

Report on the papers of
WILLIAM THOMAS ASTBURY, FRS
(1898-1961)

deposited in the Brotherton Library,
University of Leeds

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Joint Committee on Scientific and Technological Records

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

Papers of

William Thomas Astbury

(1898 - 1961)

Listed by: Jeannine Alton
Harriot Weiskittel

Deposited in The Brotherton Library, University of Leeds

1975

Description of the collection

The papers were received from Mr. W.F. Astbury (son), Fru M.M. Persson (daughter), and the Astbury Department of Biophysics, University of Leeds. Dr. Thomas Lonsdale has also contributed his recollections of Astbury's early work, and a photograph (Item A.6).

Some scientific correspondence exchanged with Astbury 1933-40 remains in the personal papers of Professor C.D. Darlington FRS.

The collection illustrates all aspects of Astbury's activities, with the exception of his work at the Royal Institution and earliest work at Leeds. The bulk of the documents represent the extensive scientific correspondence which he conducted - often single-handed in the absence of secretarial help, as the letters themselves make clear - with individual colleagues and learned societies, especially 1940-57. No records can be traced for the following periods: 1947 (all); 1949 (January-July), but the surviving letters, research plans and progress reports help to document the rapid progress of research in protein structure and nucleic acids during and after the 1939-45 War.

Astbury kept his correspondence in large 'A.B.C.' files each covering roughly one year. The letters were usually arranged in alphabetical order by name of correspondent, but there were no personal or subject files, or cross-references, and the system itself was far from consistent and proved impossible to retain. All the documents have been re-sorted and assigned either to categories (e.g. Section B. Leeds University, Section D. Publications, Section F. Conferences), industrial firms, or individual correspondents. The scientific correspondence in Section E is presented in alphabetical order, with dates: see note on p.16. There is also a General Index to the correspondence on pp. 35-53.

All items are manuscript unless otherwise indicated.

Summary of the career of W.T. Astbury

b.1898 educ.	Longton, Stoke-on-Trent Longton High School
1917, 1919-21	Jesus College, Cambridge
1921-23	Demonstrator in Physics, University College, London, and Assistant to Sir William Bragg
1922	married Frances Gould
1923-28	Assistant to Sir William Bragg, Davy-Faraday Laboratory, Royal Institution, London
1928-37	Lecturer in Textile Physics, University of Leeds
1937-45	Reader in Textile Physics, University of Leeds
1940	Elected to Royal Society
1945-61	Professor of Biomolecular Structure and Hon. Reader in Textile Physics, University of Leeds

A full list of Astbury's honours and awards may be found in the Memoir by J.D. Bernal, Biographical Memoirs of Fellows of the Royal Society, Vol.9, 1963, p.26.

Contents of the Handlist

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A. Biographical and personal A.1 - A.18

- A.1-A.3 'Press Books' containing press cuttings of lectures, honours and awards, scientific articles; telegrams; printed notices of lectures, invitations; autographed menus; photographs; programmes of conferences and meetings; letters of appointment; obituary notices: 1914-61
- A.1 1914-45
A.2 1946-51
A.3 1951-61
- A.4 Journal of visits to USA. 1937-38, 1950
(139 pp. 1937 visit; 5 pp. 1938; 1p 1950.) Contains notes of discussions with scientific colleagues.
- A.5 Biographical Details (for Who's Who, etc.)
- A.6 Correspondence containing biographical information; letter to CSAC from Thomas Lonsdale enclosing photographs of 'ping-pong group' taken on roof of Davy-Faraday Laboratory.
- A.7 Folder containing letter from W.L. Bragg offering to sponsor Astbury for election to Royal Society, copy of Astbury's reply, copies of Astbury's acknowledgements of letters of congratulation on election; correspondence re official photograph for National Portrait Gallery.
- A.8 Honours (letters of notification and of congratulation, and copies of Astbury's replies): 1945-56
- Croonian Lecture, 1945
Royal Society of Sciences, Uppsala, 1946
Hon. D.Sc., University of Strasbourg, 1946
Sylvanus Thompson Memorial Medal, British Institute of Radiology, 1948
Rockefeller Grant, 1948
Honorary Life Membership, New York Academy of Sciences, 1950
Corresponding Member, Istituto Lombardo di Scienze e Lettere, Milan, 1951
American Society of European Chemists, 1953
Foreign Member, Swedish Royal Academy of Sciences, 1956
- A.9 Correspondence re membership of various committees and societies: 1941-52
- Society for Freedom in Science, Société Philomathique de Paris, Hospital Physicists' Association, Leeds Regional Hospital Board, Royal Microscopical Society, Gerontological Society
- Invitations to fill academic post in Canada, assume directorship in India.

