches, committee meetings.

- | | |
|---------|--|
| F.5.1. | 1960-65 |
| F.5.2. | 1966 |
| F.5.3. | 1967 |
| F.5.4. | 1968 |
| F.5.5. | 1969 |
| F.5.6. | 1970 |
| F.5.7. | 1971 |
| F.5.8. | 1972-73 |
| F.5.9. | Third World I |
| F.5.10. | Reports by CAC of his visits to OXFAM projects in East Africa during his sabbatical term there, 1968-69. |

(see also A.10.3, A.10.4, B.16.1.-B.16.3.)

<u>BOX F.6</u>	<u>PACIFIST AND RELIGIOUS ORGANIZATIONS</u>	<u>14 folders</u>
F.6.1.	<u>National Campaign for the Abolition of Capital Punishment</u> Printed matter, minor correspondence.	1961-69
F.6.2.	<u>Oxford Christian Movement</u> CAC was its Senior Member from 1972. Correspondence.	1972-73
F.6.3.	<u>Oxford Council of Churches</u> CAC was on the Council from 1961. Correspondence.	1960-71
F.6.4.	<u>Oxford Overseas Students' Hostel</u> CAC was a sponsor of the original appeal. Correspondence, printed matter.	1968-70
F.6.5.	<u>Oxford Pastorate</u> CAC was on the Council. Correspondence.	1962
F.6.6.	<u>Present Question Conference</u> Correspondence, 14 pp. heavily corrected typescript of CAC's address 'The Longing for Truth' delivered at the 1964 conference in Oxford. <u>RS. 145.</u>	1950-53
F.6.7.	<u>St. George's House, Wolverhampton</u> CAC was a member of the Board of Patrons and Advisers. Minor correspondence, printed matter.	1959-63

BOX F.6. continued

F.6.8. St. George's House, Windsor 1967-73

Correspondence (especially re weekend meeting on Science and Human Potentiality held in December 1967), printed matter. CAC's address to the meeting was titled 'The Impact on Man of his Control of the Physical World'. Folder includes summary of his talk and CAC's notes taken at discussion.

F.6.9. Society for Anglo-Chinese Understanding 1965-68

Correspondence, committee papers, printed matter re goals and philosophy of the Society. CAC resigned from the Society in 1968.

F.6.10. Society for International Development 1971-73

Printed matter, correspondence.

F.6.11. Standing Joint Pacifist Committee 1956-57

Minor correspondence, printed matter.

F.6.12. Urban Theology Unit 1969-73

CAC was a Patron.

Correspondence, printed matter. 1 p. abstract of CAC's talk 'Technology, Science and Humanity', delivered at conference in 1972.

F.6.13 St. Paul's College, Cheltenham 1957-65

CAC examined the Natural Sciences course 1956-58 and maintained his interest in the college over the years.

Misc. correspondence on reading-matter, courses and examinations, appointments, etc.

F.6.14. William Temple College, Rugby 1954-63

Misc. correspondence re the work of the college and its courses on Responsibility in Industry, arrangements for CAC to visit and lecture, notes for his talk on 'The universe revealed by the physical sciences', 1956.

(see also A.7.4.)

BOX F.7.

CORRESPONDENCE

11 folders

Miscellaneous shorter correspondence with religious, pacifist, educational and humanitarian organizations or publishers. Invitations to attend meetings, lecture, contribute articles, sign appeals.

On those occasions when CAC decided not to lend his support, he always wrote a very full and careful letter setting out his reasons for declining. Many of CAC's letters include information of personal and biographical interest.

F.7.1.	Aldermaston March Committee	1958
	Amnesty International	1972
	Anglican-Methodist Student Visitation	1964
	<u>Approach</u>	1967
	Asia Christian Colleges Association	1966
	Bertrand Russell Peace Foundation	1964
	Birmingham Central Mission	1953-54
	Bradford University (Chair of Peace Studies Appeal)	1971-72
	British Council for Peace in Vietnam	1965
	British Social Biology Council	1954
F.7.2.	Canadian Peace Research Institute	1962
	<u>Cassowary</u>	1956
	Christian Frontier Council	1959
	<u>Christian News-Letter</u>	1955
	Christian Peace Conference	1966-67
	Christian Science Publishing Society	1960
	Committee for the Reprieve of Mosul Prisoners	1961
	Committee on Science and Freedom	1955-58
	Council for Academic Freedom and Democracy	1970
	Council for Education in World Citizenship	1954
	Crux Press	1962
	Cuban Defence Committee	1961
	Czechoslovak News Agency (ms. and typescript statement by CAC on effects of radioactivity following H-bomb tests)	1957
	Czechoslovak Trade Unions	1958
	<u>Daily Worker</u>	1955
	Emergency Committee for World Government	1972

