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Supplementary catalogue of the papers and
correspondence of

Sir (Frederick) Charles Frank FRS

(1911-1998)

VOLUME I

General Introduction

Section A: Biographical

Section B: University of Bristol

Section C: Research

Section D: Publications

by Caroline Thibaud and Timothy E. Powell
NCUACS catalogue no. 127/13/03

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Title: Supplementary catalogue of the papers and correspondence of
Sir (Frederick) Charles Frank FRS (1911-1998), physicist

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LIST OF CONTENTS

	Items	Page	
GENERAL INTRODUCTION		5	
SECTION A	BIOGRAPHICAL	A.99-A.566	9
SECTION B	UNIVERSITY OF BRISTOL	B.152-B.327	59
SECTION C	RESEARCH	C.204-C.396	75
SECTION D	PUBLICATIONS	D.272-D.482	99
SECTION E	LECTURES	E.91-E.185	119
SECTION F	SOCIETIES AND ORGANISATIONS	F.381-F.466	130
SECTION G	CONSULTANCIES	G.131-G.181	141
SECTION H	VISITS AND CONFERENCES	H.170-H.307	150
SECTION J	CORRESPONDENCE	J.267-J.412	167
SECTION K	REFERENCES AND APPOINTMENTS	K.63-K.110	183
APPENDIX	MEDALS AND ACADEMIC GOWNS		188
INDEX OF CORRESPONDENTS			190

GENERAL INTRODUCTION

PROVENANCE

The papers were received from Lady Frank, widow, and colleagues including J.F. Nye, via Bristol University Library, in 2003.

OUTLINE OF THE CAREER OF SIR CHARLES FRANK

For an outline of Frank's life and career to 1988, see NCUACS catalogue no. 15/8/89. Sir Charles Frank remained active in attending conferences, writing papers and corresponding with colleagues well into the 1990s. In 1994 he was awarded the Royal Society's Copley Medal, its highest honour, 'in recognition of his fundamental contribution to the theory of crystal morphology, in particular to the source of dislocations and their consequences in interfaces and crystal growth; to fundamental understanding of liquid crystals and the concept of disclination; and to the extension of crystallinity concepts to aperiodic crystals'. Frank died on 5 April 1998 and is survived by his wife Maita.

DESCRIPTION OF THE COLLECTION

The archives in this collection are supplementary to those previously catalogued for Bristol University Library as NCUACS catalogue no. 15/8/89, in conjunction with which this catalogue should be used. The material, which spans the period 1911-2001, is presented in the order given in the List of Contents. The arrangement of the material into sections and the numbering of folders follows on from that in the previous catalogue.

There is supplementary material for all ten sections and although much of the material is additional to partial documentation existing in the earlier collection, in some important cases material listed here covers events and activities not previously documented - including, of course, events occurring subsequent to the completion of the previous catalogue.

Section A, Biographical, forms a particularly valuable addition to the material in the previous collection. There is good coverage of Frank's education with schoolwork and undergraduate notes as well as documentation of his extracurricular interests at Oxford University in the 1930s, including the Film Unit, fascinating material relating to his time in Germany 1936-1937 and a little wartime memorabilia. There is additional material relating to Frank's career, honours and awards, 1935-1994 including a number of honorary degrees and the award of the Royal Society's Copley Medal in 1994.

A significant component of the section is a virtually complete sequence of Frank's pocket diaries 1926-1994, recording - in varying detail - appointments, social activities, meetings etc and reflecting Frank's breadth of interests across the arts, humanities and sciences. There is also family and personal correspondence. The section includes many photographs of Frank at various occasions, from infancy to shortly before his death, and also photographs of colleagues and family members. As the present catalogue was compiled after Frank's death, the section also includes obituaries and memorial material.

Section B, University of Bristol, is divided into Department of Physics and general University papers. Departmental material includes documentation of ICI support of research activity through its Research Fellowships and Loan Purchase Schemes, Frank's manuscript notes on lectures, seminars and colloquia given by colleagues 1945-1957 and manuscript and duplicated typescript teaching material for undergraduate and M.Sc. courses. University material includes papers of the Art Lectures Committee from 1971 to 1997 and the Colston Research Society 1967-1996, as well as a little documentation of other committees on which Frank served and general correspondence and papers.

Section C, Research, follows the previous catalogue in covering Frank's entire research career from postgraduate studies in 1933 to post-retirement research. Pre-World War Two research is particularly well covered, including Frank's postgraduate notebooks used at Oxford 1933-1936, four pocket notebooks used during his time in Germany 1936-1937, and notebooks documenting work with O. Gatty 1939-1940 in the Department of Colloid Science, University of Cambridge. There is some documentation of wartime research at Porton on smoke generation and later work on analysis of the accuracy of German V-bombs. Post-war material is chiefly the contents of Frank's folders, often with an inscription of the topic, and subjects include ice (1940s), crystal growth (1940s-1950s) and geophysics (1960s). There is also late work on nuclear cold fusion, a field in which Frank had published a pioneering paper in 1947 and to which he returned in the late 1980s, in part through the claim of B.S. Pons and M. Fleischmann to have produced cold fusion in a test tube. The papers include notes, data, calculations, figures, rough drafts etc, with a little related correspondence.

Section D, Publications, offers significant additional coverage of Frank's published output from 1936. It includes Frank's contributions on a wide range of topics in chemistry, physics and geophysics, including some not listed in his bibliography. The section is dominated, however, by documentation of the 1993 book *Operation Epsilon: the Farm Hall transcripts* for which Frank wrote the introduction. Material includes drafts of Frank's introduction, proofs of the book, correspondence about the release of the transcripts and correspondence with colleagues and historians studying the German atomic programme and the contribution of German science to the Nazi war effort more generally. The section also includes editorial correspondence and some manuscript drafts of unpublished letters to *The Times* on a variety of subjects.

Section E, Lectures, covering 1938-1997, includes a wide range of public and invitation lectures, addresses and informal speeches. Scientific lectures include a 1945 lecture on 'Nuclear Structure and Nuclear Energy', and several lectures on Orientation Mapping delivered in the UK and overseas 1983-1991. There are also Civil Defence lectures for courses during the 1960s, and later autobiographical reminiscences.

Section F, Societies and organisations, provides further documentation on twenty-two UK and international organisations with which Frank was associated. There are few extended sequences, with the most substantial body of material relating to the Royal Society and Frank's service on the Armourers and Brasiers' Company Research Fellowship Committee and the British National Committee for the History of Science, Medicine and Technology. There is some significant further documentation of Frank's involvement with the International Organization for Crystal Growth, including the 1968 international congress, and of the Pugwash Conferences on Science and World Affairs. Also of note is material relating to Frank's service as a Home Office Regional Scientific Adviser for Civil Defence.

Section G, Consultancies, documents Frank's work for commercial organisations. It covers the period 1949-1997. As in the previous catalogue, the bulk of the material relates to Frank's work for the diamond company De Beers. There is further material relating to the Diamond Research Committee, which oversaw De Beers-funded diamond research in UK universities and which organised the Diamond Research Conferences, and to the Conferences themselves 1973-1997.

Section H, Visits and conferences, covers the period 1933-1997. It includes overseas visits to South Africa, Japan, India and the continent of Europe, while UK conferences documented include Royal Society discussion meetings 1949, 1960, 1970, 1984, 1986 and 1993. There is also documentation of Frank's participation in NATO Advanced Study Institutes on the Application of Modern Physics to the Earth and Planetary Interiors (1969), Surface Effects in Crystal Plasticity (1975) and the Mechanism of Continental Drift and Plate Tectonics (1979).

Section J, Correspondence, spans Frank's whole career, from postgraduate days in the early 1930s to the late 1990s. It is presented in alphabetical order. The bulk of the correspondence is either early (1930s) or dates from the 1980s and 1990s - some of which postdates the compilation of the previous catalogue in 1989. There are few extended sequences and most of the correspondents represented are also to be found in the previous catalogue. However, there is significant additional material for R.V. Jones, F.R.N. Nabarro and K. Wirtz.

Section K, References and appointments, is chiefly material from the late 1980s and 1990s, postdating the previous catalogue.

There is also an index of correspondents, and an Appendix listing Frank's medals and academic gowns held by the University of Bristol Special Collections.

Caroline Thibaud
Timothy E. Powell
Bath
December 2003

SECTION A

BIOGRAPHICAL, A.99-A.566

1911-2001

A.99-A.101	OBITUARIES AND MEMORIALS
A.102-A.119	AUTOBIOGRAPHICAL AND BIOGRAPHICAL
A.120-A.187	EDUCATION
A.188-A.288	CAREER, HONOURS AND AWARDS
A.289-A.357	DIARIES
A.358-A.362	LITERARY COMPOSITIONS
A.363-A.406	FAMILY
A.407-A.468	FRIENDS AND COLLEAGUES
A.469-A.492	CLUBS, ASSOCIATIONS AND OTHER INTERESTS
A.493-A.565	PHOTOGRAPHS
A.566	MISCELLANEOUS

A.99-A.101	OBITUARIES AND MEMORIALS	1998-1999
A.99	Obituaries	1998
	Obituaries from:	
	<i>The Times</i>	
	<i>The Guardian</i>	
	<i>The Independent</i>	
	<i>The Daily Telegraph</i>	
	<i>Nature</i>	
	The British Crystallographic Association	
A.100, A.101	Thanksgiving Service for the Life of Sir Charles Frank, Cathedral Church of the Holy and Undivided Trinity, Bristol, 4 November 1998.	1998-1999
A.100	Order of service; transcript of the addresses by Sir John Kingman, John Nye and Jerry Hicks	
A.101	Audio cassette tape-recording of the service	
A.102-A.119	AUTOBIOGRAPHICAL AND BIOGRAPHICAL	1938-2001
A.102	Curricula vitae	1938-1983
A.103-A.113	Entries for biographical and professional directories	1959-1998
	Requests for biographical information, information provided and copies of entries.	
A.103	<i>Who's Who</i>	1959-1997
A.104	<i>Who's Who in the World</i>	c.1977, 1993

Biographical, A.99-A.566

- | | | |
|-------|---|-----------|
| A.105 | <i>International Who's Who</i> | 1982-1994 |
| A.106 | <i>Who's Who of British Scientists</i> | 1983 |
| A.107 | Indian Academy of Sciences

Frank was a Visiting Professor at the Raman Research Laboratory in Bangalore between 1979 and 1980 and as such appeared in 'History of the Academy'. The book was published by the Indian Academy of Sciences on the occasion of the Jubilee Meeting of the Academy in November 1984. | 1984 |
| A.108 | <i>People of Today</i> (Debrett) | 1988-1992 |
| A.109 | Lincoln College 'Who's Who' | 1989 |
| A.110 | <i>Who's Who in Science and Engineering</i> | 1989 |
| A.111 | <i>Who's Who in American Education</i> | 1992 |
| A.112 | 'Honoured by the Queen' (Belgravia Press) | 1994 |
| A.113 | Record of Science Research Scholars

The 'Record of Science Research Scholars' was produced by The Royal Commission for the Exhibition of 1851. | 1998 |
| A.114 | Request for an interview

Correspondence <i>re</i> arrangements.

Frank was requested to give an interview <i>re</i> intelligence in World War Two and his recollections of the internment of German scientists at Farm Hall (see D.360-D.406) for the | 1997 |

Biographical, A.99-A.566

Catholic University of Chile Television Network 'Contacto'.

A.115, A.115A	Interview with Maita Frank Correspondence with University of Bristol Archivist <i>re</i> the interview; two interview transcripts; audio cassette tape-recording (A.115A). John Nye conducted the interview, which focused on Sir Charles Frank.	1999-2001
A.116-A.119	Archival cataloguing and preservation of Frank's papers	1988-2001
A.116, A.117	Correspondence with the National Cataloguing Unit for the Archives of Contemporary Scientists <i>re</i> the cataloguing of Frank's papers. Also includes correspondence with the University of Bristol Archivist. 2 folders.	1988-1999
A.118, A.119	Lists of Frank's papers. 2 folders.	1990-2001
A.120-A.187	EDUCATION	1920-1997
A.120-A.131	Thetford Grammar School, Norfolk	1920-1932
A.120-A.125	Thetford School exercise books	1920-1926
A.120	'Inorganic Chemistry'	
A.121	'Geography'	

Biographical, A.99-A.566

A.122	'5b History'	
A.123	'History'	
A.124	'History'	
A.125	'E.H. Wallace'	
	Used by Frank from the front for stories.	
	E.H. Wallace is not identified, possibly adopted as a pseudonym after the popular novelist Edgar Wallace.	
A.126, A.127	School reports 2 folders.	1920-1926
A.128	Foundation scholarship records	1923-1926
A.129	School certificate	1926
A.130	Thetford Grammar School Troop Boy Scouts Correspondence, 1 photograph and membership card. See also A.495.	1927
A.131	'The Fulmerstonian', Thetford Grammar School school magazine, July 1932	1932

Biographical, A.99-A.566

A.132-A.141	Ipswich School, Suffolk	1927-1977
	Frank became President of the Old Ipswichians Club in 1978 (see also A.517).	
A.132	Exercise book inscribed on front cover 'F.C. Frank English VIa'	c 1928
	Used for English essays. Paginated with list of contents inside back cover.	
A.133	Hardback notebook inscribed inside front cover 'Essays F.C Frank'	c 1928
	Used for English literature notes. Paginated with list of contents inside back cover.	
A.134	School reports	1927-1929
A.135	Higher School certificates, etc	1928-1930
	Also includes 1 letter of congratulation.	
A.136	Correspondence with Ipswich School <i>re</i> state scholarship	1929
A.137	Ipswich School plays	1927-1928
	Autographed programmes of 'She Stoops to Conquer' by Oliver Goldsmith (1927) and 'Le Malade Imaginaire' by Molière (1928). See also A.497.	
	Frank played female characters in the two plays.	
A.138	Issues of the Ipswich School Magazine	1928, 1929, 1935
A.139	Old Ipswichians Dinner programme	1933
A.140	Visit to Ipswich School	1977

Biographical, A.99-A.566

Correspondence *re* arrangements.