- A.10 War Service correspondence. Astbury served as Navigation Officer in Leeds University Air Squadron. 1941-45, 1955-56
The file includes arrangements for training courses for navigation instructors, dress regulations, memoranda, specimen examination paper for meteorology course, navigation syllabus, fire-watching duties.
- A.11 Correspondence re Astbury's musical interests: instruments, concerts, Leeds University Midday Recitals Committee; with E. Ashby and C.W. Bunn re Astbury's device for violin support. 1945-46, 1948-57
- A.12 Correspondence re travel arrangements. 1942-54
- A.13 Correspondence re illness (mostly during 1954-56). 1950-56
- A.14 Misc. invitations (not indexed). 1945-56
- A.15 Acknowledgements of congratulatory letters sent by Astbury. 1940-56
- A.16-A.18 Misc. personal correspondence (3 folders). 1940-56
- B. University of Leeds and Department B.1 - B.42
- B.1-B.3 Correspondence with and re students and staff (3 folders). The correspondence deals with applications to join dept., wartime employment, applications for fellowships, grants for foreign students, advertisement and applications for laboratory boy, placing of students from departments of other universities, examining of theses: 1939-56
- B.1 1939-49
B.2 1950-52
B.3 1953-56
- (see also files with G. Eaves, L. Singleton, B. Patnaik, N.N. Saha, L. Lorand in Section E).
- B.4-B.8 Correspondence with Registrar (5 folders) re appointments in the department, research grants from charitable foundations, setting of oral examinations for students, Astbury's membership on University committees; includes copies of letters from Registrar to members of Astbury's department: 1939-57
- B.4 1939-46
B.5 1948-50
B.6 1951-52
B.7 1953-54
B.8 1955-57

- B.9-B.13 Correspondence with Bursar (5 folders) re departmental grants and finances, salaries, accounts: 1940-56
- B.9 1940-48
 - B.10 1949-50
 - B.11 1951-52
 - B.12 1953-54
 - B.13 1955-56
- B.14-B.17 Correspondence with members of other departments in the University (4 folders) re arrangements for Astbury and his staff to give lecture courses to students of other departments, University business, social invitations, visits of scientists to Leeds. B.14 contains correspondence re establishment of new Department of Biomolecular Structure: 1944-57
- B.14 1944-46, 1948-50
 - B.15 1951-52
 - B.16 1953-54
 - B.17 1955-57
- (see also files of correspondence with E. G. Cox, J. T. Ingram, J. B. Speakman, R. D. Passey, L. Lorand, N. N. Saha and M. R. Truter in Section E).
- B.18 Correspondence with Vice-Chancellor, including correspondence re establishment of new Department of Biomolecular Structure. 1940-56
- B.19 Correspondence with C. G. Kay Sharp re establishment of Ophthalmological Research Unit. 1944-46
- B.20 Correspondence with Fabric Office/Planning Engineer. 1943-57
- B.21 Correspondence re courses given by Department of Extra-mural Studies. 1951-55
- B.22 Correspondence re exchange between senior members of London Midland and Scottish Railway Co. and teaching staff of University. 1946
- B.23-B.27 Requests and arrangements for visits with Astbury and/or to his laboratory at Leeds: 1941-57
- B.23 1941-45
 - B.24 1946, 1948
 - B.25 1949-50
 - B.26 1951-52
 - B.27 1953-57
- B.28-B.31 Electron Microscope:
- B.28 Requests from schools, societies, industrial laboratories, government departments, Leeds University academics to view demonstrations of electron microscope (not indexed). 1944-54

- B.29 Correspondence with RCA re purchase, servicing and replacement parts of electron microscope (not indexed). 1941-57
- B.30 Correspondence re hiring of technician to operate electron microscope, advertisement in Nature etc. Ronald Reed was appointed to the post. (not indexed) 1943
- B.31 Misc. correspondence re electron microscope (advice to other universities re purchase and maintenance of E.M., use of the E.M. by other departments at Leeds, manufacture of new parts, articles for the press, etc.). 1944-57
- Equipment:
- B.32 Correspondence with British Supply Office. 1946
- B.33 Correspondence with Ilford Ltd. 1940-52
- B.34 Correspondence with Metropolitan Vickers. 1941-46
- B.35 Correspondence with Metropolitan Vickers. 1947-56
- B.36 Correspondence with Philips Electrical Ltd. 1940-50
- B.37-B.42 Misc. correspondence re equipment and supplies for department (6 folders): 1940-56
- B.37 1940-43
 - B.38 1944
 - B.39 1945-48
 - B.40 1949-50
 - B.41 1951-53
 - B.42 1954-56