<u>BOX F.7</u>	<u>continued</u>	
F.7.3.	Epworth Press (see also D.12.2.)	1954-56, 1959
	The Fellowship Party	1959
	Fellowship of the Kingdom	1958
	<u>Hastings Encyclopaedia of Religion</u>	1970
	Hydrogen Bomb Committee (Oxford University)	1954-55
	International Council for Christian Leadership (re 1966 conference in Cambridge)	1965
	International Preparatory Committee	1958
	International War Crimes Tribunal	1967
F.7.4.	Japan Council against Atomic and Hydrogen Bombs	1957-62
	John Wesley Society	1963
	Korean University	1967
	Medical Aid Committee for Vietnam	1965
	Methodist Education Committee	1953
	Ministerial Training Committee	1958
F.7.5.	The Mongrels	1967-69
	National Center of Communication	1966
	National Council for Abolition of Nuclear Weapons Tests	n.d.
	National Council for Civil Liberties	1962-68
F.7.6.	National Peace Council	1957
	<u>New Directions</u>	1963-64
	Nuffield Foundation (Overseas Development Institute/ Nuffield Fellowships)	1969
	Order of Unity	1961
	Oxford City Labour Party	1961
	Oxford Committee (Area Campaign) for the Abolition of Nuclear Weapons Tests	1955, 1958
	Oxford Committee for Community Relations	1973
	Oxford Committee for Racial Integration	1966
	Oxford House	1961
	<u>Peace News</u>	1957
	Peace Pledge Union	1965
	<u>Pulpit Digest</u>	1960
	Queen's College, Taunton	1964

BOX F.7 continued

F.7.7.	Queenswood School	1958
	Regent's Park College, Oxford	1957
	Rencontre pour la Détente Internationale	1954
	St. Martin-in-the-Fields Discussion Group	1954-55
	Scientific Research Committee of the Churches' Fellowship for Psychical and Spiritual Studies	1972-73
	Society for Cultural Relations between the Peoples of the British Commonwealth and the USSR	1952
	Society for the Promotion of Christian Knowledge	1950
	Society of Friends' Peace Committee	1949
	<u>Spectator</u>	1950
F.7.8.	Student Christian Movement (one folder of papers re writings by CAC for S.C.M. Press)	1951-56
F.7.9.	<u>Survey Magazine</u>	1956
	<u>Together</u>	1962
	Union of Democratic Control	1961
	<u>Universities Quarterly</u>	1950
	Vereinigungen der Verfolgten des Naziregimes (VVN)	1962-63
	Women's Strike for Peace	1964
	<u>World Christian Digest</u>	1955
	World Constitutional Convention	1961
F.7.10.	World Council of Churches	1961-62
	World Methodist Council	1956
	World Refugee Year	1959
	World's Student Christian Federation	1960
F.7.11.	One folder of miscellaneous duplicated letters sent to CAC by various organizations to enlist his support. Not itemised or indexed.	

SECTION G CORRESPONDENCE

22 BOXES

Boxes G.1 - G.18 contain general scientific and personal correspondence.

The content and arrangement are the same as for Section C

(see note on pp. 134 - 135).

Boxes G.19 - G.22. While the general content of these folders is similar to that in CAC's earlier scientific correspondence (research problems, publications, arrangements for visiting scholars, staff, appointments, etc.) they refer specifically to the new Department of Theoretical Chemistry which CAC was instrumental in creating at Oxford (see also H.11.1 - H.11.13) and whose Chair now bears his name. The folders reflect his efforts to build up a thriving research team as rapidly as possible, and contain a larger element of personal information as he became progressively more unwell.

Box G.22 is particularly interesting in this respect, as much of the correspondence covers the last months of his life, and was continued by Miss R. Schwerdt after his death in January 1974. CAC's solicitude for the academic and personal welfare of his students and for the continuation of his department is clear and touching, as is the sense of shock and personal loss widely felt at his death.