- | | | |
|--------------------|--|------------------|
| A.141 | Miscellaneous memorabilia | n.d. |
| A.142-A.147 | Lincoln College, Oxford | 1928-1997 |
| | See also A.469-A.480, A.499, A.500. | |
| A.142 | Miscellaneous correspondence with Lincoln College | 1928-1997 |
| A.143 | Faculty of Physical Sciences lecture programme, with Frank's annotations | 1930-1932 |
| A.144 | Bachelor of Science (Physical Sciences) Degree certificate.

Certificate and letters of congratulations. | 1933 |
| A.145 | Oxford Union Library Committee

Correspondence with Librarians and committee members.

Frank became a member of the Union Library Committee in 1933. | 1933-1936 |
| A.146 | Student accomodation and bills | 1929-1938 |
| A.147 | Lincoln College dinners

Programmes, menus and seating plans. | 1936, 1968 |

Biographical, A.99-A.566

A.148-A.183	Undergraduate notes	1923-1935
	Presented in a single chronological sequence.	
A.148	'Elementary Phys. Chem. Jun 1923'	
	The date notwithstanding, these appear to be undergraduate notes.	
A.149	Binder inscribed on front cover 'F.C. Frank, Lincoln' and labelled on front and spine 'Questions answered'	
	Used for notes entitled 'Advanced Organic Chemistry (1925)'	
A.150	Binder of Frank's literary writings	1929-1931
	Found with sequence of science notes.	
	Includes drafts of plays, poems, travel notes, jottings, letters.	
	See also A.358-A.362.	
A.151	'Organic chemistry: - aliphatic. [H.B.] Baker'	1929-1930
A.152	'Essays for [N.V.] Sidgwick'	1929-1930
A.153	'Inorganic chemistry H to Ni'	1929-1930
A.154	'Random remarks [F.W.] Soddy'	1929-1930
A.155	'Dyson Perrin Lab'	1929-1930
A.156	'Electrochemistry [J.F.] Wolfenden'	1929-1931

Biographical, A.99-A.566

A.157	'Essays for Sidgwick'	1930
A.158	'Organic chemistry: aromatic [H.B.] Baker'	1930
A.159	'Balliol & Trinity Labs. Physical Chemistry'	c 1930
A.160	Specimens of toilet paper These have a note of make, date and location.	1930
A.161	'Inorganic chemistry (II) Ru to Po'	1930-1931
A.162	'Aspects of structural organic chemistry [R.] Robinson'	1930-1931
A.163	'Colloids George'	1930-1931
A.164	'Stereochemistry of carbon. Plant [...] Of other elements [?T.W.J.] Taylor'	1930-1931
A.165	'Atomic structure Sidgwick [...] Molecular structure Sidgwick'	1930-1931
A.166	'Thermodynamics [C.N.] Hinshelwood. Physics for Chemists Hinshelwood. Chemical Kinetics Hinshelwood'	c 1930-1931
A.167	'Rate of reaction [E.J.] Bowen [...] Photochemistry Bowen'	1930-1932
A.168	'Essays'	1931
A.169	'Chemical history'	1931

Biographical, A.99-A.566

A.170	'Inorganic analysis. Quantitive Russell. Qualitative'	1931
A.170A	'Inorganic Practical O.C.D.' Found with preceding notes.	1929-1931
A.171	'Personal prejudices and work in progress General science'	1931
A.172	'Organic chemistry: - mainly heterocyclic. [H.B.] Baker'	1931
A.173	'Essays for Brewer'	1931
A.174	'Tautomerism Taylor'	1931
A.175	'Heterogenous equilibrium [?D.L.] Hammick'	1931
A.176	'Personal prejudices and work in progress General chemistry'	1932
A.177	'L.E. Sutton on dipoles'	1932-1934
A.178	Miscellaneous manuscript notes	1932-1934
A.179	'Essays' Includes notes on learning Russian, jottings, musings, poems etc. Not all undergraduate.	1932-1935

Biographical, A.99-A.566

- | | | |
|--------------------|--|------------------|
| A.180-A.182 | Miscellaneous manuscript pages of notebooks and binders

3 folders. | 1933 and n.d. |
| A.183 | 'Divers Lectorers' | n.d. |
| A.184-A.187 | Postgraduate | 1933-1940 |
| A.184 | British Association 'Oxford' Exhibition

Correspondence <i>re</i> arrangements.

Frank was nominated by the Vice-Chancellor to attend the British Association 'Oxford' Exhibition in Aberdeen. | 1934 |
| A.185 | Goldsmiths' Company Senior Studentship

Correspondence and certificates.

Frank was the recipient of a Goldsmiths' Company Senior Studentship from 1936 to 1937. | 1933-1937 |
| A.186 | Doctor of Philosophy in Physical Sciences

Correspondence, mainly with Frank's examiner Dr L.E. Sutton <i>re</i> viva arrangement.

Frank was awarded a D. Phil. in 1937. | 1933-1937 |
| A.187 | Royal Commission for the Exhibition of 1851 Senior Studentship

Correspondence <i>re</i> the studentship. | 1939-1940 |

Biographical, A.99-A.566

A.188-A.288	CAREER, HONOURS AND AWARDS	1927-1994
A.188-A.194	Germany This includes memorabilia from Frank's time in Germany 1936-1937 and after the war with the Allied Control Commission. Frank studied dielectric loss in Germany from 1936 to 1938 at the Kaiser Wilhelm Institut fur Physik, Berlin-Dahlem.	1936-1943
A.188	Miscellaneous correspondence <i>re</i> visit to Germany	1937
A.189	Invitations and programme of ball and opera evenings	1937-1938
A.190	Hotel and restaurant bills	1937
A.191	Pocket map of Germany	n.d.
A.192	Copy of the Nazi party newspaper 'Der Sturmer', November 1936	1936
A.193	Zielgevierttafel, in leather case German mapping device.	1943
A.194	Miscellaneous memorabilia Ski clothes brochures in German, Gemaldegalerie museum brochure, business cards, typescript descriptions of photographs taken by Frank.	c.1937

Biographical, A.99-A.566

A.195	Correspondence <i>re</i> job applications	1927-1939
A.196-A.203	Wartime activities	1939-1950
A.196	Correspondence <i>re</i> appointment as a Scientific Officer at the Ministry of Aircraft Production Also includes National Service Armed Forces registration card.	1940-1941
A.197	Scientific Research Central Register Frank's biographical details and leaflet on the Central Register. The Register was compiled by the National Service Department of the Ministry of Labour to gather information on professional scientific, technical and higher administrative personnel who could serve the UK government in their professional capacity in wartime.	1939
A.198	'Combined Operations Headquarters' card	1942
A.199	Ration book	1941
A.200	Untitled, undated manuscript draft on Allied control in Germany	n.d.
A.201-A.203	Postwar material Includes Official Gazette of the Allied High Commission for Germany with Law 22 on atomic energy; typescript paper entitled 'Research and Development'; typescript notes on Law 23 on control of scientific research. 3 folders.	1949-1950

Biographical, A.99-A.566

A.204-A.288	Professional honours and awards	1935-1994
A.204	List of Frank's professional honours and awards compiled by Maita Frank	n.d.
A.205	Fellowship of the Chemical Society, London, 6 June 1935 Correspondence <i>re</i> election.	1935
A.206, A.207	Fellowship of the Royal Society, London, March 1954 Correspondence; information for newly elected members; certificate. 1 folder, 1 tube.	1954
A.208	Chair of Physics, University of Bristol, August 1954 Correspondence and contract of employment.	1954
A.209, A.210	Honorary Degree, University of Ghent, Belgium, 3 October 1955 Correspondence and certificate. See also A.509. 1 folder, 1 tube.	1955
A.211	Fellowship of the Institute of Physics, London, 1 October 1957 Certificate.	1957
A.212	Invitation to become Institute Professor of Solid State Science and Engineering Materials at the Carnegie Institute of Technology, Pittsburgh, Pennsylvania, September 1960 Correspondence <i>re</i> invitation.	1960

Biographical, A.99-A.566

Frank declined the invitation.

A.213	Invitation to become Dean of the Faculty of Physical Sciences at the University of Kent, Canterbury, August 1963	1963
	Correspondence <i>re</i> invitation.	
A.214-A.219	A.A. Griffith Medal, British Materials Science Club, Banbury, 22 September 1967	1967
A.214, A.215	Correspondence <i>re</i> arrangements 2 folders.	1967
A.216	Typescript drafts of speech with corrections	1967
A.217	Manuscript biographical notes on A.A. Griffith	1967
A.218, A.219	Manuscript notes found with the material 2 folders.	n.d.
A.220	Honorary Degree of Doctor of Science, University of Bath, 12 December 1973 Certificate and 2 photographs of the ceremony.	1973
A.221-A.224	Doctor Honoris Causa of the University of Surrey, Guildford, 3 December 1977	1977-1978
A.221	Correspondence Includes newspaper cuttings and photograph.	1978
A.222	Programme and order of proceedings	1977

Biographical, A.99-A.566

A.223	Printed booklet with addresses delivered at the ceremony	1977
A.224	Photographs 4 photographs.	1977
A.225, A.226	Honorary Fellowship of the Institute of Physics, London, 13 December 1977 1 letter <i>re</i> the election, photograph and certificate of election. 2 folders.	1977
A.227-A.229	Honorary Degree of Doctor of Sciences, University of Dublin, 6 July 1978 Programme of the ceremony; dinner seating plan; 2 photographs; certificate. Most documents are in Latin. 3 folders.	1978
A.230, A.231	Crystal Growth Award, The American Association for Crystal Growth, Washington DC, USA, 18 July 1978 3 photographs, magazine cutting and award plaque (A.231). Frank was the first recipient of this newly established award. 2 folders.	1978
A.232, A.233	Royal Medal of the Royal Society, London, 30 November 1979 Correspondence <i>re</i> election and certificate in leather bound case. 1 folder, 1 case.	1979

Biographical, A.99-A.566

See also A.518.

- | | | |
|--------------|--|------|
| A.234, A.235 | <p>Foreign Associate of the National Academy of Engineering of the United States, Washington DC, USA, 3 March 1980</p> <p>Correspondence, University of Bristol Newsletter on the award and certificate.</p> <p>The award ceremony was held in October 1980 in Washington DC.</p> <p>1 folder, 1 tube.</p> | 1980 |
| A.236-A.238 | <p>Gregory Aminoff Medal, Royal Swedish Academy of Sciences, Stockholm, 3 June 1981</p> <p>Certificate, information on Gregory Aminoff and announcement of Frank's award in the University of Bristol Newsletter.</p> <p>3 folders.</p> | 1981 |
| A.239-A.241 | <p>Honorary Degree of Doctor of Sciences, University of Warwick, Coventry, 17 July 1981</p> <p>Programme of the ceremony, 2 photographs and certificate.</p> <p>2 folders, 1 tube.</p> | 1981 |
| A.242 | <p>Service on the British National Committee for Physics, January 1982</p> <p>Certificate.</p> <p>Frank was a committee member before 1973 and again 1976-1981.</p> | 1982 |
| A.243 | <p>Guthrie Medal and Prize, Institute of Physics, January 1982</p> <p>Letters of congratulation.</p> | 1982 |

Biographical, A.99-A.566

- | | | |
|--------------|---|------------|
| A.244 | Honorary Fellowship of the Indian Academy of Sciences, Bangalore, India, January 1984.

Correspondence <i>re</i> the fellowship and announcement in the University of Bristol Newsletter. | 1984 |
| A.245, A.246 | Unveiling ceremony of Frank's portrait, University of Bristol, 20 September 1985. | 1984 |
| A.245 | Correspondence <i>re</i> the portrait | 1984 |
| A.246 | List of contributors

Also includes photograph of the portrait and photograph of Frank and his wife in front of the portrait. | 1984 |
| A.247, A.248 | Foreign Associate of the Royal Society of South Africa, 24 April 1986.

Correspondence and certificate.

2 folders. | 1986 |
| A.249, A.250 | Honorary Presidency of the British Association of Crystal Growth 1981-1986

Certificate and commemorative plaque.

2 folders. | 1981, 1986 |
| A.251-A.252A | Doctor Honoris Causa, Universite de Paris-Sud, Orsay, France, 28 October 1986

Correspondence, dinner menu, addresses and certificate.

3 folders. | 1986 |
| A.253-A.255 | Honorary Fellowship of the University of Bristol, Bristol, 5 December 1986

Correspondence, announcement in university | 1986 |

Biographical, A.99-A.566

A.263	Correspondence <i>re</i> arrangements	1987
A.264	Certificate Also includes biographical information on Frank and a schedule of the ceremony.	1987
A.265	Announcement of the award in the University of Bristol Newsletter	1987
A.266	The Frank Theatre, University of Bristol 1 letter <i>re</i> the naming of the G.44 lecture theatre after Frank.	1989
A.267-A.271	80th birthday celebrations and symposium, University of Bristol, 15 April 1991 See also A.524.	1991
A.267	Correspondence.	1991
A.268	Programme of the celebration and list of participants.	1991
A.269	Typescript copy of Frank's speech.	1991
A.270	Drawing and card offered on the occasion.	1991
A.271	Publication of the proceedings of the symposium. Also includes announcement in scientific and academic magazines.	1991
A.272, A.273	Honorary Degree, University of Surrey, Guildford, 29 November 1991	1991

Biographical, A.99-A.566

Correspondence, seating plan, colour photograph and photocopy photograph.

2 folders.