C. Notebooks and slides C.1 - C.6

- C.1 Laboratory notebook containing record of experimental results, diagrams, measurement of photographs, notes on articles read. 1928-39, 1942
 Notations on muscle photographs (1932), on extensibility of fibres (1932), on cancer photographs (1932). Notes on 'Lectures at the Dept. of Leather Industries (Mr. Thompson)' (1932-33). Notebook also contains draft of 'Report on the structure of Polyisobutylene for I.C.I. Ltd. at Billingham', December 1942, with photographs and figures.
 At the end of the notebook there is an 'Index of Wool X-ray Photographs' with 482 entries dated and described. These entries include summaries of those photograph measurements which are recorded in the experimental results.
- C.2 Notebook titled on first page 'X-ray and Related Research on the Molecular Structure of Biological Tissues Proteins, etc. (Rockefeller Grant)'. The notebook begins with an entry dated 1934 and continues for 209 pages (in Astbury's hand) 1934-61

to the last entry dated March 1961 and labelled 'Feather Keratin'. The experiments, tabular summaries of data, graphs, illustrations, notes on others work, are clearly set out and dated. Many loose notes and data were inserted between the pages of the notebook and these have been left in their original position. There is one package of illustrations and photographs.

- C.3 Notebook containing drafts and notes of lectures: 1931-52
- 'Lectures on the Fundamental Structure of Textile, delivered to 2nd and 3rd year Textile Physics Class, Oct.1931-1932.'
 - 'Lecture on X-ray Investigation of Collagen and Gelatin delivered to Leather Dept. (Leeds University), June 21, 1933.'
 - 'Lectures on the Molecular Structure and Properties of Textile Fibres. Dept. of Textile Industries, The University of Leeds. Session 1934-35.'
 - 'Lectures on The Molecular Structure of Fibres. Textile Physics. 1936-37.'
 - 'Lecture by White (I.C.I.) on dyeing of new synthetic fibres.' 1940.
 - 'Colloquium on Nylon by A.K. Saville.' 1942.
 - 'Advanced course on The Science of Fibres given in the Textile Dept., 1952.'
- C.4 Notebook containing 119 pp. draft entitled 'Studies of Protein Structure', May 1947, with loose bibliographical notes. Possibly the draft for a monograph Astbury was to write for Oxford University Press series. (see also Item D.32). 1947
- C.5 Wooden slide case containing 105 slides (possibly for visit to USA in 1953) and a full descriptive index. The slides cover the whole range of Astbury's career and the multitude of his interests.
- C.6 2 envelopes containing photograph of X-ray of Ardil (1945) and X-ray photographs from Bamford (1953).
- D. Lectures, addresses and publications D.1 - D.29 Lectures, addresses
D.30 - D.58 Publications
- D.1 'The Molecular Structure of the Fibres of the Collagen Group.' 1939-40
First Proctor Memorial Lecture, International Society of Leather Trades' Chemists, London Conference 28 Aug. 1940: correspondence re scheduling and publishing of lecture, published in J. Internat. Soc. Leather Trades' Chemists, Vol. 24, p.69 (No.41 in R.S. Memoir).

- D.2 Correspondence re: 1940-41
- 'The Structure of Proteins', The Chemical Society of Glasgow, 15 Nov. 1940.
- 'Protein Multilayers', University of Manchester Chemical Society, 5 Nov. 1940.
- 'Adventures among the Proteins', Ardeer Chemical Club, 10 Dec. 1940.
- 'The Molecular Structure and Properties of the Collagen Fibres', Manchester College of Technology Chemical Society, 10 Feb. 1941.
- 'Protein Structure', Institute of Chemistry East Midlands Section, 20 Feb. 1941.
- D.3 'Proteins.' Jubilee Memorial Lecture, Society of Chemical Industry, published in Chem. and Ind. 60, 41, 491 (No.52 in R.S. Memoir). 1941
- Invitation to deliver lecture from Prof. J.C. Philip FRS, correspondence re details of lecture, venue, printing of lecture, reprints.
- D.4-D.5 Correspondence with British Council and the British Broadcasting Corporation re Astbury's broadcasts (2 folders): scripts, ideas for new programmes, scheduling of rehearsals and recording sessions, publication and illustration of broadcasts, distribution of recordings, translation, letters received following broadcasts. 1942-50, 1957
- Titles include:
- 'Textile fibres from peanuts.'
 - 'Fibres in nature and industry.'
 - 'Motion, muscles and molecules.'
 - 'Molecules to measure' series.
 - 'Clear thinking.'
- D.6 Correspondence re: 1941-43
- 'Applied X-rays', Society of Chemical Industry, Newcastle Upon Tyne Section, 30 June 1941.
- 'X-rays and the stoichiometry of the proteins, with special reference to the structure of the Keratin-myosin group', The Chemical Society, London, 20 Nov. 1941. Published in J. Chem. Soc., 1942, p.337 (No.55 in R.S. Memoir).
- 'The Structure of Fibres', Chemical Society, Dundee, 19 Jan. 1942.
- 'X-rays and protein structure: some recent advances', Oxford University Junior Scientific Club, 30 Oct. 1942.
- 'Fibrous Proteins', University of Manchester Chemical Society, 28 July 1943.