<u>BOX G.1</u>	<u>CORRESPONDENCE</u>	<u>6 folders</u>
G.1.1.-G.1.4.	ALTMANN, Simon Leonardo <u>R.S. 122, 123, 200</u> (see also B.14.)	1949-72
G.1.5.	ANNO, Toshinobu <u>R.S. 269</u>	1958-62, 1968-69
G.1.6.	ARTHURS, Arnold Magowan	1960-73

<u>BOX G.2</u>	<u>CORRESPONDENCE</u>	<u>2 folders</u>
G.2.1.-G.2.2.	ALI, Md. Asgar <u>R.S. 229, 252, 259</u>	1956-71

<u>BOX G.3</u>	<u>CORRESPONDENCE</u>	<u>6 folders</u>
G.3.1.	BAILEY, John P. M. <u>R.S. 398</u>	1966-72
G.3.2.	BAILEY, Margaret L. <u>R.S. 398</u>	1967-74
G.3.3.	BANERJEE, Kalyan K.	1961-70
G.3.4.-G.3.6.	BARNETT, Michael P. <u>R.S. 108, 131, 132, 152, 215</u> (see also A.5.7., G.4.2.)	1948-70

<u>BOX G.4</u>	<u>CORRESPONDENCE</u>	<u>6 folders</u>
G.4.1.	BASU, Sadham	1955-65
G.4.2.	BIRSS, Fraser W. <u>R.S. 215</u> (see also G.3.4.-G.3.6.)	1955-65
G.4.3.	BOYD, Russell Jaye <u>R.S. 421, 442</u>	1969-74
G.4.4.	BOYLE, Laurence L. <u>R.S. 342, 344</u>	1965-72
G.4.5.	BROWN, Ronald D. <u>R.S. 223</u>	1947-69
G.4.6.	BRUSH, Stephen G. includes biographical notes re <u>R.H. Fowler</u> and Sir John Lennard-Jones	1955-71

<u>BOX G.5</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.5.1.	CARLSON, K. Douglas	1959-67
G.5.2.	CHANDRA, Asish K. <u>R.S. 325</u>	1962-74
G.5.3.	CHAPMAN, John A.	1968-73
G.5.4.	COHEN, Maurice <u>R.S. 258</u>	1957-72
G.5.5.	CRAIG, David Parker <u>R.S. 62, 74, 106</u>	1946-51, 1954-67 1970
G.5.6.	CROSSLEY, Richard J. S. <u>R.S. 292</u>	1960-71
G.5.7.	CRUICKSHANK, Durward W. J.	1949-73

<u>BOX G.6</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.6.1.	DAUDEL, Raymond <u>R.S. 47, 55, 61, 82, 91, 112, 151</u>	1946-52
G.6.2.	DAUDEL, Raymond <u>R.S. 151, 159, 223</u>	1953-73
G.6.3.	DEB, Bidyendu Mohan <u>R.S. 385, 405</u>	1964-69
G.6.4.	DEB, Bidyendu Mohan <u>R.S. 400, 405, 409</u>	1970-73
G.6.5.	DE HEER, Joop <u>R.S. 114, 119</u>	1948-50
G.6.6.	DE HEER, Joop	1951-66
G.6.7.	DEN BOOR, Diet H. W. (and DEN BOOR, P. C.) <u>R.S. 134 (2nd ed.), 280, 309</u>	1956-72

<u>BOX G.7</u>	<u>CORRESPONDENCE</u>	<u>9 folders</u>
G.7.1.	DEWAR, Michael John Steuart <u>R.S. 59, 290</u>	1946-64
G.7.2.	DIXON, William T. <u>R.S. 280</u>	1960-70
G.7.3.	DOGGETT, Graham <u>R.S. 376</u>	1960-69
G.7.4.	DUCHESNE, Jules <u>R.S. 51, 77, 78</u>	1946-50
G.7.5.	DUCHESNE, Jules <u>R.S. 408</u>	1951-72
G.7.6.	EPSTEIN, Irving Robert	1965-73
G.7.7.	EVERETT, Douglas Hugh <u>R.S. 16</u>	1939-50, 1956-57
G.7.8.	FARMER, Christine M.	1966-71
G.7.9.	FELSENFELD, Gary	1954-62

<u>BOX G.8</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.8.1.	GERRATT, Joseph <u>R.S. 396</u>	1964-73
G.8.2.	GIANTURCO, Francesco A. <u>R.S. 367, 368, 369, 389</u>	1964-67
G.8.3.	GIANTURCO, Francesco A. <u>R.S. 367, 368, 369, 395</u>	1968-73
G.8.4.	GIANTURCO, Francesco A. <u>R.S. 395</u>	1969
G.8.5.	HAIGH, Claude William <u>R.S. 169, 293</u>	1960-73
G.8.6.	HALL, George Garfield	1958-72
G.8.7.	HAYWARD, Robin J. R. <u>R.S. 186</u>	1953-65