A.274-A.278	Honorary Degree of Doctor of Sciences, University of Leeds, 21 July 1992	1991-1992
A.274	Correspondence <i>re</i> arrangements	1991-1992
A.275	Certificate and presentation addresses	1992
A.276	Graduation supper guest list and seating plans	1992
A.277	2 colour photographs, with legend.	1992
A.278	Announcement in university publications and newspaper	1992
A.279-A.288	Copley Medal of the Royal Society, London, 30 November 1994 See also A.527.	1994-1995
A.279-A.281	Correspondence <i>re</i> arrangements and letters of congratulation 3 folders.	1994
A.282, A.283	'Copley Congrats' Contents of Frank's folder so inscribed divided into two for ease of reference.	1994-1995
A.284	Programme of the award ceremony	1994

Biographical, A.99-A.566

A.285	Portrait photograph of Frank. 1 photograph.	1994
A.286	Certificate	1994
A.287	Announcement in the Royal Society News, July 1994	1994
A.288	Miscellaneous material	1994
A.289-A.357	DIARIES	1926-1994
	<p>This is a virtually complete run of Frank's pocket diaries.</p> <p>Intercalated within the diaries are visiting cards, notices of meetings, notes of addresses etc.</p> <p>At A.298 is a journal covering the outbreak of the Second World War</p>	
A.289	1926 Boy Scouts' diary.	
A.290	1927	
A.291	1928	
A.292	1932-1933	
A.293	1933-1934	

Biographical, A.99-A.566

- | | |
|-------|---|
| A.294 | 1934-1935 |
| A.295 | 1935-1936 |
| A.296 | 1937
German pocket diary |
| A.297 | 1938
German pocket diary |
| A.298 | Hardback notebook, used at front as a journal covering the outbreak of the Second World War 25 August-12 September 1939

Most pages not used. |
| A.299 | 1940 |
| A.300 | 1940
Entries are by Maita Frank. |
| A.301 | 1941 |
| A.302 | 1942 |
| A.303 | 1942 |
| A.304 | 1944 |

Biographical, A.99-A.566

A.305	1945
A.306	1946
A.307	1947
A.308	1947-1948
A.309	1948
A.310	1948-1949
A.311	1949
A.312	1950
A.313	1951
A.314	1952
A.315	1953
A.316	1954
A.317	1955
A.318	1956

Biographical, A.99-A.566

A.319 1957

A.320 1958

A.321 1959

A.322 1960

A.323 1961

A.324 1962

A.325 1963

A.326 1964

A.327 1965

A.328 1966

A.329 1967

A.330 1968

A.331 1969

A.332 1969

Biographical, A.99-A.566

A.333 1969-1970

A.334 1970

A.335 1971

A.336 1972

A.337 1972-1973

A.338 1973-1974

A.339 1974-1975

A.340 1976

A.341 1976-1977

A.342 1978

A.343 1978-1979

A.344 1980-1981

A.345 1981-1982

Biographical, A.99-A.566

A.346 1982-1983

A.347 1983-1984

A.348 1984-1985

A.349 1985-1986

A.350 1986-1987

A.351 1987-1988

A.352 1988-1989

A.353 1989-1990

A.354 1990-1991

A.355 1991-1992

A.356 1992-1993

A.357 1993-1994

Biographical, A.99-A.566

A.379	Frank, Alice M. Alice Frank was F. C Frank's aunt.	1939
A.380	Frank, Audrey	1985-1990
A.381	Frank, Edward Edward Frank was F. C Frank's brother.	1937-1950
A.382	?Frank, Fred	1951-1991
A.383	Frank, Geoff and Liz	1985-1994
A.384	Frank, Joy and Angela	1990-1991
A.385	Frank, Lottie Lottie Frank was an aunt.	1931
A.386	Frank, M.E. ('Molly')	1985-1990
A.387	Frank, Phil.	1931, 1985
A.388	Jo and Margaret	1985-1994
A.389	John and Jo	1986
A.390	Ken and Elizabeth	1992
A.391	Pat and Vera	1985-1990

Biographical, A.99-A.566

A.392	Peggy	1941
	Folder inscribed 'Perhaps a relative'.	
A.393	Pond, Ada and Arthur	1934-1935
A.394	Pond, Desmond	1936-1938
	Possibly the son of Ada and Arthur Pond.	
A.395	Read, Arnold	1934, 1946
A.396	Read, John Carley	1934
	Wedding invitation.	
A.397	Read, Rowland	1933
A.398	Romaine, [?]	1986
A.399	Smith, Effie	1934
	Effie Smith was an aunt.	
A.400	Smith, Effie	1934
	Effie Smith, cousin, was the daughter of Frank's aunt, also called Effie Smith.	
A.401	Southwell, Warburton	n.d.
A.402	Stanton, Rex and Gladys	1935-1936
	The Stantons were cousins.	

Biographical, A.99-A.566

A.403	Miscellaneous correspondence	1934-1939
A.404-A.406	Frank family tree	1986-1989
A.404	Correspondence with members of the family <i>re</i> the Frank family tree	1986-1989
A.405, A.406	'Family tree plus related material' Contents of Frank's folder so inscribed divided into two for ease of reference.	n.d.
A.407-A.468	FRIENDS AND COLLEAGUES	1929-1997
A.407-A.436	Correspondence with friends From Oxford and Germany	1932-1941, n.d.
A.407	Adelheim, [?] Adelheim was a friend from Berlin.	1938
A.408	Bellam, Jim	1938
A.409	Brown, Thea	n.d.
A.410, A.411	Carpenter, Anne See also Thea Brown. Also includes a text in German entitled 'The Skier's Waltz'.	n.d.
A.412	Clarke, E.J.S.	n.d.

Biographical, A.99-A.566

A.413	Davis, Alan	1936
A.414	Davis, Mal	1935
A.415	Dutta, A.	1938
A.416	Evans, Patrick See also Alan Davis (A.413).	1937
A.417	Finn, Edward	n.d.
A.418	Gatty, Penelope	1940-1941
A.419	Gatty, Richard and Katharine	1940
A.420	Guerrini, V.H. Frank met Guerrini in Berlin.	1938-1939
A.421	Hill, Roger P.	1937
A.422	Holt, R.V.	1935
A.423	Horton, A.J.	1934
A.424	[L?], [?] In German.	1938

Biographical, A.99-A.566

A.425	Marsden, Ralph J.B.	1936-1939
A.426	Nettleton, Martin	1935
A.427	[?P], B.	1934
A.428	Pelmore, Denis Denis Pelmore was Frank's successor in Oxford as a research student.	1937
A.429	Purna, Kittu R.	1934-1935
A.430	Richards, J.	1937
A.431	Seycart, E.N.	n.d.
A.432	Stroud, L. Stroud was Frank's landlady in Oxford.	1935, 1936
A.433	Not used	
A.434	Wallace, Bertie Bertie Wallace was a school friend of Frank.	1932
A.435	Wynne, Charles G.	1934
A.436	First names only	1933-1937

Biographical, A.99-A.566

A.437-A.461	'Correspondence with girlfriends' . Contents of folder so inscribed	1929-1940
A.437	Allan, Isobel	1937
A.438	Allison, E.	1938
A.439	[?B], Zoe	1937
A.440	Bremner, H.	1936
A.441	Burdett, Dulce	1929-1938
A.442	C[?], Judy	1936
A.443	C[?], Marion Frank met Marion C during the Holiday Fellowship. See H.172.	1935
A.444-A.446	'Elsi' 3 folders.	1937
A.447-A.449	Mathisson, Ilse 3 folders. See also A.559. Frank met Ilse Mathisson in Estonia.	1933-1939
A.450, A.451	Mac Currach, Jean	1935-1938

Biographical, A.99-A.566

Also includes 6 photographs from Frank's time in Germany.

2 folders.

A.452	Meier, Theena	1933
A.453	Menser, G.	1938
A.454	Michaelis, Lotte	1934
A.455	Platz, Margaret	1937
A.456	Saunders, Mary	1940
A.457	Schreiber, Betti	1936-1937
A.458	Undritz, M. With typescript transcriptions of correspondence, compiled in the 1990s. Frank met M. Undritz in Estonia.	1931-1932
A.459	Wagen, Gertrud	1938
A.460	Williams, Molly	1938
A.461	Unidentified	1937

Biographical, A.99-A.566

A.462-A.468	Information on colleagues	1977-1997
A.462	Service of Thanksgiving for Harry Garner Edwards, Clifton College Chapel, 29 April 1995 Order of service and address.	1995
A.463, A.464	Newspaper cuttings on Reginald V. Jones. 2 folders.	1977-1997
A.465	N.F. Mott's 80th birthday List of guests and poem entitled 'Some Jots for Mott'. See also J.357.	1985
A.466-A.468	Newspaper cuttings on colleagues and various personalities 3 folders.	1983-1995
A.469-A.492	CLUBS, ASSOCIATIONS AND OTHER INTERESTS	1931-1997
A.469-A.480	Oxford University clubs	1931-1940
A.469	Oxford University Alembic Club Programmes of meetings 1935-1936; signed menus 1931 and 1935; Rules.	1931-1936
A.470-A.475	Oxford University Film Unit Chiefly correspondence <i>re</i> speakers for meetings, films to be shown, Film Unit policy and membership etc. Also includes some scripts, lists of camera shots etc. See A.9 of the previous catalogue. Frank was a committee member of the University Film	1933-1940 and n.d.

Biographical, A.99-A.566

	Society and Founder and first President of the Film Unit. The two merged in 1936.	
A.470	1933-1934	
A.471	1934	
A.472	1934-1935	
A.473	1936 Includes shooting script for documentary on the Oxford University Air Squadron.	
A.474	1937, 1940 and n.d.	
A.475	Scripts, shooting lists, scenarios etc. Also includes some memorabilia of the (Left wing) Film & Photo League.	N.d.
A.476	Oxford University German Club Programme of meetings.	1934
A.477	Oxford University Jiudo/Jiu-jitsu Club Brief correspondence only.	1935
A.478	Oxford University Junior Scientific Club Programmes for meetings etc.	1935-1936
A.479	Oxford Union Society Life membership certificate.	1932

Biographical, A.99-A.566

A.480	Oxford Society	1937
	Letter <i>re</i> possible branch in Germany; membership card, constitution.	
A.481-A.488	'Subscriptions'	1934-1997
	Contents of Frank's folder so inscribed: correspondence and papers relating to subscriptions for membership of clubs and associations, and charitable donations. It also includes some scientific societies otherwise documented in section F.	
	Arranged in alphabetical order.	
A.481	A	1958-1997
	Includes (incomplete) list of Frank's memberships.	
A.482	B (1)	1969-1986
A.483	B (2)	1981-1988
A.484	C-E	1940-1994
A.485	F-I	1971-1990
A.486	M	1979-1985
A.487	N-R	1935-1990
A.488	S-Y	1934-1989

Biographical, A.99-A.566

A.489-A.491 Concerts and functions 1935-1950

Programmes for music concerts, plays etc.

3 folders.

A.492 'Historical material' 1939, 1940

Contents of Frank's folder so inscribed: newspaper and magazine cuttings kept by Frank.

A.493-A.565 PHOTOGRAPHS 1911-1995, n.d.

Most of the photographs have some note identifying occasion, date and/or those featured inscribed on verso or by attached note.

There are many other photographs elsewhere in the collection, particularly with the Career, honours and awards material (A.204-A.288). These have been retained with the correspondence and papers with which they were found.

A.493-A.533 Photographs of Frank 1911-1995, n.d.

A.493 Frank as a baby 1911

3 photographs.

For further photographs of Frank as an infant see Family photographs below.

A.494 Frank as a schoolboy early 1920s

2 photographs.

A.495 Thetford Scout Camp 1927

6 photographs.

Biographical, A.99-A.566

See also A.130.

- | | | |
|-------|--|-------------|
| A.496 | Group photograph of pupils at Ipswich School

1 photograph (rolled).

See also A.132-A.141. | 1928 |
| A.497 | Ipswich School play

4 photographs, two mounted.

See also A.136, A.137.

The photographs are of a performance and cast of Molière's <i>Malade Imaginaire</i> . Frank played Béline, second wife of Argan. | 1928 |
| A.498 | Portrait photograph of Frank

1 photograph. | 1930 |
| A.499 | Lincoln College Oxford

2 graduation photographs.

1 group photograph of B.Sc./D.Phil. class, featuring Frank in back row.

See also A.142-A.147. | early 1930s |
| A.500 | ?Lincoln College

Note on verso suggests the photograph is 'Lincoln College staff? or some charitable or other organisation'.

1 photograph. | early 1930s |
| A.501 | Group photograph of Oxford Scientific Club

'A souvenir of the visit [...] to the laboratories of Parke, Davis & Co., Hounslow, on 1st November 1934'. | 1934 |

Biographical, A.99-A.566

- Frank is featured on the right of the middle row.
1 photograph.
- A.502 Frank and K. Wirtz 1937
1 photograph.
- A.503 Group photograph of Colloid Science group, Cambridge ?1939
Frank is on the right of the middle row.
1 photograph.
- A.504 Group photograph of H.H. Wills Laboratory staff and researchers 1948
1 photograph.
- A.505 'Fort Royal Lab 1948-9 Party' 1948 or 1949
Those featured include Frank, A.M. Tyndall and N.F. Mott.
8 photographs.
- A.506 Frank and J. H. Hollomon at GE Laboratory, Schenectady, USA c 1951
1 photograph.
- A.507 Frank, Maita Frank and G.P.S. Occhialini, Bristol 1953
1 photograph.
- A.508 Frank, J.C. Fisher and T. Read 1954
1 photograph.

Biographical, A.99-A.566

- | | | |
|-------|--|--------------|
| A.509 | Honorary Degree ceremony, Ghent, Belgium

1 photograph.

See also A.209, A.210. | 1955 |
| A.510 | Visit of the Duke of Edinburgh to the H.H. Wills Laboratory

Those featured include the Duke of Edinburgh and C.F. Powell.

3 photographs; newspaper cutting on the visit. | 1957 |
| A.511 | 'Charles Frank observing dilatancy effects in wet sand, La Jolla shore 1964 or 1965'

1 photograph. | 1964 or 1965 |
| A.512 | Frank, Maita Frank and D. Parkin, Mexico

Annotated on front 'Wish you were here', sent to H.H. Wills Laboratory for their Christmas Party. Those featured are wearing Mexican hats and sitting in a donkey-cart.