- D.7 Lancastrian Frankland Society: correspondence with W.G. Sedgwick re lecture on 'Proteins', 9 Jan. 1942 and lecture on 'From Wool to Bacterial Flagella: Studies in the Molecular Basis of Biological Motility', 7 Dec. 1956. The file also contains some scientific correspondence. 1941-56
- D.8 'X-ray examinations of plastics', Society of Chemical Industry, Plastics Group, 15 March 1944. Published in Chem. and Ind., No.15, p.114 (No.64 in R.S. Memoir): correspondence re scheduling of lecture and publication of Mss. 1944
- D.9 Correspondence re: 1944
- 'The X-ray study of plastics', Chemical, Textile Chemical, and Textile Societies of Manchester College of Technology, 22 May 1944.
 - 'The Molecular Structure of Fibres', Lancaster Section of the Textile Institute, 7 Oct. 1944.
 - 'Adventures among the Proteins and other Molecular Giants', Association of Women Science Teachers, 23 Sept. 1944.
 - 'X-ray analysis of fibres', Yorkshire Section of the Textile Institute, 9 Oct. 1944.
 - misc. invitations (declined).
- D.10 'Fibres and Fabrics, old and new', Royal Institution Friday Discourse, 12 May 1944. Published in Proc. Roy. Inst., Vol.33, p.140, 1946 (No.65 in R.S. Memoir). 1944-46
- Invitation from Sir Henry Dale, correspondence with W.J. Green re arrangements for lecture and equipment, with librarian re publication.
- D.11 'X-ray interpretation of wool', Cantor Lecture, Royal Society of Arts, 26 Feb. 1945. Published in J. Roy. Soc. Arts, Vol.43, p.613, 1945 (No.64a in R.S. Memoir). 1944-48
- Correspondence re scheduling of lecture, list of people to whom invitations were sent, publication and illustration of lecture, publicity.
- D.12 Correspondence re: 1945
- 'Science and Textile Industries', Rotary Club of Bradford, 19 Jan. 1945.
 - 'X-ray study of plastics', Association of Scientific Workers, 8 Feb. 1945.
 - 'The Molecular Structure of Fibres. A Review of the Present Position', Scottish Section of the Textile Institute, 2 March 1945.
 - 'Macro-molecules', British Section of International Society of Leather Trades Chemists, 21 Sept. 1945.
 - misc. invitations to lecture (declined).

- D.13 'Recent advances in X-ray and related studies of the fibrous proteins', lecture at Utrecht, 9 Nov. 1946 (with correspondence re other invitations to lecture in Holland). Summary of lecture is included in the file. 1946
- D.14 Correspondence re: 1946
- Lecture to Old Scholars, Scientific Society, Yorkshire, 5 Jan. 1946.
 - 'The Structure and Elastic Properties of Synthetic Fibres', Birmingham and Midlands Section of Royal Institute of Chemistry, 15 Feb. 1946 (with 2-page typescript of abstract).
 - Lecture on penicillin, The Inner Wheel, Leeds, 22 Feb. 1946.
 - Speech day, Longton High School, 6 June 1946.
 - misc. invitations (declined)..
- D.15 Correspondence re: 1947-48
- Lecture to Society of Chemical Industry, Newcastle Upon Tyne Section, 16 April 1947.
 - Lecture to Royal Institute of Chemistry, South Yorkshire Section, May 1947.
 - 'Collagen and Keratin', Royal College of Surgeons, Dental Postgraduate Course, 28 Jan. 1948.
 - 'The structure of biological tissues as revealed by X-ray diffraction analysis and electron microscopy' (Sylvanus Thompson Memorial Lecture), 16 April 1948. Published in Br. J. Radiol., Vol.22, p.355 (No.84 in R.S. Memoir).
 - Demonstration of electron microscope, Royal Microscopical Society Soirée, 6 Oct. 1948.
 - 'The electron microscope and some recent discoveries with it in the field of macromolecules', Chemical Society, Sheffield, 4 Nov. 1948.
 - 'The Muscle Machine', Biochemical Society, University of Birmingham, 11 Nov. 1948.
 - 'Macromolecular adventures with the electron microscope', Chemical Society, Aberdeen, 10 Dec. 1948.
 - misc. invitations (declined).
- D.16 'The Science of Fibres', Bradford Textile Society, 13 Jan. 1947. 1947
Published in J. Bradford Textile Society, p.3, 1946-47 (No.69 in R.S. Memoir).
- Correspondence re arrangements for lecture, publication, reprints.