<u>BOX G.9</u>	<u>CORRESPONDENCE</u>	<u>3 folders</u>
G.9.1.	JOSEPH, Anthony <u>R.S. 346, 351, 359</u>	1964-67
G.9.2.	JOSEPH, Anthony	1968-72
G.9.3.	JOHNSON, Burt P. <u>R.S. 315</u>	1962-64

<u>BOX G.10</u>	<u>CORRESPONDENCE</u>	<u>6 folders</u>
G.10.1.	KARAGOUNIS, Georg	1958-72
G.10.2.	KEARSLEY, Mary J. <u>R.S. 211</u>	1954-63
G.10.3.	Work with Mary Kearsley for papers on diamond <u>R.S. 183, 211</u>	
G.10.4.	KISELEV, Aleksei Alekseevich	1968-74
G.10.5.	KOTANI, Masao	1950-62
G.10.6.	KOUTECKY, Jaroslav	1963-71
<u>BOX G.11</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.11.1.	LADIK, János	1957-74
G.11.2.	LARKINS, Francis Patrick <u>R.S. 386, 411</u>	1965-72
G.11.3.	LENNARD-JONES, John Edward <u>R.S. 13, 157</u> includes correspondence with Lady Lennard-Jones and typescript of CAC's Obituary of Lennard-Jones for <u>Nature</u> , 1954-55	1933-39, 1948-50
G.11.4.	LESTER, George R. <u>R.S. 174, 187</u>	1948-61, 1967
G.11.5.	LEVINE, Raphael D.	1963-66
G.11.6.	LEVINE, Raphael D. <u>R.S. 357</u>	1966-73
G.11.7.	LEWIS, John T. <u>R.S. 275</u>	1955-72

<u>BOX G.12</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.12.1.	LIDIARD, Alan Brian	1948-73
G.12.2.	LINNETT, John (Jack) Wilfred <u>R.S. 51, 108</u>	1947-63, 1968-73
G.12.3.	LIPSCOMB, William N.	1953-72
G.12.4.	LOMER, William Michael	1952-61
G.12.5.	LONG, Leon H.	1946-58, 1963-65
G.12.6.	LONGUET-HIGGINS, Hugh Christopher	1946-49
G.12.7.	LONGUET-HIGGINS, Hugh Christopher <u>R.S. 37, 50, 55, 59, 78, 86, 92, 165, 215</u>	1950-68

<u>BOX G.13</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.13.1.	MACCOLL, Allan <u>R.S. 62, 74</u>	1946-49, 1963, 1968-69
G.13.2.	MACKRODT, William C.	1966-72
G.13.3.	MADDOX, John Roydon	1946-54, 1966, 1972
G.13.4.	MAKIN, Doreen	1967-73
G.13.5.	MARCH, Norman Henry <u>R.S. 98, 116, 123, 178</u>	1949-53
G.13.6.	MARCH, Norman Henry <u>R.S. 178</u>	1954-57
G.13.7.	MARCH, Norman Henry <u>R.S. 271, 326</u>	1958-73

<u>BOX G.14</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.14.1.	MASLEN, Victor William	1953-74
G.14.2.	MASLEN, Victor William <u>R.S. 210</u>	1955
G.14.3.	MASON, Stephen F.	1955-62
G.14.4.	MATTHEWS, Roger Hardin	1970-71
G.14.5.	MAVROYANNIS, Constantine	1960-63
G.14.6.	MCWEENY, Roy	1946-50
G.14.7.	MCWEENY, Roy <u>R.S. 73, 89</u>	1951-73
 <u>BOX G.15</u>	 <u>CORRESPONDENCE</u>	 <u>6 folders</u>
G.15.1.	MOSER, Carl M.	1950-53
G.15.2.	MOSER, Carl M.	1954-57
G.15.3.	MOSER, Carl M. <u>R.S. 143, 152</u>	1958-67
G.15.4.	MOTT, Sir Nevill Francis	1945-58, 1968, 1972
G.15.5.	MULLIKEN, Robert Sanderson	1939-43, 1948-50
G.15.6.	MULLIKEN, Robert Sanderson <u>R.S. 97, 105, 106, 123, 314</u>	1952-74