1 photograph. | 1964 |
| A.513 | Portrait photographs of Frank

5 photographs; letter found therewith. | 1969 |
| A.514 | Visit to Prague

Frank visited Prague, Czechoslovakia, in September 1969.

2 photographs. | 1969 |
| A.515 | Frank at ?Physics Department party, Bristol.

1 photograph. | 1972 |
| A.516 | Frank's Retirement Party | 1976 |

Biographical, A.99-A.566

- Features Frank and Maita Frank.
1 photograph.
- A.517 Group photograph of Old Ipswichians Reunion 1978
1 photograph, with key.
- A.518 Royal Medal of the Royal Society 1979
Features all the Royal Society medallists for 1979.
1 mounted photograph.
See also A.232, A.233.
- A.519 Farewell Party for A.W. Merrison, Vice-Chancellor, Bristol 1984
Features Frank, Maita Frank, Isobel Powell and D.M.C. Hodgkin.
1 mounted photograph.
- A.520 Group photographs of the Polymer Physics Group 1985, 1997
2 photographs
- A.521 Frank, A.R.Lang and N. Sumida, Bristol 1987
1 photograph.
- A.522 'Fowler breakfast' 1989
Those featured include Frank and E. Sondheimer.
3 photographs.
- A.523 Frank with Mai Zhenhong, Assistant Director of the Institute of Physics of the Chinese Academy of Sciences, Bristol 1990

Biographical, A.99-A.566

1 photograph.

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|-------|---|------|
| A.524 | Photographs of Frank's 80th birthday celebrations

Photograph at civic function, featuring the Lord Mayor of Bristol, N.F. Mott and J.F.C. Kingman.

1 group photograph of celebrants, with key.

See also A.267-A.271. | 1991 |
| A.525 | Frank with A.Keller and D.C. Bassett

3 photographs. | 1991 |
| A.526 | Trinity College Cambridge

Features Frank with colleagues including A. Keller, A.H. Windle and E.L. Thomas.

1 photograph. | 1993 |
| A.527 | Copley Medal of the Royal Society

Features all the Royal Society medallists for 1994.

1 mounted photograph.

See also A.279-A.288. | 1994 |
| A.528 | Frank, M.L.E. Oliphant and M.M. Gowing

Taken during Kaptiza Centenary Symposium, Cambridge, 8 July 1994

2 photographs. | 1994 |
| A.529 | Frank, A.R. Lang and S. Takagi, Bristol

1 photograph. | 1995 |

Biographical, A.99-A.566

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|--------------------|---|------------------------|
| A.530 | Undated group photographs of staff and researchers of the H.H. Wills Laboratory

3 photographs. | N.d. |
| A.531 | Group photograph of visit of members of Chinese Academy of Sciences to Bristol

Bristol figures featured include Frank, J.M. Ziman and ?R.L. Gregory.

1 photograph. | N.d. |
| A.532 | ?H.H. Wills Laboratory party

Those feature include Frank and C.F. Powell.

5 photographs. | N.d. |
| A.533 | Frank at ?Departmental Party, Bristol

N. Thompson is also featured.

4 photographs. | N.d. |
| A.534-A.550 | Conferences

Photographs of proceedings and group photographs of participants from conferences attended by Frank.

There are other photographs in the Visits and conferences section H, retained with the material with which they were found. | 1948-1976, n.d. |
| A.534 | Group photograph of participants at conference 'Amsterdam 1948'

1 photograph.

See also H.177. | ?1948 |

Biographical, A.99-A.566

- A.535 Group photograph of participants at 'Cambridge ? ca c 1950
1950'

1 photograph.
- A.536 Mounted group photograph of participants at 9th 1951
International Solvay Conference in Physics, Brussels,
Belgium, 25-29 September 1951

1 photograph.

See also H.186-H.192.
- A.537-A.541 Visit to Japan, September-October 1953 1953

See H.195 of this catalogue, and H.11-H.22 of the
previous catalogue.
- A.537 Group photograph of participants at meeting

Frank is to the left of the fourth row up.

1 photograph.
- A.538 Photographs of lectures and meetings

Those featured include Frank, N.F. Mott and R.P.
Feynman.

5 photographs.
- A.539 Photographs of visits to Japanese laboratories and
research facilities

Those featured include Frank, N.F. Mott, J.C. Fisher and
Japanese colleagues.

9 photographs.
- A.540 Photographs of excursions

14 photographs.

Biographical, A.99-A.566

- A.541 Photographs of social occasions and parties
5 photographs.
- A.542 Photographs 'c 1953 ?Berlin' ? 1953
5 photographs.
See also A.188-A.194.
- A.543 Group photograph of participants at International
Congress on Theoretical Physics, Seattle, USA,
September 1956 1956
1 photograph.
- A.544 Group photograph of participants at 'Cooperstown
Conference', 1958 1958
1 photograph.
See also E.111A.
- A.545 International Conference on Crystal Growth, Japan,
March-April 1974 1974
Photographs of Frank lecturing, and with colleagues at
social functions and on excursions.
Those featured also include Maita Frank, S. Takagi and B.
Pamplin.
6 photographs.
See also H.229.
- A.546 Group photograph of participants at 2nd International
Spring School on Crystal Growth, Japan, 31 March-7 April
1974 1974
1 photograph.

Biographical, A.99-A.566

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|--------------------|---|-------------|
| A.547 | Group photograph of participants at 26th Pugwash Conference on Science and World Affairs, Mühlhausen, East Germany, 26-31 August 1976

1 photograph. | 1976 |
| A.548 | Group photograph of participants at NATO Advanced Study Institute on Surface Effects on Strength of Materials ('Hohe Geiss Conference 1976')

1 photograph. | 1976 |
| A.549 | Group photograph of participants at unidentified conference

Those featured include N. Cabrera, B. Bilby and N.F. Mott. | N.d. |
| A.550 | Informal photographs from unidentified conference

Those featured include Frank, A.B. Pippard, A.H. Cottrell and N.F. Mott.

2 photographs. | N.d. |
| A.551-A.558 | Family

See also A.363-A.406. | N.d. |
| A.551 | Grandparents

Includes photographs of Frank as an infant with his grandmother.

4 photographs. | |
| A.552 | Frederick Frank (father)

Includes photographs of Frank as an adult with both his parents and of both his parents together.

5 photographs. | |

Biographical, A.99-A.566

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|-------|--|------------------|
| A.560 | Photographs from Frank's period of research in P. Debye's laboratory, Berlin, Germany

Those featured include M. Pirene, P. Debye, M. von Laue and E. Fischer.

10 photographs.

See also A.188-A.194. | 1936-1937 |
| A.561 | Group photograph of ?H.H. Wills Laboratory staff and researchers

1 photograph. | c 1949 |
| A.562 | J.E. Mayer and A. Sommerfeld, Bad Nauheim, Germany, October 1950

1 photograph. | 1950 |
| A.563 | F. Seitz, Japan

1 photograph. | 1953 |
| A.564 | Group photograph of members of the H.H. Wills Laboratory on the occasion of J. Malos's retirement

1 photograph. | 1992 |
| A.565 | Group photograph of colleagues in Uppsala, Sweden

1 photograph, with key. | N.d. |
| A.566 | MISCELLANEOUS

Household finance, tenancy agreements, insurance, etc. | 1932-1945 |

SECTION B	UNIVERSITY OF BRISTOL, B.152-B.327	1945-1997
	B.152-B.281	PHYSICS DEPARTMENT
	B.282-B.327	UNIVERSITY
B.152-B.281	PHYSICS DEPARTMENT	1945-1976, n.d.
	B.152-B.155	Administration
	B.156-B.169	Research funding
	B.170-B.226	Research seminars
	B.227-B.266	Teaching
	B.267-B.270	Postgraduate courses
	B.271-B.279	Students
	B.280, B.281	Miscellaneous
B.152-B.155	Administration	1966-1972
B.152	Minutes of Physics Steering Committee, 19 October and 21 December 1968	1968
B.153	Correspondence <i>re</i> registration of research assistant for Ph.D.	1966-1967
B.154	Correspondence and papers <i>re</i> technicians' dispute	1969-1970
B.155	Correspondence and papers <i>re</i> Research Fellow in Polymer Science	1970-1972

University of Bristol, B.152-B.327

B.156-B.169	Research funding	1966-1975
	<p>This is material relating to ICI support of science research activity at Bristol, and support of research in the Physics Department in particular.</p> <p>See B.104 of the previous catalogue.</p>	
B.156, B.157	General funding	1967-1974
B.156	Correspondence <i>re</i> possibilities for cooperation between ICI and the University of Bristol; ICI Vacation Student Scheme	1967
B.157	Correspondence chiefly <i>re</i> ICI support for Bristol research after the end of the Fellowships scheme	1973-1974
B.158-B.165	ICI Research Fellowships Scheme	1969-1975
	<p>Chiefly papers of the ICI Research Fellowships Committee. Arranged chronologically.</p> <p>Includes applications.</p>	
B.158	1969	
B.159	1970	
B.160	1971	
B.161	1972	
B.162	1973	
B.163	1973	
	Correspondence <i>re</i> future of Fellowship scheme.	

University of Bristol, B.152-B.327

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|-------------|--|-----------------|
| B.164 | 1974 | |
| B.165 | 1975 | |
| B.166-B.169 | ICI Loan Purchase Scheme | 1966-1972 |
| | Invitations to apply for loans, applications, etc. | |
| | Arranged chronologically. | |
| | This scheme enabled university science departments to acquire special apparatus which was too costly to be included in usual departmental expenditure but not large enough for a major grant application. The equipment remained the property of ICI although it was not required to be returned while it remained of use in the department. | |
| B.166 | 1966-1968 | |
| B.167 | 1969 | |
| B.168 | 1971 | |
| B.169 | 1972 | |
| B.170-B.226 | Research seminars | 1945-1957, n.d. |
| | Manuscript notes on postgraduate lecture courses (may include some undergraduate teaching), departmental seminars and colloquia given by colleagues. | |
| | See B53.-B.56 of the previous catalogue. | |
| B.170 | '[W.K.] Burton & [N.] Cabrera: Equilibrium at crystal surfaces 25.5.45' | 1945 |

University of Bristol, B.152-B.327

B.171	A.F. Devonshire, 8 October-12 November 1946 6 lectures.	1946
B.172	N.F. Mott, 14 October-9 December 1946 11 lectures.	1946
B.173	'[H.] Fröhlich Nov 4th', '18.11.46', '25.11.46' and '2.12.46'	1946
B.174	A.F. Devonshire, 19 November-17 December 1946 5 lectures.	1946
B.175	N.F. Mott, 14 January-10 March 1947 7 lectures.	1947
B.176	A.F. Devonshire, 21 January-4 February 1947 3 lectures.	1947
B.177	H. Fröhlich, 27 January-21 March 1947 8 lectures on dielectrics.	1947
B.178	'Devonshire 11.2.47 Organic molecules with double bonds'	1947
B.179	'[D.] Polder: Group theory Nov. 12th' and 'Nov 19th 1947 Infinite Groups'	1947
B.180	'Heisenberg Superconduc. 1.12.47'	1947

University of Bristol, B.152-B.327

B.181, B.182	Duplicated typescript notes for Biochemical Kinetics lectures by D.D. Eley 2 folders.	1947
B.183	'Polder - Group theory - Jan 21st 1948'	1948
B.184	'Fröhlich Sat 24 Jan 1948'	1948
B.185	'Devonshire 26th Jan 1948'	1948
B.186	'[H.] Dingle Fri 2[?] Jan 1948'	1948
B.187	'Polder 4 Feb 1948'	1948
B.188	'[J.D.] Eshelby 6 Feb 1948 Damping'	1948
B.189	'Dingle 6 Feb 1948'	1948
B.190	'Group theory Booth 3.3.48'	1948
B.191	'Mitchell 8th Mar 1948'	1948
B.192	'Booth 18th Mar'	1948
B.193	'[J.K.] Galt. Magnetism 30 April 1948'	1948
B.194	'Devonshire 5.5.48. Comparison of collision theory & activ. complex theory'	1948

University of Bristol, B.152-B.327

B.195	'Mehl 18.5.48. Diffusion in Metals'	1948
B.196	'Polder. Magnetism 21.5.48'	1948
B.197	'Mrs Garforth Oxidation 15.9.48'	1948
B.198	'Ferroelectrics [A.F.] Devonshire 13.10.48'	1948
B.199	'[N.F.] Mott. Wigner-Seitz cohesion theory. Nov 2nd 1948'	1948
B.200	'Devonshire': '17 Nov 1948', '24.11.48' and 'Dec 1st 1948'	1948
B.201	'[W.K.] Burton Dec 1st. 2nd lecture'	1948
B.202	'Devonshire 8.12.48'	1948
B.203	'Burton 9.12.48'	1948
B.204	'Burton 27.1.49'	1949
B.205	'Mott 31st Jan 1949. Method of tight binding'	1949
B.206	'Burton': '3rd Feb 1949', '3rd Mar' and '24.3.49'	1949
B.207	'Mott': '8.3.49', '14th Mar 1949' and '21.3.49'	1949
B.208	'Burton 25.4.49'	1949

University of Bristol, B.152-B.327

B.209	'Mott 2nd May 1949' on defects	1949
B.210	'Burton 20.5.49. (Another [?lemmary] explanation)' and 'Burton recap 7th June 1949'	1949
B.211	'Roberts 2.11.49' and 'Roberts 2nd lecture' on subatomic particles	1949
B.212	'Burton Groups 26.1.50' and 'Burton Feb 2nd'	1950
B.213	'Mackenzie', ?February	1950
B.214	'[J.D.] Eshelby Screw dislocation 8.2.50'	1950
B.215	'Burton 9.2.50'	1950
B.216	'Roberts': 20.2.50', '27.2.50' and '1 lecture on quantum mechanics'	1950
B.217	'Eshelby 26.2.50'	1950
B.218	'Burton 2[?8].2.50' and '2.3.50'	
B.219	'Hill [...] Lecture 23 Oct. 1950' on Coordinates in the yield focus plane	1950
B.220	University of Bristol Public Lecture on Meteorites by H.C. Urey, 17 June 1957 Notice; manuscript notes.	1957