- D.17 'Macromolecular Adventures with the Electron Microscope',
 Presidential Address to the Yorkshire Branch of the Science
 Masters' Association, 12 Oct. 1948. 1947-49
- During Astbury's year as president, the Association held a
 Conference on the Correlation of School and University Science
 Teaching on 8 May at Leeds University; the file includes
 Astbury's correspondence with the secretary re arrangements
 for the conference (speakers, publicity, hospitality).
- D.18 Correspondence re: 1949
- Lecture to Blackburn Philosophical and Scientific
 Society, 7 Oct. 1949.
- 'Recent Macromolecular Adventures with the Electron
 Microscope', Glasgow Section of Royal Institute of
 Chemistry, 21 Oct. 1949.
- Lecture to Society of Glass Technology, Wembley,
 26 Oct. 1949.
- Lecture to Royal Institute of Chemistry, Tees-side Section,
 28 Oct. 1949.
- Lecture to Chemical Society, Southampton, 25 Nov. 1949.
 misc. regrets.
- D.19 Correspondence re: 1950
- 'X-ray analysis and electron microscopy of fibre structure',
 University of Manchester, 9 Feb. 1950.
- 'The Chemistry and Physics of Textile Fibres', University
 College, Leicester, 21 Feb. 1950.
- 'Molecular Studies with the electron microscope', Huddersfield
 Section, Royal Institute of Chemistry, 7 March 1950.
- 'The Science of Fibres', course for tutors, University of
 London, 25 April 1950.
- Lecture at jubilee meeting of the British Ceramic Society,
 25 April 1950.
- 'X-ray and electron microscope studies of the structure of
 biological tissues', Fison Memorial Lecture, Guy's Hospital
 Medical School, 9 June 1950.
- 'The Muscle Machine, and from there down to bacterial
 flagella', Association of Women Science Teachers, 25 Nov.
 1950.
- misc. regrets.

- W.T.A. C.S.A.C. 33/10/75 12
- D.20 'Adventures in Molecular Biology', The Harvey Lecture, New York, 28 Sept. 1950. Published in Harvey Soc. Series, Vol.46 (No.93 in R.S. Memoir). 1950-53
Correspondence re dinner before lecture, publication, illustrations, request for reprint.
- D.21 'Festival of Britain', correspondence re planning of Science Exhibition in South Kensington. 1950-52
- D.22 'Fibres and Chain Molecules, Old and New', the Plastics Institute, 1 Nov. 1951. 1951
Correspondence re scheduling of lecture, synopsis, publicity and news accounts, 2-page typescript summary of lecture.
- D.23 Correspondence re: 1951-52
'Studies by X-ray analysis, electron microscopy and supporting techniques of the structure of biological macromolecules and the tissues formed from them', British Postgraduate Medical Federation, London, 23 Oct. 1951.
'The Muscle Machine and Bacterial Flagella', Biological Society, University of Sheffield, 26 Nov. 1951.
'Some recent adventures in molecular biology', Maxwell Society, King's College, London, 21 Jan. 1952.
'The Problem of the Structure of Collagen Fibres: How We Stand Now', Atkin Memorial Lecture, Leather Students' Society, Leeds, 22 Feb. 1952.
'Fibres and Fibre Molecules in Industry, Biology and Medicine', W.E.A., 21 April 1952.
- D.24 'The great adventure of fibre structure', The Mather Lecture, The Textile Institute, 1952. Published in J. Text. Inst., Vol.44, p.81 (No. 105 in R.S. Memoir). 1952-53
Correspondence re publication of lecture.
- D.25 Correspondence re: 1952
Prize-giving at County School for Boys, Bromley, Kent, 11 July 1952.
'Hairs, Muscles and Bacterial Flagella', Biochemical Society, University of Birmingham, 16 Oct. 1952.
'Hairs, Muscles and Bacterial Flagella', Chemical Society, St. Andrews University, 14 Nov. 1952.
misc. invitations to speak.