<u>BOX G.16</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.16.1.	NASH, John Christopher <u>R.S. 414, 435</u>	1968-74
G.16.2.	PARR, Robert G. <u>R.S. 105, 106</u>	1949-73
G.16.3.	PAULING, Linus (contains a long critique by Pauling of <u>Valence</u> , and CAC's reply) <u>R.S. 105, 134, 200</u>	1948-62
G.16.4.	POPLE, John A.	1950-64, 1968
G.16.5.	POOLE, Michael Dines <u>R.S. 313, 316, 322, 327</u>	1961-67
G.16.6.	PULLMAN, Alberte and Bernard <u>R.S. 47, 58, 62, 68</u>	1946-63
G.16.7.	RUSHBROOKE, George Stanley <u>R.S. 67, 70, 71</u>	1947-73
<u>BOX G.17</u>	<u>CORRESPONDENCE</u>	<u>8 folders</u>
G.17.1.	SHARMA, Chandra Shekhar	1958-65
G.17.2.	SHARMA, Chandra Shekhar <u>R.S. 279, 282, 290, 331</u>	1966-74
G.17.3.	SLOWINSKI, Emil J.	1959-60, 1968, 1970-73
G.17.4.	STEWART, Eric Theal	1951-59
G.17.5.	STEWART, Eric Theal	1960-64
G.17.6.	STEWART, Eric Theal <u>R.S. 183, 321</u>	1964-68
G.17.7.	STOCKER, David <u>R.S. 245, 287</u>	1957-62
G.17.8.	SUTTON, Leslie Ernest	1947-51, 1958-59, 1965-67

<u>BOX G.18</u>	<u>CORRESPONDENCE</u>	<u>7 folders</u>
G.18.1.	VAN DER WAALS, John H.	1950-53, 1968-71
G.18.2.	WALMSLEY, Mary	1964-67
G.18.3.	WALMSLEY, Mary <u>R.S. 345, 347, 437</u>	1967-74
G.18.4.	WEAVER, Ronald F.	1968-74
G.18.5.	WILLIAMS, David John	1958-60
G.18.6.	WILLIAMS, David John	1961-74
G.18.7.	ZAULI, Carlo <u>R.S. 301</u>	1955-69

<u>BOX G.19</u>	<u>CORRESPONDENCE (Theoretical Chemistry Dept.)</u>	<u>22 folders</u>
G.19.1.	ABRAHAM, Douglas Bruce	1972-74
G.19.2.	BECKEL, Charles L.	1972-74
G.19.3.	BENNETT, Margaret N.	1972
G.19.4.	BERRY, R. Stephen	1959-60, 1972-73
G.19.5.	CHILD, Mark S.	1972-74
G.19.6.	CHOJNACKI, Henryk	1973-74
G.19.7.	COLBOURN, Elizabeth Ann	1971-74
G.19.8.	COLLIER, Charles H.	1973
G.19.9.	DUKE, Brian J.	1971-73
G.19.10.	FERREIRA, Ricardo	1973-74
G.19.11.	GIARETTA, David Leslie	1973
G.19.12.	GOMBERG, Martin Godfrey Luis	1972-73
G.19.13.	GOMES, José Alberto Nunes Ferreira	1972-73
G.19.14.	GOPINATHAN, M. S.	1972-73
G.19.15.	GRAVES, John L.	1973
G.19.16.	HALL, Brian John	1972-73
G.19.17.	HALPERN, Alvin	1973-74
G.19.18.	HASKINS, Peter J.	1971-73
G.19.19.	ISSIGONI, Margaret Joan	1971-73
G.19.20.	JACKSON, Malcolm	1971-74
G.19.21.	KLEPPMANN, Wilhelm Georg	1973
G.19.22.	KÖPPEL, Horst Hans Georg Folder also contains correspondence re possible publication of paper 'Pure rotational spectrum of BF ₃ ' (Köppel's work in collaboration with CAC).	1972-78

<u>BOX G.20</u>	<u>CORRESPONDENCE (Theoretical Chemistry Dept.)</u>	<u>12 folders</u>
G.20.1.	LOWE, John P.	1971-74
G.20.2, 3.	MALLION, Roger Blakeney	1968-74
G.20.4.	MUCCI, Joseph F.	1972-74
G.20.5.	NWACHUKU, Charles O.	1973
G.20.6.	O'LEARY, Brian Leonard	1969-73
G.20.7.	ORLANSKY, Daniel	1973
G.20.8.	ORTEGA BLAKE, Ivan	1973
G.20.9.	PAJUNEN, Petri Juhani	1973-74
G.20.10.	PETTITT, Brian Ackroyd	1971-73
G.20.11.	PULFER, James Douglas	1973-74
G.20.12.	PULLIN, A. David E.	1971-73