University of Bristol, B.152-B.327

B.221	Undated notes on Burton	N.d.
B.222	Undated notes on Eshelby	N.d.
B.223	Undated notes on Mott	N.d.
B.224	'Thermodynamics of irreversible processes' by J. Meisener	N.d.
B.225, B.226	Miscellaneous shorter notes 2 folders.	N.d.
B.227-B.266	Teaching	1946-1970, n.d.
B.227	Duplicated typescript notes for teaching on precipitation in alloys and dislocations	c 1946
B.228	Manuscript outline of lecture course on 'The constitution of matter', summer term 1947	1947
B.229	Syllabus for course on the Earth, winter 1947-1948 Manuscript draft.	1947
B.230-B.233	'Lectures on solids' Contents of Frank's folder so inscribed divided into four for ease of reference: manuscript notes.	1952
B.234-B.240	Contents of Frank's folder divided into seven for ease of reference: manuscript lecture notes on thermodynamics	1953

University of Bristol, B.152-B.327

B.241-B.244	'Thermodynamics' Contents of Frank's folder so inscribed divided into four for ease of reference: manuscript notes.	N.d.
B.245-B.247	'Lectures + notes on waves in crystals + related matters' Contents of Frank's folder so inscribed divided into three for ease of reference: manuscript and typescript notes.	1958-1966
B.248	Manuscript lecture notes beginning 'The general topic of this course is Physics since 1910, and my particular part of it is the Defects of Crystals'	N.d.
B.249-B.251	'Notes on crystallography etc'. Contents of Frank's folder so inscribed divided into three for ease of reference: manuscript notes.	
B.252-B.257	'Lecture notes on E.M. [electromagnetic] theory' Contents of Frank's folder so inscribed divided into six for ease of reference: manuscript notes for lectures 1-20 (not all represented).	N.d.
B.258	'Gravity survey' Manuscript ?lecture notes.	N.d.
B.259-B.263	Lecture notes for unidentified course Lectures II, IV, V and VII, and manuscript notes found therewith. 5 folders.	N.d.
B.264	Duplicated typescript physics examination papers	1970

University of Bristol, B.152-B.327

B.265, B.266	Manuscript draft questions 2 folders.	N.d.
B.267-B.270	Postgraduate courses	1966-1971
B.267	M.Sc. course in the physics of materials Outline syllabuses, 4pp duplicated typescript; examination paper.	1966
B.268	M.Sc. course in the physics of materials Photocopy examination paper.	1967
B.269	M.Sc. course in the physics of materials Manuscript notes for introductory lectures. Not in Frank's hand.	1968
B.270	Manuscript draft of M.Sc. examination question	1971
B.271-B.279	Students	1954-1976, n.d.
B.271	'Notes on students' Contents of Frank's folder so inscribed: manuscript notes on students applying for courses at Bristol.	1954-1959
B.272	Hardback notebook used for notes on progress of M.Sc. students	1965-1966
B.273	Marks for student projects	1969-1970
B.274	Student marks	1970

University of Bristol, B.152-B.327

B.275	'Stage III Honours projects' Contents of Frank's folder so inscribed: manuscript notes on projects.	1970, 1972
B.276	Hardback notebook used for notes on progress of students	1970-1976
B.277	Notes on Stage II tutorial group	1974
B.278	Completed questionnaire returns The returns mark Frank's proficiency as a Lecturer in geophysics.	N.d.
B.279	Marked student essays	N.d.
B.280, B.281	Miscellaneous	1948, 1962
B.280	'The Shape and Size of the Universe', University of Bristol Department of Adult Education talk, Taunton, 6 October Letter; notice. Frank was deputising for C.F. Powell.	1948
B.281	'On Atoms', 'Talk to Prof Beare's Lucretius Class', 1 February 1962 9pp manuscript.	1962
B.282-B.327	UNIVERSITY	1962-1997
	B.282-B.285	General correspondence and papers

University of Bristol, B.152-B.327

	B.286-B.309	Committees	
	B.310-B.324	Colston Research Society	
	B.325-B.327	University of Bristol Newsletters	
B.282-B.285	General correspondence and papers		1963-1993
B.282	Speech for University of Bristol Council, 2 June 1967 2pp typescript; newspaper cutting <i>re</i> Oxford Fund. Frank raised the issue of student fees.		1967
B.283	Miscellaneous correspondence		1969-1993
B.284	Salary information		1963-1975
B.285	Memorabilia from Centenary Celebrations of the University of Bristol		1976
B.286-B.309	Committees		1962-1997
B.286-B.295	Art Lectures Committee Papers for committee meetings. See B.90-B.93 of the previous catalogue.		1971-1997
B.286	1971		
B.287	1972		
B.288	1973		
B.289	1974		

University of Bristol, B.152-B.327

B.290	1975	
B.291	1986, 1990	
	Two letters only.	
B.292	1994	
B.293	1995	
B.294	1996	
B.295	1997	
	Also includes letter of thanks to Frank for 34 years of service.	
B.296	Chemistry Department Scheduling Sub-Committee	1962
	Correspondence and papers <i>re</i> mechanical and glass-blowing workshops.	
B.297	Committee of Professors in the Faculty of Engineering	1974-1976
	Agenda and minutes of meetings.	
B.298-B.300	Engineering Board	1975-1976
	Agenda and minutes of meetings.	
	3 folders.	
B.301-B.305	Knowlson Trust Foundation Awards Committee	1963-1973
	Papers for committee meetings and applications for	

University of Bristol, B.152-B.327

awards, and related correspondence.

Those for 1963-1967 are C.F. Powell's, passed to Frank in 1968.

See B.109-B.111 of the previous catalogue.

B.301	1963-1964	
B.302	1965-1966	
B.303	1967-1968	
B.304	1969-1970	
B.305	1971-1973	
B.306-B.309	Library Committee Includes Periodicals Subcommittee (B.308).	1973-1974, 1994-1995
B.306	Papers of meeting, May	1973
B.307	Papers of meeting, November	1973
B.308	Papers of meeting of Periodicals Subcommittee, December	1973
B.309	Correspondence	1974, 1994- 1995
B.310-B.324	Colston Research Society	1967-1996
B.310	Correspondence <i>re</i> Council membership	1974-1992

University of Bristol, B.152-B.327

B.311-B.318	Papers for meetings of Council	1974, 1986- 1996
B.311	1974	
B.312	1986	
B.313	1987	
B.314	1988	
B.315	1992, 1993	
B.316	1994	
B.317	1995	
B.318	1996	
B.319	Minutes of Colston Research Fund Committee meetings	1967-1971
B.320-B.322	Papers for meetings of the Colston Research Society Symposium Committee	1972-1975
B.320	1972, 1973	
B.321	1974	
B.322	1975	

University of Bristol, B.152-B.327

B.323, B.324	Miscellaneous correspondence	1973, 1991
B.323	Correspondence <i>re</i> offprints policy	1973
B.324	Correspondence and papers <i>re</i> Colston Symposium on Understanding Science, Bristol, March 1991 Includes 2pp typescript by Frank 'Understanding Science'. Frank was invited to give the introductory talk opening the Symposium.	1990-1991
B.325-B.327	University of Bristol Newsletters	1980-1989
	Newsletters kept by Frank for items of interest.	
B.325	12 June and 26 June 12 June has letter from Frank on the Association of University Teachers' opposition to military research in universities; that of 26 June has letters arising.	1980
B.326	Letter on the Tyndall family Arising from article on the 'The last of the Tyndalls' in the newsletter of 15 June 1985.	1985
B.327	Miscellaneous newsletters	1987, 1989

SECTION C	RESEARCH, C.204-C.396	1914-1992, n.d.
	<p>Divided into subsections to follow the arrangement of the previous catalogue and presented in a largely chronological order, though related material has been kept together.</p> <p>At C.386-C.396 are miscellaneous photographs of crystal structure etc.</p>	
C.204-C.209A	POSTGRADUATE	1933-1937
	<p>See C.1-C.33 of the previous catalogue.</p>	
C.204	Hardback notebook inscribed on first page 'Nov 1933'	1933-1937
C.205	Hardback notebook inscribed inside front cover 'I' and on first page 'Nov 1933'	1933-1935
	<p>Used November 1933-2 April 1935, chiefly for work on electrical circuits. Loose material intercalated at front.</p>	
C.206	Hardback notebook inscribed inside front cover 'II' and April 1935'	1935
	<p>Used 2 April-1 October 1935.</p>	
C.207	Hardback notebook inscribed inside front cover 'III'	1935-1936
	<p>Used 22 October 1935-8 July 1936. Loose intercalated material dated 1936.</p>	
C.208	Hardback notebook inscribed inside front cover 'IV'	1936
	<p>Used 28 July-13 October 1936 for work on acetonitrile, palmitonitrile and butyronitrile.</p>	
C.208A	Manuscript notes on the 'Contents of the 4 "Physics Books" and 1 Chemistry Book'; miscellaneous manuscript notes on octomitrile etc.	1935-1936

Research, C.204-C.396

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|-------------|--|------------------|
| C.209 | Ring back pocket notebook | c 1935 |
| | Used for notes on the literature, bibliographical references and jottings. Latest reference 1935. | |
| C.209A | Abstract of D. Phil. thesis | 1936 |
| | Manuscript draft; manuscript calculations, notes and figures. | |
| C.210-C.213 | GERMANY | 1936-1937 |
| | See C.34-C.54 of the previous catalogue. | |
| C.210 | Pocket notebook | 1936-1937 |
| | Used 1936-1937 for notes, calculations etc. A little loose intercalated material including sketch of 'Scientists Three Faith, Hope & Charity'. | |
| C.211 | Pocket notebook | 1937 |
| | Used 1937 for rough notes and calculations. | |
| C.212 | Pocket notebook | c 1937 |
| | Used c 1937 for rough notes and calculations. Many loose intercalated pages at end of notebook. | |
| C.213 | Pocket notebook | c 1937 |
| | Used c 1937 for rough notes and calculations. Some notes in German. | |

Research, C.204-C.396

C.214-C.216 CAMBRIDGE 1939-1940

These notebooks record Frank's work with Oliver Gatty of the Department of Colloid Science, University of Cambridge at the end of 1939 and early 1940.

See C.55-C.79 of the previous catalogue.

C.214 Hardback notebook inscribed on first page 'F.C. Frank and O. Gatty' 1939-1940

Used for notes on work by Frank and Gatty 14 November 1939-16 January 1940.

C.215 Hardback notebook inscribed on first page 'F.C. Frank and O. Gatty Vol II' 1940

Used for notes on work by Frank and Gatty 16 January-2 February 1940.

C.216 Hardback notebook inscribed on first page 'F.C. Frank & O. Gatty III' 1940

Used for notes on work by Frank and Gatty 2-16 February 1940.

C.217-C.233 SECOND WORLD WAR 1935-1946

See C.80-C.109 of the previous catalogue.

C.217-C.226 'Smoke generation Porton 1940' 1935-1941

Contents of Frank's folder so inscribed.

This work was to investigate smoke density and dispersal. O. Gatty who had been working with Frank at Cambridge (see C.214-C.216 above) was also involved in this work.

C.217 'Mists and volatile smokes' by Frank, Gatty and H. Campbell. 1940

Research, C.204-C.396

Typescript with manuscript figures; summary by Frank, August 1940, manuscript draft and 3pp typescript.

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| C.218 | 'Specification of boiling point for oil smokes' | 1940 |
| | 4pp manuscript draft, 1p typescript draft + figure, September 1940. | |
| C.219 | 'A theory of evaporation in wind from surfaces of small downwind length' by Frank | 1940 |
| | Manuscript draft, October 1940. | |
| C.220 | 'Comments on P.D.R. 246' by Frank | 1940 |
| | 1p manuscript and 1p typescript drafts. | |
| C.221 | Figures illustrating the 'Porton Creosote Burner' | 1940 |
| | Includes mounted photographs of the Burner in action. | |
| C.222, C.223 | Titled sets of manuscript notes and calculations | c 1940 |
| | 'Aerodynamic boundary layers', 'Diffusion into an air flow with uniform velocity gradient', 'Effective density of coagulating particles of hard substance', 'Note on the nature of the conduction in highly insulating substances' and 'Shape of capillary drops'. With two letters to Frank, 1940, found therewith. | |
| | 2 folders. | |
| C.224 | Miscellaneous manuscript notes and calculations | c 1940 |
| C.225 | Typescript translations of German language journal articles on smoke-related topics from 1940. | 1940 |
| C.226 | Published background material | 1935, 1938 |

Research, C.204-C.396

Pages from *Berliner Illustrirte Zeitung*, 20 June 1935;
Daily Express, 17 August 1938 featuring failures of
government-issued gasmasks.

C.227-C.231	'Air Ministry Intelligence 1940-1945' Contents of Frank's folder so inscribed.	1942-1946
C.227	'Elements of flight' Manuscript note and calculations.	early 1940s
C.228	Calculations of 'Isobar rules' Manuscript note.	early 1940s
C.229	Manuscript notes	early 1940s
C.230	'Dr Jones 30th Nov 1945' Contents of folder so inscribed found within Frank's 'Air Ministry' folder: 'Theory of a U-235 Bomb (treatment according to Heisenberg)', 'Elements of Pu-production calculation', manuscript notes.	1945
C.231	'Prof Jones 1.8.46' Contents of folder so inscribed found within Frank's 'Air Ministry' folder. Includes letter to R.V. Jones from Frank explaining why he does not wish to continue in the Civil Service, May 1946; photograph of Porton Down reunion, Spetember 1946, with key; humorous material 1942 and n.d.	1942-1946
C.232, C.233	'Analysis of Rocket Accuracy' Contents of Frank's folder so inscribed: material <i>re</i> analysis of fall of German V-rockets in England.	1945
C.232	Manuscript calculations and analyses	

Research, C.204-C.396

C.233 Duplicated typescript sections of report, including 2pp summary of conclusions

C.234-C.377

BRISTOL

1940s-1992

Frank's method of working often resulted in many scraps of paper being used for untitled and undated calculations. Frequently drafts begin in longhand and after two or three papers peter out into increasingly roughly written calculations. Many of the calculations are themselves written on the verso of earlier drafts, not necessarily related.