- D.26 Correspondence re: 1953
- 'Modes of Vision', Derby Scientific Club, Derby,
16 Jan. 1953.
- Lecture to Cardiff Section of Textile Institute, 22 Jan.
1953.
- 'The Structure of the Wool Fibre', Huddersfield Textile
Society, 30 March 1953 (with typescript verbatim report
of lecture).
- 'Some recent ideas about the proteins and other biological
macromolecules', British Postgraduate Medical Federation,
17 Nov. 1953 (with schedule of lecturers for course).
- misc. invitations (declined).
- D.27 Correspondence re: 1954
- Christmas lectures for children, sponsored by Bradford
Civic Society, 8 and 9 Jan. 1954.
- 'Recent ideas on the structure of the proteins and nucleic
acids', Manchester University Chemical Society,
11 Feb. 1954.
- misc. invitations (declined).
- D.28 'Some observations and thoughts on the structure and motility
of flagella', Litchfield Lecture, Oxford University Medical
School, 19 May 1954 (originally scheduled for 6 May 1953,
but cancelled due to illness). 1952-54
- Correspondence with A.H.T. Robb-Smith re arrangements for
lecture and for dinner, and re details of electron microscopes.
- D.29 Correspondence re: 1955-57
- Proposed visit to Russia for lectures in 1955 (cancelled
due to illness).
- 'Studies of the molecular basis of biological motility',
Ramsey Memorial Lecture, 1 Dec. 1955 (lecture not given).
- Speech to Rotary Club of Bradford scheduled for 16 Dec.
1955 (not delivered).
- 'The Structure of Fibres', National Physical Laboratory,
19 Nov. 1956 (with synopsis of speech).
- 'Protein structure', Wolverhampton and Staffordshire Technical
College, 30 Jan. 1957.
- 'The present position in protein fibre studies', University of
Birmingham Biochemical Society, 7 Feb. 1957.
- 'Fundamentals of Collagen', British Society of Periodontology,
4 May 1957.

- D.30-D.31 Textile Fibres under the X-ray, Imperial Chemical Industries, 1940-45
1940:
Invitation to write book, correspondence re points to be included, arrangements for visit to discuss the work in progress, queries of accuracy, difficulties in obtaining good reproductions of photographs, foreign translations, distribution of presentation copies and the letters of thanks. (See also Item D.46, correspondence re Endeavour and Items E.82-E.89, I.C.I.)
- D.32 Correspondence with Oxford University Press re proposed 2nd edition of Fundamentals of Fibre Structure and re a monograph on X-ray Studies of Protein Structure which Astbury was to write for R.H. Fowler's International Series (with letter from N.F. Mott urging him to complete the work). The monograph was never published. Item C.4, a 119-page Ms draft dated May 1947 and entitled 'Studies of Protein Structure', is presumably Astbury's draft for this work. 1940-50
- D.33 'An attempt at an X-ray analysis of embryonic processes' (with R.G. Harrison and K.M. Rudall), J. Exp. Zool. 85, 339 (No.45 in R.S. Memoir): correspondence with co-authors. 1940
'Science in relation to the community', School Science Review, No.109, p.268 (No.78 in R.S. Memoir).
- D.34 Correspondence with Jerome Alexander re Astbury's article 'Proteins' for Vol.V of 'Colloid Chemistry, Theoretical and Applied'. (This article is not given in the R.S. Memoir bibliography.) 1941-42, 1944
- D.35 Correspondence re publication of 'X-rays and the stoichiometry of the proteins', Advances in Enzymology, Vol.3, p.63 (No.57 in R.S. Memoir) and re royalties due to Astbury. 1941-50
- D.36 Correspondence re 'Flagella', Scientific American, 184 No.1, p.21 (No.97 in R.S. Memoir). 1949-51
- D.37-D.40 Correspondence re reviews and short contributions, distribution of offprints, setting up of illustrations, refereeing of papers (4 folders). 1939-57
- D.41-D.43 Correspondence re requests to reprint illustrations, photographs, figures, etc. from Astbury's published work (3 folders). 1939-56
- D.44-D.45 Correspondence with the editors of Nature re submission of articles and letters for publication, refereeing of papers, reviews, permission to reproduce photographs and illustrations (2 folders). Although the texts of only three contributions were with the correspondence, many of Astbury's letters contain much scientific information. 1940-57

- D.46 Correspondence with editors of Endeavour re contributions by Astbury, translations, blocks for illustrations, proofs, and reviews. Astbury was requested to contribute an article on textile fibres under the X-ray for one of the first issues and much of the correspondence is re this article. The file also contains the typescript of Astbury's review of 'The Nature and Structure of Collagen' by J.T. Randall (1954). 1941-55
- D.47 Correspondence with J.G. Crowther and F.D. Ommanney re articles for Monthly Science News. 1942-46
- D.48-D.49 Correspondence re Journal of Polymer Science, Polytechnic Institute of Brooklyn, Interscience Publishers Inc. (These correspondence files are so intermingled that the subjects cannot be segregated) (2 folders). 1943-57
- Astbury was a member of the Editorial Board of the Journal of Polymer Science; the correspondence includes requests for Astbury to contribute articles, memos re editorial business and publication matters, Astbury's forwarding of papers to Journal, arrangements to visit the Biophysics Department at Leeds, copies of correspondence between editors in N.Y. and authors in England. (See also Item E.48, correspondence with Paul Doty.)
- D.48 1943-54
D.49 1955-57
- D.50 Correspondence re Journal of Colloid Science (Astbury was a member of the Consulting Committee of the Editorial Board): invitation to join Board, submission of papers, invitation to edit handbook on textile fibres. 1945-51
- D.51-D.58 Biochimica et Biophysica Acta 1946-57
- Astbury was a member of the Editorial Board from its inception. The correspondence deals with the composition of the Editorial and Advisory Boards, distribution scheme of manuscripts submitted for publication, drafts of prospectus and of editorial policy, notifications of papers sent and received, monthly lists of papers submitted for publication, problems of long delays in publication and of poor reproduction of illustrations, subscription costs, reviews and articles by Astbury, proposals for various books to be sponsored by BBA, translations. Much of the correspondence, especially that with authors who submitted manuscripts to Astbury for forwarding to BBA, contains discussion of scientific subjects. (See also correspondence in Section E with G. Eaves, C. Weibull, L. Singleton, and especially with R. Wyckoff, another member of the Editorial Board.)
- D.51 { March-Dec. 1946
Dec. 1947-July 1948
D.52 Aug.-Dec. 1948 ; Aug. 1949-July 1950
D.53 Aug. 1950-Nov. 1952
D.54 Jan. 1953-Dec. 1953
D.55 Jan. 1954-Dec. 1955