<u>BOX G.21</u>	<u>CORRESPONDENCE (Theoretical Chemistry Dept.)</u>	<u>13 folders</u>
G.21.1.	RAYMENT, Trevor	1972-73
G.21.2.	REED, Paul	1972-73
G.21.3.	RØEGGEN, Inge Arvid	1973
G.21.4.	SCHORPP, Karl Theodor	1972-73
G.21.5.	SHAW, Gilbert B.	1972-73
G.21.6.	SHUN, Dick-Huck	1973-74
G.21.7.	TAVARES, Maria Amália	1973
G.21.8.	THOMAS, Michael W.	1969-73
G.21.9.	THORSON, Walter R. (see also C.19.12)	1972-74
G.21.10.	TOUGH, Robert John Alexander	1972-74
G.21.11.	TRINAJSTIĆ, Nenad	1968, 1972-74
G.21.12.	WHITEHEAD, Michael Anthony	1972-74
G.21.13.	YOUNGSON, Martin	1973-74

BOX G.22

CORRESPONDENCE (Theoretical Chemistry Department)

Correspondence 1973-74, mainly re colloquia and 'coffee party' talks to be given by visiting scholars and research workers in the Department.

Much of the correspondence covers the last months of CAC's life, and was continued by Miss Schwerdt after his death. It shows his determination to maintain a thriving and lively department despite his own growing incapacity, and to arrange a constant sequence of talks and visitors throughout the academic year 1974-75.

The correspondence in this box is not indexed.

SECTION H

OXFORD UNIVERSITY

11 boxes

This section relates to CAC's university and departmental work at Oxford 1952-74. The material ranges over a wide variety of topics: student admissions, course work, lecture schedules, examining, DSIR/SRC research grants, university and advisory committees, etc. The growth of the School of Mathematics during CAC's service as Rouse Ball Professor is amply documented as is CAC's care for detail and personal concern for the welfare of all the members of the Mathematical Institute. Items H.7.3 - H.7.7 trace the gradual emergence of the new Theoretical Chemistry Department.

See also:

A.2.5 and A.2.6, re Centenary Party, 1958

A.14.14 and A.14.15, re Theoretical Chemistry Department

E.3.4 and E.3.5, re IBM Research Fellowship

G.19 - G.22, correspondence relating to the Theoretical Chemistry Department

BOX H.1

PROGRAMMES, REPRINTS AND RESEARCH
PROBLEMS

5 items

H.1.1. and
H.1.2.

Two loose-leaf notebooks containing printed notices and programmes for CAC's departmental 'coffee party' talks, colloquia in atomic and molecular structure and seminars in quantum theory.
(see also B.13.6.)

1953-73

H.1.3. and
H.1.4.

Distribution of reprints:
two notebooks containing lists of CAC's reprints and of the recipients, with some correspondence re requests to be put on the mailing list.

H.1.5.

'Problems Book':

1953-56

bound notebook indexed by CAC by areas of interest (Reactions, Molecular Structure, Wave Mechanics, Metals). Each section is sub-indexed by title of problem, page and date. Each entry notes how the problem was first suggested to CAC (i.e. conversations with colleagues, students' theses), a description of the problem and CAC's thoughts on how the problem might best be solved.

(see also Box B.15 and B.33.1.)

BOX H.2

MATHEMATICAL INSTITUTE, ST. GILES, OXFORD

7 items

One box of correspondence and papers relative to the planning, building and equipping of the new Mathematical Institute.

CAC's scrupulous attention to the myriad details of the project, from the first meetings to discuss tentative requirements for the new building to his weekly notes re minor items which were faulty or lacking after the building was completed and occupied, is much in evidence.

H.2.1. CAC's notes, drafts, and memoranda with floor plan sketches.

H.2.2.-H.2.4. 3 folders of correspondence: with colleagues in the Maths Department, with Oxford University Registry and Surveyor's Office, with colleagues in other universities re their suggestions, with BBC re possibility of closed-circuit television, with suppliers of equipment, with librarians of other departments and universities re design of new library. Invitation to Lord Blackett to open the new building.

H.2.2. 1959-62

H.2.3. 1963-64

H.2.4. 1965-66

H.2.5. Printed memoranda for circulation within the Department re meetings of Planning Subcommittee, suggestions to be incorporated into the design; press-cuttings.

H.2.6. Bound notebook containing lists of furnishings and requirements for each room.

H.2.7. Architects' drawings.