See C.110-C.203 of the previous catalogue.

C.234

'Ice crystallography'

1940s

Contents of Frank's folder so inscribed: manuscript notes and calculations, latest reference 1940.

C.235, C.236

'Ice. Polarisation kinetics'

1940s

Contents of Frank's folder so inscribed: typescript extracts of Frank's contributions to Faraday Society discussions, manuscript notes and calculations.

2 folders.

C.237

'Ice. Dielectric Prop[ertie]s'

1940s

Contents of Frank's folder so inscribed: manuscript notes, diagrams etc.

C.238, C.239

'Alternating reaction kinetics'

c 1945

Contents of Frank's folder so inscribed: manuscript notes and calculations. One page of calculations dated to December 1945.

2 folders.

Research, C.204-C.396

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| C.240, C.241 | 'Mathematical' | c 1946 |
| | Contents of Frank's folder so inscribed: chiefly manuscript notes and calculations. | |
| | 2 folders. | |
| C.242 | Contents of Frank's untitled folder. | 1946 |
| | Includes manuscript notes and calculations; 30pp duplicated typescript 'The quantum theory of crystalline solids with particular references to semi-conductors', September 1946; and references to visit to Germany December [?1946] to visit K. Wirtz and Th. Forster. | |
| C.243 | Manuscript note on 'Crystal growth', with duplicated typescript 'Calculation on the rate of migration of a ledge' found attached. Latest bibliographical reference 1946. | c 1946 |
| C.244, C.245 | 'Entropy of Ice 1947' | 1947 |
| | Contents of Frank's folder so inscribed: 11pp typescript draft on 'Entropy of Ice-I'; untitled manuscript draft referring to work by Pauling dated May 1947; manuscript notes and calculations. | |
| | 2 folders. | |
| C.246-C.269 | 'Crystal growth' | 1948-1954 |
| | Contents of Frank's boxfile so labelled divided into twenty four for ease of reference. | |
| C.246 | Correspondence, chiefly with D.A. Jones of the University of Aberdeen, <i>re</i> lecture course on crystals | 1948 |
| C.247 | Brief correspondence, with typescript and manuscript notes etc. | 1948 |

Research, C.204-C.396

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| C.248 | Correspondence, chiefly with Faraday Society, <i>re</i> discussion on crystal growth | 1949 |
| C.249 | Correspondence chiefly <i>re</i> Faraday Society discussion | 1949 |
| C.250 | Correspondence, chiefly with L.J. Griffin <i>re</i> theory of dislocations. | 1949 |
| C.251 | Miscellaneous correspondence | 1951-1952 |
| C.252 | Letter from F.H. Horn replying to Frank's comments on his draft paper on dislocations, 11 July

With 8pp typescript draft of paper. | 1952 |
| C.253 | Miscellaneous correspondence

Includes drafts on dislocations by N. Cabrera and on crystal growth from the melt by J. Franks, sent to Frank for comment. | 1953 |
| C.254 | Miscellaneous correspondence | 1954 |
| C.255 | 'Continuous crystallisation' and Growth rate of one crystal face'

Manuscript and typescript notes, dated March and April 1949. | 1949 |
| C.256 | Ministry of Supply Advisory Council on Scientific Research and Technical Development Crystallisation Panel paper 'Interferometric studies on quartz crystal' by S. Tolansky and L.J. Griffin

Duplicated typescript with figures, July 1949. | 1949 |
| C.257 | 'Memorandum on Kossel's Reciprocity Theorem' | 1949 |

Research, C.204-C.396

Manuscript notes, November 1949.

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| C.258 | 'Note on the structure of a crystal surface'

8pp typescript; manuscript notes, calculations etc found therewith. | c 1949 |
| C.259 | 'Crystal growth and surface structure. I' by W.K. Burton and N. Cabrera

13pp typescript. | c 1949 |
| C.260 | Manuscript notes on layer lattice structures by Frank | 1951 |
| C.261 | Manuscript on the theory of crystal growth with two different 2pp typescript summaries on work carried out in the US by Frank, July | 1951 |
| C.262 | Miscellaneous manuscript notes found clipped to offprint of 'Vapour pressure and rate of evaporation' by I.N. Stranski, Research vol 4 (1951)

The offprint is annotated by Frank ' He must be a very clever man to understand his own article'. | c 1951 |
| C.263 | 'Wachstum und kristallographische Orientierung von Dendriten' by A. Seeger and J. Schlipf, sent to Frank by N.F. Mott

4pp typescript + figure. | 1954 |
| C.264 | 'A theory of the shape of growth pyramids on crystals' by Frank

9pp typescript. | N.d. |
| C.265 | Titled sets of manuscript notes and calculations by Frank | 1950, n.d. |

Research, C.204-C.396

	'A method to grow dsingle crystals', 'Model for NaCl' and 'Point charge & dielectric'.	
C.266	Miscellaneous manuscript notes, graphs and calculations	N.d.
C.267	Miscellaneous notes on the literature and bibliographical references	N.d.
C.268	Miscellaneous photographs of crystals and crystal structure	N.d.
C.269	Miscellaneous published material	1958, 1951, n.d.
C.270-C.276	'Diffusion' Contents of Frank's folder so inscribed.	1948-1952
C.270	Correspondence	1948, 1952
C.271	'On the growth of crystals from dilute solutions' by A. Seeger 16pp typescript. Work done while on leave from the Technische Hochschule Stuttgart and working at the H.H. Wills Laboratory.	c 1949
C.272	'Calculation of diffusion penetration curves for surface and grain boundary diffusion' by J.C. Fisher, GE Research Laboratory paper, January 1950 With manuscript calculations by Frank found therewith.	1950
C.273	Manuscript notes on 'The crystal growth diffusion problem' by Frank	N.d.

Research, C.204-C.396

C.274-C.276	Miscellaneous manuscript notes and calculations 3 folders.	N.d.
C.277-C.281	'Twins' Contents of Frank's folder so inscribed: material <i>re</i> Frank's work on twinning in uranium published as 'A note on twinning in alpha-uranium', Bibliog. no. 40 (1952), see D.290.	1949-1952
C.277	Letter from J. Herenguel on orientation texture of aluminium, with offprints of his work	1949
C.278	Exchange of correspondence with R.W. Cahn on uranium twins, with copy of Cahn's Atomic Energy Research Establishment report 'Plastic deformation of uranium' The figures at the back are annotated by Frank. Intercalated within the report are manuscript notes and calculations by Frank.	1951
C.279	Letter from B. Bilby enclosing typescript draft of 'On the dislocation theory of lattice transformations' for comment	1952
C.280, C.281	Manuscript notes and calculations 2 folders.	N.d.
C.282-C.287	'Plastic deformation - anatomy of' Contents of Frank's folder so inscribed.	1949-1951
C.282	Manuscript notes on 'Orowan's discussion 15/16/ Sept 1949' and 'Lecture to Rheology Club Mon 26/9/49'	1949
C.283	Typescript reports and note	1950-1951

Research, C.204-C.396

'Report on the present state of theoretical research on deformation of metals' to the B.I.S.R.A. Metal Physics Committee, 5pp, 1950; 'Report on research in metal physics at the H.H. Wills Physical Laboratory', 4pp, 1951; 'Distribution of slip in metal crystals', 4pp, 1951.

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| C.284 | Manuscript note on 'The one-dimensional dislocation model under uniform shear stress' | c 1950 |
| C.285 | Letter from H. Nishimura enclosing offprint 'The effect of strain rate on the plastic deformation in aluminium single crystals' by Nishimura and J. Takamura

Intercalated are manuscript note by Frank and photographs. | 1951 |
| C.286, C.287 | Manuscript notes and calculations

2 folders. | |
| C.288-C.290 | 'Curved crystals'

Contents of Frank's folder so inscribed.

Dated by offprint of 'Misfitting Monolayers' by Frank and J.H. van der Merwe, <i>Bibliog.</i> no. 19 (1949) found in the folder. | c 1949 |
| C.288 | 'Curvilinear crystals of non uniform composition'

Manuscript draft by Frank, with note 'The following considerations began from being shown by Dr T.S. Westall [...] some highly curved crystals of Augite'. | |
| C.289, C.290 | Manuscript notes, calculations, figures etc

2 folders. | |
| C.291 | Miscellaneous material on damping in metals | 1949 |

Research, C.204-C.396

C.292-C.294	'Notes on lectures by Burton, Roberts, Hill, 1950-51' Contents of Frank's folder so inscribed.	1948-1951
C.292	Manuscript notes on lectures by Roberts, Burton and R. Hill	1950-1951
C.293	Manuscript notes on lectures Not in Frank's hand	N.d.
C.294	Manuscript notes Not all in Frank's hand. Also includes duplicated typescript question sheet from McGill University, 1948.	N.d, 1948
C.295, C.296	'Supercooled water, 1950' Contents of Frank's folder so inscribed.	1950
C.295	Correspondence with H.P. Palmer <i>re</i> work of W. Rau	
C.296	Photographic copies of paper and figures (annotated). Found in envelope within the folder.	
C.297	'Report on work during period 1.IV.50-26.IX.50' 6pp typescript on work on crystals 'not by FCF'.	1950
C.298-C.301	'Growth spirals' Contents of Frank's folder so inscribed.	1950-1952
C.298	Correspondence Includes electron micrographs and other photographic	1950-1951

Research, C.204-C.396

	material.	
C.299	Correspondence Includes photographic material.	1952
C.300	'Growth spirals originating from screw dislocations on gold crystals' by S. Amelinckx 11pp typescript + photographs, sent to Frank for comment.	1952
C.301	Miscellaneous photographs	
C.302	'Wulff's theorem' Contents of Frank's folder so inscribed: manuscript notes, latest reference 1951.	c 1951
C.303	'Wulff's constructions' Contents of Frank's folder so inscribed: manuscript notes.	N.d.
C.304	Contents of Frank's untitled folder: manuscript notes on Wulff's theorem	N.d.
C.305	'Surface free energy' Contents of Frank's folder so inscribed: letter to N.F. Mott from J. White; Electric Furnace Refractories Subcommittee paper on 'Effect of reducing conditions on the sintering of basic materials' by White and P.W. Clark; manuscript notes etc.	1951
C.306-C.309	'Supercooling and nucleation' Contents of Frank's folder so inscribed.	1951-1952

Research, C.204-C.396

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| C.306, C.307 | Letters and printed material from D. Turnbull of the General Electric Metallurgy Research Department, Schenectady, New York

2 folders. | 1951 |
| C.308 | Typescript and manuscript drafts on super cooling liquids by Frank | |
| C.309 | Letter to H.N.V. Temperley on the theory of liquids

Manuscript draft and typescript carbon copy. | 1952 |
| C.310 | Manuscript notes | |
| C.311-C.313 | Contents of Frank's folder: miscellaneous manuscript notes, duplicated and typescript papers by others etc on dislocations

3 folders

Latest reference 1951. | c 1951 |
| C.314 | Contents of Frank's untitled folder: miscellaneous manuscript and typescript material <i>re</i> sintering | c 1951 |
| C.315-C.318 | 'Wylie, R.G.'

Contents of Frank's folder so inscribed. | 1952 |
| C.315 | Correspondence with Wylie <i>re</i> super-cooled water | |
| C.316 | 'On the hysteresis of adsorption on solid surfaces' by Wylie

18pp photostat typescript; figures. | |

Research, C.204-C.396

re arrangements to visit La Jolla; correspondence received (much of it forwarded from Bristol) while in La Jolla.

C.323	Correspondence <i>re</i> invitation to La Jolla	1961-1964
C.324	Correspondence	1964-1965
C.325, C.326	'La Jolla 1964-5 Sundry correspondence'	1964-1965
C.325	General correspondence Includes exchange with E. Orowan on fracture zones.	1964-1965
C.326	Contract as research analyst, US Air Force Materials Laboratory, Wright-Patterson Air Force Base, Ohio; manuscript notes.	
C.327, C.328	'La Jolla 1964-5 Alefield paper' Contents of Frank's folder so inscribed.	1964
C.327	'Grouping of pinning points on dislocation lines' by G. Alefield Bound General Electric research paper with notes etc by Frank intercalated at front.	
C.328	Manuscript notes.	
C.329-C.333	'Geophysics' Contents of Frank's folder so inscribed.	1959-1967
C.329	Brief correspondence; 'The origin of diamonds' by Frank, 1p typescript 1967; manuscript notes	1965-1967

Research, C.204-C.396

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| C.330 | US Defence Research Board translation of Russian language papers on Asian and Pacific geomagnetic features

Bound volume. | 1964 |
| C.331 | Papers by E. Orowan for the Boeing Solid State Physics Laboratory

Two bound volumes. | 1966 |
| C.332 | Geological maps of California | 1959 |
| C.333 | Printed graphical data for mapping | N.d. |
| C.334-C.337 | 'La Jolla '64-5. Geophysics notes'.

Contents of Frank's folder so inscribed divided into four for ease of reference: manuscript notes. | 1964-1965 |
| C.338-C.341 | 'La Jolla 1964-65. Schlossin and Lang paper. Amethyst'

Contents of Frank's folder so inscribed: material chiefly relating to work by H. Schlössin and A.R. Lang, with some manuscript notes by Frank on amethyst crystals | 1964 |
| C.338 | 'A study of repeated twinning, lattice imperfections and impurity distribution in amethyst' by Schlössin and Lang

19pp typescript + references and captions; figures. | 1964 |
| C.339 | Correspondence, chiefly with A.R.Lang, <i>re</i> the paper

Also includes 'On the orientation of the Miller-Bravais axes in gamma-quartz' by Lang, 6pp typescript. | 1964-1965 |
| C.340 | 'Plastic relaxation of crack tip stresses in gamma-quartz' by Schlössin | 1965 |

Research, C.204-C.396

10pp typescript + figures.