- D.56 Jan.1956-Feb.1957
 D.57 Monthly lists of Mss submitted for publication
 1948-1957
 D.58 One set of postcards (1948-54): notifications
 of receipt by BBA of Mss forwarded by
 Astbury.

E. Professional correspondence E.1 - E.212

These files comprise Astbury's correspondence with scientific colleagues in universities, research laboratories, industrial or manufacturing firms, and also with Trusts and Foundations giving financial support to his work. Private individuals are listed by name; scientists working for firms such as I.C.I., British Celanese, etc. do not appear by name in the list below, but can be found in the General Index on pp.35-53.

An indication is given below of the period covered by the correspondence.

E.1	Adiam, J. Patrick	1955
	Allsopp, C. B.	1952
	Astbury, Norman	1944-48
	Atkins, W. R. G.	1942
E.2	Alexander, Peter	1951-56
E.3	Andrade, Edward Neville da Costa	1946-52
E.4	Bacon, G. H.	1952
	Baker, Richard F.	1951
	Barclay, A. E.	1948
	Barker, Aldred F.	1955
	Barrer, R. M.	1943
	Bates, Leslie Fleetwood	1946-48
	Beadle, L. C.	1941
	Bennett-Clark, Thomas Archibald	1950
E.5	Berridge, N. J.	1944-45
	de Boer, J. H.	1951
	Bonhoeffer, K. F.	1950
	Bourne, Geoffrey H.	1946-55
	Bowes, M. E.	1955-56
	Brasseur, H.	1940
	Brewer, Douglas B.	1955
	Buck, John B.	1940-43
	Burr, H. K.	1943
	Burton, E. F.	1944-45
	Buxton, P. A.	1946
E.6-E.9	Bailey, Kenneth	1939-56
	4 folders: E.6	1939-41
	E.7	1942-43
	E.8	1944-46
	E.9	1948-56
E.10	Bairati, Angelo	1951-52

E.11	Bate-Smith, E. C.	1940
E.12	Bear, Richard S.	1951-56
E.13	Bernal, John-Desmond	1941-54
E.14	Bisset, Kenneth A.	1950-53
E.15	Blackett, Patrick Maynard Stuart (Baron Blackett of Chelsea)	1946
E.16	Block, Richard J.	1941-46
E.17	Bragg, Sir William & Bragg, Sir (William) Lawrence	1940-54
E.18-E.20	British Celanese (Astbury was a consultant 1942-56)	1941-56
	3 folders: E.18	1941-42
	E.19	1943-45
	E.20	1946-56
E.21	British Cotton Industry Research Association	1943-46
E.22	British Leather Manufacturers' Research Association	1940-48
E.23	British Pottery Research Association	1940-46
E.24	Brother, George H.	1940-51
E.25	Burgers, W. G.	1945-51
E.26	Carter, D.	1950-54
	Cary-Gilson, F.	1953
	Cornu, Ch.	1944
	Corran, J. W.	1940
	Cragg, J. B.	1948
	Crook, E. M.	1948
E.27	Caspersson, T.	1942-52
E.28	Chargaff, Erwin	1951-55
E.29	Chibnall, Albert Charles	1940-51
E.30	Clark, George L.	1939-52
E.31	Clark, Sir Wilfrid Le Gros	1948
E.32	Corey, Robert B.	1946-55
E.33-E.35	Courtaulds Ltd.	1941-55
	3 folders: E.33	1941-46
	E.34	1948-52
	E.35	1953-55
E.36	Cox, Sir (Ernest) Gordon (George) (includes W.T.A.'s correspondence with Royal Society re assessment of Cox's work using Paul Instrument Fund grant (1955-56))	1941-56
E.37	Cox, H. L.	1940-41