BOXES H.3 and H.4. MATHEMATICAL INSTITUTE/THEORETICAL
CHEMISTRY DEPARTMENT

Two boxes of correspondence with and re applicants to study at the Mathematical Institute and/or the Theoretical Chemistry Department, who, for various reasons, did not come. The correspondence has not been broken down into folders or indexed.

various dates 1962-73

<u>BOX H.5</u>	<u>MATHEMATICAL INSTITUTE</u>	<u>8 folders</u>
H.5.1.	Quantum theory lectures: Printed schedules, synopses, correspondence with colleagues and Oxford University Registry, notes and memoranda.	1969-72
H.5.2.-H.5.4.	Diploma in Advanced Mathematics Memoranda and notes circulated by CAC, correspondence with colleagues, students and Registry, timetable of examinations, students' work schedules, agenda and minutes of departmental meetings, lists of questions for examinations. The Diploma programme later became the M.Sc. in Mathematics by course of special study. (see also H.10, correspondence with the DSIR <u>re</u> establishment and administration of the Diploma)	1964-74
H.5.5.	Proposal to establish an advanced course in quantum theory which eventually became the Diploma in Advanced Mathematics.	1963
H.5.6.	One folder of correspondence and papers <u>re</u> organization and teaching of weekly classes for students doing Mathematical Moderations.	1965, 1971
H.5.7.	Notes and drafts of examination papers in mathematics and theoretical physics, London and Oxford.	1950-64
H.5.8.	Folder of correspondence <u>re</u> arrangements for visit to Oxford by group of chemistry students from Leiden.	1956-57

BOX H.6

UNIVERSITY COMMITTEES AND SOCIETIES

8 folders

H.6.1.-H.6.4. Committee for the Computing Laboratory

Four folders of committee papers, annual reports, correspondence and comments by CAC.

In chronological order:

H.6.1. 1963

H.6.2. 1964

H.6.3. 1965

H.6.4. 1966

(see also Box E.5, Inter-University Committee on Computing)

H.6.5. One folder of correspondence and papers re a proposal to allow individual university departments to acquire their own computers in addition to having access to the central University computing facilities. 1963

CAC was a member of the committee which the University established to advise on the merits of the proposal. Many of the letters are replies either to CAC or to his colleagues on the committee who had written to heads of departments in other universities for views and recommendations.

H.6.6.-H.6.7. Oxford Union Society 1957-74

CAC acted as science adviser to the Library Committee of the Oxford Union.

Correspondence with Librarian of the Union re purchase of books, with colleagues for their opinion on books outside CAC's field. Lists of books recommended for purchase.

The correspondence is not indexed.

H.6.8. Oxford Mathematical and Physical Society 1970-73

CAC was President 1969-73.

Correspondence re arrangements for meetings and speakers.

The folder includes much correspondence arising from CAC's efforts to trace the first minute book of the Society. When his efforts proved to be unsuccessful, he deposited in the Bodleian Library in 1973 the second minute book, which covered the period 1925-54. (Bodleian Reference: MS. Top. Oxon. d. 655). The current minute book is in the Mathematical Institute.

<u>BOX H.7</u>	<u>UNIVERSITY COMMITTEES</u>	<u>9 folders</u>
H.7.1.	<u>Committee on Applied Mathematics</u> Committee papers, correspondence and papers <u>re</u> revision of the syllabus.	1966-67
H.7.2.	<u>Atlas Computer Laboratory</u> Applications to use its computer, correspondence.	1973
H.7.3.-H.7.7.	<u>Sub-Faculty of Chemistry</u> Correspondence, committee papers, lecture schedules and synopses, architects' plans and proposals for the redevelopment of the University Science Area. Planning requirements <u>re</u> allocation of space. Suggestions, proposals and correspondence <u>re</u> creation of Department of Theoretical Chemistry. N.B. A note by Miss R. Schwerdt states that 'most agenda and minutes have been removed except those particularly connected with the correspondence'. Five folders in chronological order: H.7.3. 1955-61 H.7.4. 1961-63 H.7.5. 1963-66 H.7.6. 1966-73 (includes letter from CAC to F. Dainton, 7 June 1970, in which he sets forth his views on the relationship he anticipates between the proposed Theoretical Chemistry Department and Physical Chemistry Laboratory). H.7.7. Architects' plans	1955-73
H.7.8.	<u>Oxford University Commission of Enquiry (The Franks Commission)</u> Correspondence, questionnaire and replies, comments on drafts of replies.	1964-65
H.7.9.	<u>Heads of Chemistry Departments</u> Minor committee papers, some annotated by CAC.	1973-74

BOX H.8

FACULTY BOARDS

9 folders

H.8.1.-H.8.4. Sub-Faculty of Mathematics, Board of the Faculty of Physical Sciences

Committee papers, correspondence re lecture schedules, syllabus, meetings of the Sub-Faculty, outside lecturers, examination results, reprint collection held at the Mathematical Institute and other items of Sub-Faculty business.