- C.341 Manuscript notes on amethyst
- C.342, C.343 'International Geomagnetic Reference Field' 1966
Contents of folder so inscribed (not in Frank's hand):
correspondence and papers sent to A.J. Zmuda *re* the
proposed IGRF.
2 folders.
- C.344 Report on 'The tensile behaviour of oriented polyethylene'
by J.G. Rider 1966
Spiral bound 'report on work carried out in the H.H. Wills
Physics Laboratory, University of Bristol, in association
with Dr A. Keller and under the general direction of
Professor F.C. Frank FRS, between September 1964 and
August 1965'.
With manuscript notes by Frank and photographs
intercalated at front.
- C.345-C.349 'Correspondence *re*: Hannay diamonds' 1968-1969
Contents of Frank's folder so labelled: correspondence,
manuscript notes and photocopied background material *re*
history of attempts to create artificial diamonds.
- C.345 Correspondence, chiefly with R.V. Jones and E.P. Flint 1968-1969
- C.346 'Thirty-nine steps to artificial diamond' by Frank 1969
3pp manuscript rough draft.
- C.347-C.349 Photocopied background material
3 folders.

Research, C.204-C.396

- | | | |
|--------------|--|-----------|
| C.350, C.351 | Manuscript notes on the melting of the Earth

2 folders. | 1960s |
| C.352-C.355 | 'Sundry notes'

Contents of Frank's folder so inscribed divided into four for ease of reference: manuscript notes, calculations, etc, some dated to the 1960s.

Topics include relativity, energy storage and gel permeation chromatography. | 1960s |
| C.356 | 'Surface energy of ice, estimated from number of broken H-bonds per unit area'

Manuscript note dated 17 March 1973. | 1973 |
| C.357 | Photocopied manuscript calculation

Inscribed 'Prof Frank - I think this would be the "official" version of your stretched molecule analysis' by J.H.H.' | 1983 |
| C.358-C.366 | 'Fusion'

Contents of Frank's boxfile so inscribed: material relating to cold (muon-catalyzed) fusion.

Correspondence; manuscript notes; printed background material.

Frank attended a number of meetings on cold fusion in this period, including in June 1989 a Spring School on Plasma Physics, International Centre for Theoretical Physics, Trieste, Italy, see H.268-H.269 and in 1990 an International Symposium on Muon catalyzed fusion at Keble College Oxford, 11-13 September 1990.

In 1947 Frank had published a pioneering paper on the theoretical possibility of muon-catalysed fusion. He retained an interest in this area which became more active in the 1980s. Cold fusion made headline news in 1989 when M. Fleischmann and B.S. Pons claimed to have successfully produced cold fusion of deuterium by electrochemistry. Some of the material presented here relates to their claim. | 1987-1992 |

Research, C.204-C.396

C.358	General correspondence on the history of work on nuclear fusion	1987-1992
C.359	'Muon-catalysed fusion - a brief history' by Frank 3pp typescript. Prepared for discussion meeting on Cold Fusion.	1989
C.360	Manuscript notes and calculations	
C.361-C.363	General printed and photocopied background material on cold (muon catalysed) fusion. 3 folders.	
C.364-C.366	Notes and printed and photocopied material on the claim of M. Fleishmann and B.S. Pons to have achieved cold fusion. 3 folders.	1989
C.367	'Notes on Toda' Frank's manuscript notes on article by A. Toda.	c 1991
C.368	'Bragg-fringe patterns' Contents of Frank's folder so inscribed: manuscript draft and notes.	N.d.
C.369	Manuscript 'Notes on rock deformation'	N.d.
C.370	Manuscript data on 'The Sargent Law'	N.d.
C.371-C.374	'Sundry notes lecture notes - mainly atomic & nuclear, & fluid flow' Contents of Frank's folder so inscribed.	N.d.

Research, C.204-C.396

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|--------------|--|------------------|
| C.371 | Duplicated typescript copy of 'Recent investigations on the transmutations of atomic nuclei' by N. Bohr | |
| C.372 | Frank's manuscript notes on 'The electronic structure of atoms', 'Fluid flow', 'Surface tension' | |
| C.373, C.374 | Miscellaneous manuscript notes

2 folders. | |
| C.375, C.376 | Contents of Frank's untitled folder: manuscript notes, chiefly on 'Step-contrast microscopy', calculations etc

2 folders. | N.d. |
| C.377 | Miscellaneous manuscript calculations and notes | N.d. |
| C.378-C.385 | PRINTED MATERIAL

These are published books, monographs and bound offprints kept with Frank's papers as being of particular historical or scientific significance.

They are presented in chronological order by date of publication, although the earliest item (1914) is a photostat copy made later. | 1914-1953 |
| C.378 | 'Schiebungen und Translationen in Kristallen' by A. Johnsen, <i>Jahrbuch der Radioaktivität w. Elektronik</i> , vol 11 (1914)

Photostat copy. | 1914 |
| C.379 | <i>Polar Molecules</i> by P. Debye (Chemical Catalog Co., New York, 1929). | 1929 |

Research, C.204-C.396

Inscribed inside front cover 'F.C. Frank 22/7/33'. With manuscript notes intercalated at p10.

- C.380 *Mathematische Formelsammlung* by O.T. Bürlen and F. Ringleb (Berlin, 1936) 1936

With manuscript annotations by Frank.

- C.381 *Übergänge zwischen Ordnung und Unordnung in festen und flüssigen Phasen. Diskussionstagung der Deutschen Bunsen-Gesellschaft* (1938) 1938

Cover annotated 'Return to F.C.Frank 14 Gainsborough Rd, Ipswich'

- C.382 'Kinetik der Phasenbildung' by M. Volmer, vol 4 of *Die Chemische Reaktion*, Dresden and Leipzig (1939) 1939

Annotated by Frank, with manuscript calculation intercalated at p213.

This book was important in Frank's postwar crystals research. In a letter of June 1999 R.G. Chambers noted that 'After the war he had been sent, by a friend in Germany, a copy of a book by Volmer, published in 1939 on this topic, and it was this that set him thinking'.

- C.383 *Kernphysikalische Tabellen* by J. Mattauich (Berlin, 1942) 1942

Hardback bound photostat copy with manuscript notes and calculations by Frank intercalated at front of volume.

In a letter of June 1999 R.G. Chambers noted 'The book was clearly used by him [Frank] in working out his ideas on cold fusion'.

- C.384 *Der Geschichte der Natur. Zwölf Vorlesungen, gehalten in Göttingen im Sommer 1946* by C.F. von Weizsäcker (1946) 1946

Bound duplicated typescript.

- C.385 *Dislocations in Crystals* by W.T. Read, Jr (McGraw-Hill, 1953

Research, C.204-C.396

New York, 1953)

C.386-C.396

PHOTOGRAPHS

N.d.

Miscellaneous photographs of crystal structures, most
captioned and identified on verso.

11 folders.

SECTION D PUBLICATIONS, D.272-D.482 1936-1998, n.d.

D.272-D.412 A DRAFTS 1936-1997, n.d.

A chronological sequence of material relating to publications or to the intention to publish. Where applicable reference is made to the bibliography on pp 224-235 of the previous catalogue in the form *Bibliog. no.* ... Cross-references to related material in the previous catalogue are also provided where appropriate.

D.272 'Energy of formation of "cyclol" molecules', not listed in Bibliog. but published in *Nature* vol 138 (1936), p242 1936

Proof copy.

D.273 'A possible explanation of some anomalous electric dipole moments', with L.E. Sutton, *Bibliog. no.* 4 (1937) 1974

Untitled typescript draft beginning 'It has been suggested in connexion with dimethyl and diphenyl mercury that their normal molecular configurations are linear, but that they possess finite average dipole moments [...]'

Exchange of letters about the article with L.E. Sutton, 1974.

D.274 'On high dielectric constants', not listed in Bibliog. but published in *Transactions of the Faraday Society* vol 33 (1937), pp 513-523 1936-1937

Correspondence *re* publication; proof copy.

See D.6 of the previous catalogue.

D.274A 'Dielektrische Relaxation von Molekülen mit frei drehbaren Dipolgruppen', with E. Fischer, not listed in Bibliog. but published in *Phys. Zeitschrift* vol 40 (1939), 345-352 1939

16pp typescript with manuscript corrections.

D.275 'On slip bands as a consequence of the dynamic behaviour of dislocations', *Bibliog. no.* 15 (1948) 1948

Publications, D.272-D.482

- D.282-D.288 'The growth of crystals and the equilibrium structure of their surfaces', with W.K. Burton and N. Cabrera, *Bibliog. no. 30* (1951) 1950-1951, 1990
- Contents of folder inscribed 'Burton, Cabrera & Frank'.
- See D.29 of the previous catalogue.
- D.282 Manuscript title page and list of contents; typescript introduction
- D.283 Part I. Movement of steps on a crystal surface
- D.284 Part II. Rates of growth of a crystal surface
- D.285 Part III. Steps and two-dimensional nuclei
- D.286 Part IV. Structure of a crystal surface as a cooperative phenomenon
- D.287 Appendices C and E
- D.288 Letter *re* inclusion of the paper as a Citation Classic 1990
- D.289 'Crystal growth and dislocations', *Bibliog. no. 37* (1952) c 1952
- 21pp typescript.
- See D.30, D.31 of the previous catalogue.
- D.290 'A note on twinning in alpha-uranium', *Bibliog. no. 40* (1952) 1952
- 10pp typescript with manuscript corrections; references; abstracts in English, French and German.

Publications, D.272-D.482

See also C.

- D.291-D.293 'Martensite', *Bibliog. no. 41* (1953) 1953
See D.33 of the previous catalogue.
- D.291 17pp typescript with manuscript corrections; list of those to receive offprints; abstracts in English, French and German
- D.292, D.293 Manuscript and typescript parts of drafts; manuscript notes; figures
2 folders.
- D.294, D.295 'Stable dislocations in the common crystal lattices', with J.F. Nicholas, *Bibliog. no. 42* (1953) 1953
Contents of Frank's folder inscribed 'Notes for dislocation catalogue'.
- D.294 37pp typescript draft
- D.295 Figures; pages of manuscript draft.
- D.296 'On tin whiskers', *Bibliog. no. 43* (1953) c 1953
Manuscript rough draft.
- D.297 'Hexagonal networks of dislocation', *Bibliog. no. 45* (1954) 1954
12pp typescript; offprint with manuscript notes found attached.
See D.34 of the previous catalogue.
- D.298 Review of: *Chemistry of the Defect Solid State* by A.L.G. Rees (London, 1954) c 1954
Proof copy.

Publications, D.272-D.482

- D.299 'On the X-ray diffraction "spikes" of diamond', *Bibliog. no.* 1956
54 (1956)

14pp typescript + figure; proof.
- D.300 'Complex alloy structures regarded as sphere packings. I. c 1958
Definitions and basic principles', with J.S. Kaspar', *Bibliog.*
no. 57 (1958)

Contents of folder inscribed 'Frank & Kaspar and
coordination shells': typescript and manuscript drafts.

See D.44, D.45 of the previous catalogue.
- D.301-D.303 'On the theory of liquid crystals', *Bibliog. no.* 65 (1958) c 1958
- D.301 Manuscript rough draft
- D.302 20pp typescript
- D.303 Manuscript notes on liquid crystals
- D.304 Untitled manuscript draft with later note attached 'Draft ms c 1958
on crystal growth & diffusion'
- D.305-D.307 'A note on the impingement problem' c 1961

Contents of folder inscribed: 'Unpublished drafts, mainly
on polymer crystallisation'.
- D.305 Manuscript draft
- D.306, D.307 Pages of manuscript drafts and notes

2 folders.

Publications, D.272-D.482

- D.308 'Linear compounds of dislocations in silver chloride with cupric ions', with A.S. Parasnis and J.W. Mitchell, *Bibliog. no. 79* (1963) c 1963
- Rough manuscript draft.
- D.309 'On superconductive dynamic geometries', not listed in *Bibliog.*, latest bibliographical reference 1963 c 1963
- 4pp typescript + abstract and figure; 19pp typescript on superconductors; manuscript calculations.
- D.310 'A note on platelets and diffraction spikes in diamond', *Bibliog. no. 81* (1964) 1964
- 7pp typescript; proof.
- D.311 'Hydrolytic weakening of quartz crystals', with D.T. Griggs et al, *Science*, c 1966 1966
- Letter with abstract.
- D.T. Griggs wrote to Frank with the abstract asking Frank whether he wished to be included as a co-author.
- D.312 Review of: *Melting and Crystal Structure* by A.R.J.P. Ubbelohde (Oxford University Press, 1965) 1966
- 2pp typescript; exchange with Nature.
- D.313 'Defects in diamond', *Bibliog. no. 91* (1967) 1967
- Proof copy with manuscript corrections, with later manuscript note attached 'A splendid paper - the historians should read it!'
- D.314 'On the theory of Hertzian fracture', with B.R. Lawn, *Bibliog. no. 93* (1967) 1966-1967
- Proof copy.
- See D.80, D.81 of the previous catalogue.

Publications, D.272-D.482

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|-------------|--|-----------|
| D.315 | 'On the characterization of crustal drift', not listed in Bibliog., latest bibliographical reference 1968

6pp manuscript. | c 1968 |
| D.316 | 'Diamonds and deep fluids in the upper mantle', <i>Bibliog. no. 99</i> (1969)

8pp typescript. | 1969 |
| D.317-D.336 | 'Cecil Frank Powell', with D.H. Perkins, <i>Bibliog. no. 108</i> (1971)

This material was assembled by Frank in preparing his Royal Society Biographical Memoir of Powell (D.317-D.326). It also includes papers relating to other of Frank's published memorials to Powell, and to commemorations of Powell's death, including his funeral service, a Memorial Meeting in Bristol and the erection of a plaque in the Bristol Department of Physics.