Four folders in chronological order:

H.8.1. 1952-56

H.8.2. 1956-59

H.8.3. 1959-61

H.8.4. 1962

In Trinity Term 1963 a separate Board of the Faculty of Mathematics was established.

H.8.5.-H.8.7. Board of the Faculty of Mathematics

1963-73

Correspondence re students, nominations to the Board, lecture lists and synopses, Diploma, examination statutes, grants, curatorship of the Mathematical Institute, and other items of Faculty business.

Three folders in chronological order:

H.8.5. 1963-66

H.8.6. 1967

H.8.7. 1968-73

H.8.8.-H.8.9. Board of the Faculty of Mathematics

1965-74

Printed material for circulation among faculty members or for distribution to students: lecture lists and synopses, reading lists, information about post-graduate numbers, analyses of examination results.

<u>BOX H.9</u>	<u>UNIVERSITY COMMITTEES</u>	<u>9 folders</u>
H.9.1.-H.9.2.	<u>Committee of Management, Mathematical Institute</u> Correspondence, committee papers. 2 folders. (see also Box H.2)	1963-71
H.9.3.	<u>Mathematical Institute</u> General correspondence: draft of statute establishing Mathematical Institute, correspondence re allocation of rooms, expenditure, maintenance of buildings, architects' plans, lecture lists. Correspondence re Mathematical Prizes Fund.	1952-70, 1973
H.9.4.	<u>Progress Reports</u> Circular letters sent to all members of the department with request for a report on their work during the past year. The replies were published in the annual <u>Reports of the Wave Mechanics and Quantum Chemistry Group</u> . (see also H.11.17.)	1965-73
H.9.5.	<u>Quantum Chemistry (Supplementary Subject)</u> Examining: examination questions, correspondence with secretary of nominating committees.	1973-74
H.9.6.	<u>Radcliffe Science Library</u> Correspondence re library policy.	1964-68
H.9.7.	<u>University Museum</u> Correspondence re meetings of the delegates, committee business.	1954
H.9.8.	<u>University Registry</u> Correspondence with Registry re supervision of students, building plans for science area, research fellowships, finances, etc.	1952-73
H.9.9.	<u>George Eastman Chair</u> Correspondence.	1960-63

BOX H.10

MATHEMATICAL INSTITUTE

6 folders

One box of correspondence and papers relative to DSIR/SRC research grants and postgraduate training awards for members of the Mathematical Institute 1963-64. The correspondence is with officials of DSIR/SRC, colleagues, students, Oxford University Registry on matters of policy, the selection and administration of awards, the establishment and periodic evaluation of the Diploma Course in Advanced Mathematics, etc.

Six folders in chronological order:

- | | |
|---------|---------|
| H.10.1. | 1963-64 |
| H.10.2. | 1965 |
| H.10.3. | 1966-67 |
| H.10.4. | 1968-69 |
| H.10.5. | 1970 |
| H.10.6. | 1971-72 |

BOX H.11

MATHEMATICAL INSTITUTE AND THEORETICAL
CHEMISTRY DEPARTMENT

17 folders

H.11.1.-
H.11.13.

Correspondence with applicants to study at the
Theoretical Chemistry Department who did not take
up residence following CAC's death.

(see also G.19.-G.21.)

H.11.1. Adams, William H.

H.11.8. Pickup, B.T.

H.11.2. Asubiojo, F.O.I.

H.11.9. Plowman, A.

H.11.3. Buchanan, David

H.11.10. Rai, D.K.

H.11.4. Durham, P.J.

H.11.11. Rankin, J.

H.11.5. Keaveny, I.T.

H.11.12. Wade-Wright, P.P.

H.11.6. Lavery, R.

H.11.13. Williams, M.L.

H.11.7. Ohkubo, K.

H.11.14.-
H.11.15.

Two folders of correspondence re references, super-
vision, grants, etc. for those students at the Mathematical
Institute who were not under CAC's supervision. Not
indexed.

H.11.16.

CAC's list of research students at King's College,
London and the Mathematical Institute, Oxford.

1949-69

H.11.17.

Progress report for 1972-73, Oxford University
Department of Theoretical Chemistry. (A complete
set of the annual Reports of the Wave Mechanics and
Quantum Theory Group may be found in the Mathematical
Institute and the Radcliffe Science Library, Oxford.)

(see also H.9.4.)