In addition to co-authoring the Royal Society's Biographical Memoir of Powell, Frank also wrote the obituary of Powell for <i>Physics Bulletin</i> and 'C.F. Powell (1903-1969). A tribute from a colleague', <i>Bibliog. no. 101</i> (1969) | 1969-1974 |
| D.317-D.326 | Royal Society Biographical Memoir

At D.322-D.324 is correspondence and papers of Powell's which appear to have come into Frank's possession during the compilation of the Memoir. | 1971 |
| D.317 | Typescript draft + appendix | |
| D.318 | Lists of publications | |
| D.319 | Reminiscences of and information about Powell from colleagues | 1969 |
| D.320 | Reminiscences of and information about Powell from | 1970-1971 |

Publications, D.272-D.482

colleagues

- | | | |
|--------------|--|-----------------|
| D.321 | Correspondence with D.H. Perkins, co-author, and Royal Society <i>re</i> preparation and publication of the memoir

PERKINS, Don H.; ROYAL SOCIETY | 1969-1971 |
| D.322 | Correspondence of Powell <i>re</i> career. | 1928-1947, n.d. |
| D.323 | Correspondence and papers <i>re</i> Westinghouse Time Capsule | 1964-1965 |
| D.324 | Notebook of Powell's 'Fees and expenses for income tax' | 1964-1969 |
| D.325, D.326 | Printed and typescript biographical accounts, tributes and obituaries

2 folders. | 1948-1969 |
| D.327 | Obituary of Powell by Frank, <i>Physics Bulletin</i> , vol 20 (1969)

2pp typescript; proof copy; copy as published; brief correspondence. | 1969 |
| D.328 | 'C.F. Powell (1903-1969). A tribute from a colleague', <i>Bibliog. no.</i> 101 (1969)

Copy of <i>Scientific World</i> with Frank's article on pp5-7; covering letter. | 1969 |
| D.329 | Funeral service for Powell

Order of ceremony; 4pp typescript of Frank's address; newspaper cutting. | 1969 |
| D.330-D.333 | Memorial Meeting, Bristol, February 1970 | 1969-1970 |

Publications, D.272-D.482

- | | | |
|--------------|---|-----------|
| D.330 | Programme; lists of invitees | 1970 |
| D.331, D.332 | Correspondence with University of Bristol, speakers and participants <i>re</i> arrangements

Includes letters of condolence to Isobel Powell (widow)

2 folders | 1969-1970 |
| D.333 | Supplement to <i>Scientific World</i> 1970, no. 3

This recorded the proceedings of the meeting | 1970 |
| D.334 | Memorial plaque, University of Bristol

Correspondence and papers <i>re</i> fund-raising | |
| D.335 | Plaque marking the residence of Powell in Bristol

2pp typescript of Frank's address at the unveiling ceremony.

This plaque was put up by the Clifton and Hotwells Improvement Society, Bristol. It was unveiled by Frank on 8 October 1974. | |
| D.336 | Miscellaneous correspondence | 1972-1973 |
| D.337 | 'The future of crystal growth', <i>Bibliog. no.</i> 111 (1972)

5pp typescript draft with covering letter to B. Mullin.

See D.99 of the previous catalogue. | 1971 |
| D.338 | 'Descartes' observations on the Amsterdam snowfalls of 4,5,6 and 9 February 1635', <i>Bibliog. no.</i> 122 (1974)

6pp typescript + references; abstract; exchange with publishers. | |

Publications, D.272-D.482

See D.112 of the previous catalogue.

- D.339 'The Descartes-Mpemba phenomenon', not listed in *Bibliog.* but published in *Physics Education* (1974) 1974
Letter for publication in *Physics Education*; correspondence.
- D.340 'Japanese work on snow crystals', *Bibliog. no.* 123 (1974) 1974
Typescript draft; proof copy.
- D.341 'Nucleation-controlled growth on a one-dimensional growth front of finite length', *Bibliog. no.* 126 (1974) 1974
Abstract; proof copy; typescript notes found therewith.
See D.114 of the previous catalogue.
- D.342 'Crystal dislocations', with J.W. Steeds, not listed in *Bibliog.* but chapter two of ed. P.B. Hirsch, *The Physics of Metals: 2 Defects* (Cambridge, 1975) 1974
Correspondence with Cambridge University Press, publishers.
See D.120 of the previous catalogue.
- D.343 'Airy functions in the air: an easy way with stress problems', *Bibliog. no.* 135 (1978) 1977-1978
Correspondence with editor; 12pp typescript 'Original' + figures.
See D.126 of the previous catalogue.
- D.344, D.345 'Snow crystals', *Bibliog. no.* 140 (1982) 1981, 1982
This was first delivered as a lecture to the Royal Swedish Academy of Sciences on the occasion of Frank's receiving the Gregori Aminoff Medal in June 1981
See also A.236-A.238

Publications, D.272-D.482

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|--------|--|--------|
| D.344 | Proof with manuscript corrections | 1982 |
| D.345 | Figures | 1981 |
| D.346 | Review of: <i>Diamond</i> by G. Davies (Bristol, 1984). In <i>Physics Bulletin</i> , ca 1984

Proof copy with covering letter | 1984 |
| D.347 | 'Some personal reminiscences of the early days of crystal dislocations', in <i>Dislocations and properties of real materials: proceedings of the conference to celebrate the fiftieth anniversary of the concept of dislocation in crystals</i> (Institute of Metals, London, 1985)

5pp typescript with manuscript corrections; correspondence with the Metals Society re the paper.

Frank delivered the paper at a Metals Society meeting on Dislocations and Properties of Real Materials, Royal Society, London, 11-12 December 1984. | 1984 |
| D.348 | 'Prince Rupert's drops', <i>Bibliog. no. 144</i> (1986)

Photocopy typescript and manuscript drafts, probably prepared for lecture.

See D.141-D.158 of the previous catalogue. | c 1986 |
| D.348A | Review of: <i>A life in science</i> by N.F. Mott (London, 1986). In <i>Physics Bulletin</i> , c 1986

7pp manuscript draft; proof. | c 1986 |
| D.349 | 'On the Burgers circuit', <i>Bibliog. no. 148</i> (1988)

Letter from publishers only. | 1987 |
| D.350 | 'Micro-hot fusion', University of Bristol Newsletter, 29 June 1989

Annotated copy of article by Frank commenting on | 1989 |

Publications, D.272-D.482

developments on cold fusion.

- D.351 Obituaries by Frank of Reginald Victor Jones for *the Independent* newspaper 1989, 1991
- Frank prepared the obituary but in the event it was not used when Jones died in December 1997.
- Frank had.
- D.352-D.357 'The conformal neo-Eulerian orientation map', *Philosophical Magazine A*, vol 65 (1992), pp 1141-1149 1991
- The first version was returned to Frank for revision, before being accepted for publication
- D.352 14pp typescript
- D.353 11pp typescript of 'Master with corrections'
- D.354 Proof copy
- D.355 Correspondence with editor, *Philosophical Magazine*
- Includes referee's comments on the paper.
- D.356-D.357 Manuscript notes found therewith.
- D.358 'Body-centred cubic is a close-packed structure', *Philosophical Magazine Letters*, 1992 1992
- Letter from editor only.
- D.359 Preface to *Handbook of Crystal Growth* ed. D.T.J. Hurle (Elsevier, 1993) 1990, 1992
- Correspondence with editor; 2pp typescript.

Publications, D.272-D.482

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|-------------|--|-----------|
| D.360-D.406 | <i>Operation Epsilon: the Farm Hall transcripts</i> , introduced by Frank (Institute of Physics, Bristol, 1993) | 1990-1996 |
| | <p>At the end of the Second World War in August 1945, the leading German physicists were interned at Farm Hall, Godmanchester, near Huntingdon. Their conversations were secretly recorded by British Intelligence, principally for information on the German wartime atomic programme.</p> <p>Following representations by the Royal Society and British Academy, the transcripts (the voice recordings not having survived) were released by the Lord Chancellor in 1992.</p> <p>Frank served during the Second World War. He had met some of the imprisoned German scientists before the war and visited Farm Hall during their time there.</p> | |
| D.360 | Drafts of Frank's introduction | |
| | 10pp typescript and manuscript; 9pp typescript. | |
| D.361 | 'Archival note' | |
| | 7pp manuscript; 2pp typescript | |
| D.362 | Correspondence and papers <i>re</i> release of the Farm Hall transcripts into the public domain | 1991-1993 |
| D.363-D.367 | Correspondence with Institute of Physics, publishers | 1992-1993 |
| | 5 folders. | |
| D.368-D.374 | Correspondence with colleagues, historians and others preparatory and in the course of preparing the book | 1990-1993 |
| | Includes photocopies of articles on German A-bomb work and Farm Hall, sent to Frank for information. | |
| D.368 | Miscellaneous correspondence | 1990-1992 |

Publications, D.272-D.482

D.369	Correspondence with R.V. Jones <i>re</i> draft of article by Jones on atomic bomb development	1992
D.370	Correspondence with P. F. Ganz.	1992
D.371	Correspondence <i>re</i> copy of 1941 report by F.G. Houtermans	1992
D.372	Miscellaneous correspondence Includes correspondence with M. Walker <i>re</i> his article on the Farm Hall transcripts.	1992
D.373	Correspondence with J.L. Logan Includes drafts of articles by Logan Logan disagreed with M. Walker's interpretation of the German A-bomb work.	1992
D.374	Exchange with Sir Michael Atiyah <i>re</i> the transcripts, February	1993
D.375, D.376	Frank's manuscript notes 2 folders.	
D.377-D.379	Miscellaneous background material Printed and photocopied information on the German A-bomb, German scientists and Farm Hall. 3 folders.	
D.380-D.390	Photocopy of original transcript 11 folders.	

Publications, D.272-D.482

D.391-D.399	Photocopy of proof copy of <i>Operation Epsilon</i> 9 folders.	
D.400	Book reviews of <i>Operation Epsilon</i>	1993-1994
D.401-D.406	Correspondence and papers following publication Includes material relating to articles and books discussing the complicity or otherwise of German scientists in trying to create an atomic bomb.	1993-1996
D.401	Correspondence, chiefly with J.H.J. Oerling	1993-1994
D.402-D.404	Letter from P.L. Rose with draft of sections of his book <i>Heisenberg and the Nazi atomic bomb project: a study in German culture</i> This was published by University of California Press, 1998. 3 folders.	1993
D.405	Correspondence and papers	1994-1995
D.406	Correspondence	1996
D.407	Review of: <i>Uncertainty. The life and science of Werner Heisenberg</i> by D.C. Cassidy (New York, 1991). In: <i>Notes and Records of the Royal Society</i> 5pp typescript; correspondence with editor.	1993
D.408	Foreword to unidentified publication 3pp typescript + manuscript corrections.	1993
D.409	Untitled article on the D-Day celebrations, Nonesuch	1994

Publications, D.272-D.482

magazine, University of Bristol, 1994

5pp typescript; 4pp proof copy with extensive manuscript corrections; correspondence with editor.

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| D.410 | 'Recollections of Sir Nevill Mott', in <i>Nevill Mott: reminiscences and appreciations</i> , ed. E.A. Davis (London, 1998) | 1996-1997 |
| | 3pp typescript; correspondence <i>re</i> Frank's contribution. | |
| D.411 | 'On the condensation of cavities in a crystal' | N.d. |
| | Rough manuscript draft. | |
| D.412 | 'On crystal surface self-diffusion: with particular reference to the growth of ice from the vapour' | N.d. |
| | Manuscript rough draft. | |
| D.412A | 'Gespräch mit Niels Bohr' | N.d. |
| | 10pp typescript (in German); manuscript translation by Frank; covering manuscript note. | |
| | This was an interview conducted by P. Vinding, a Danish journalist, with Niels Bohr in 1935. | |
| D.413-D.481 | EDITORIAL CORRESPONDENCE | 1955-1998 |
| D.413-D.426 | Butterworths Scientific Advisory Board | 1969-1975 |
| | Chiefly papers for meetings of the board; correspondence <i>re</i> publishing policy in general and specific prospective projects. | |
| | See D.177 of the previous catalogue. | |
| | Frank joined the Scientific Advisory Board at the invitation of Sir Harold Thompson in 1969 | |
| D.413 | Correspondence <i>re</i> invitation to join the Board | 1969 |

Publications, D.272-D.482

D.414-D.225	Papers for meetings etc	1969-1974
D.414	1969	
D.415-D.417	1970 3 folders	
D.418, D.419	1971 2 folders.	
D.420, D.421	1972 2 folders.	
D.422-D.424	1973 3 folders.	
D.425	1974	
D.426	One letter only	1975
D.427-D.473	<i>Contemporary Physics</i>	1981-1996

Commenting on synopses of possible contributions, refereeing papers; meetings of the editorial board; journal policy etc.

See D.195-D.206 of the previous catalogue.

Frank was on the editorial board of *Contemporary Physics* from 1979 to 1996 when he resigned for health reasons.

Publications, D.272-D.482

D.427	1981
D.428-D.430	1982 3 folders.
D.431-D.433	1983 3 folders.
D.434-D.437	1984 4 folders.
D.438-D.441	1985 4 folders.
D.442-D.444	1986 3 folders.
D.445-D.448	1987 4 folders.
D.449-D.452	1988 4 folders.
D.453-D.457	1989 5 folders.
D.458-D.461	1990 4 folders.

Publications, D.272-D.482

- | | | |
|--------------|---|-----------|
| D.462, D.463 | 1991
2 folders. | |
| D.464-D.466 | 1992
3 folders. | |
| D.467, D.468 | 1993
2 folders. | |
| D.469, D.470 | 1994
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