- | | | |
|------|--|---------------------|
| E.38 | Czekalowski, Jaroslaw Wiktor | 1951-56 |
| E.39 | Dale, W. M. | 1946 |
| | Davenport, Charles B. | 1941-42 |
| | Day, T. D. | 1948 |
| | Dickinson, Sylvia | 1948 |
| | Dmochowski, Leontyn Ludomir | 1946, 1954,
1958 |
| | de Navarre, M. G. | 1944-45 |
| | Dougherty, Ellsworth C. | 1956 |
| | Durrans, Thomas H. | 1941 |
| E.40 | Dainton, Sir Frederick Sydney | 1941-55 |
| E.41 | Dalgleish, Charles E. | 1948 |
| E.42 | Darlington, Cyril Dean (includes correspondence and photographs in Dec. 1939 on nucleic acids quoted only in part in R. Olby, <u>The path to the double helix</u> , 1974, p.111) | 1939-44 |
| E.43 | Darmon, S. E. | 1948 |
| E.44 | Davies, Mansell M. | 1945-55 |
| E.45 | Dillon, J. H. | 1952-55 |
| E.46 | Dingle, Herbert | 1940 |
| E.47 | Dohrn, Peter & Dohrn, R. (see also F.4) | 1953-56 |
| E.48 | Doty, Paul M. | 1948-55 |
| E.49 | Dowson, W. J. | 1950 |
| E.50 | Dunlop Rubber Co. Ltd. | 1942, 1950 |
| E.51 | Ellis, Frank | 1950, 1955 |
| | Engström, Arne | 1946 |
| | 'Espinasse, Paul G. | 1948 |
| | Evans, G. | 1942 |
| | Evans, R. C. | 1940, 1946 |
| E.52 | Eaves, George | 1949-54 |
| E.53 | Edsall, John T. | 1951-53 |
| E.54 | Elton, Sir Arthur Hallam Rice (see also Imperial Chemical Industries) | 1945 |
| E.55 | Ewald, Paul P. | 1943-45 |
| E.56 | Fearon, William | 1948 |
| | Fenton, W. C. | 1940 |
| | Fonbrune, P. de | 1950 |
| | Forman, Jan | 1945 |
| | Foster, John | 1952 |
| | Frazer, Alastair Campbell | 1950 |
| E.57 | Fankuchen, Isidor | 1941, 1946,
1956 |
| E.58 | Fish, Sir (Eric) Wilfred (also includes W.T.A.'s correspondence with Martin A. Rushton) | 1945-56 |

E.59	Fowler, R. H.	1940-43
E.60	Franklin, Rosalind	1953
E.61	Gard, Sven	1948
	George, William H.	1957
	Geren, Betty Ben	1954
	Ghosh, B. N.	1949
	Giles, C. H.	1953-54
	Goldie, A. N. A.	1945
	Gotte, Lorenzo	1953
	Graham, M.	1953
	Green, H. L.	1948
	Gross, Jerome	1952-53
	Gullard, J. Masson	1946
	Gutfreund, Herbert	1943-44
E.62	Gorter, Evert	1948-54
E.63	Gray, J.	1951
E.64	Gustavson, K. Helmer	1950-56
E.65	Hallsworth, E. S.	1948
	Hamacher, Howard F.	1944
	Harvey, P.	1951
	Hellier, F. F.	1948
	Helveg-Larsen, H. F.	1948
	Heppleston, A. G.	1952
	Hermans, J. J.	1948
	Hermans, P. H.	1940
	Hetherington, A. L.	1946
	Hinshelwood, Cyril Norman	1946
	Holness, R. F. G.	1947
	Hopwood, F. L.	1942
	Horton, W. G.	1956
E.66	Haddow, Sir Alexander	1944-55
E.67	Halle, Friedrich	1946-51
E.68	Hanes, Charles Samuel	1940-50
E.69	Happey, Frank	1940-57
E.70	Harrington, Sir Charles (Robert)	1941-45
E.71	Harrison, W.	1934-41
E.72	Harry, Ralph G.	1942-55
E.73	Harvey, A.	1941-51
E.74	Haworth, W. N.	1944-45
E.75	Heidelberger, Michael	1950-53
E.76	Heringa, G. C.	1946-54
E.77	Hill, Archibald Vivian	1940-45
E.78	Hirst, Sir Edmund (Langley)	1941-52

E.79	Hodge, Alan J.	1953-54
E.80	Hodgkin, Dorothy Crowfoot (includes one letter from Thomas Hodgkin 1944)	1942-52
E.81	Hoyle, Lester	1950-52
E.82-E.91	Imperial Chemical Industries Ltd.	1940-56

Astbury undertook research work for I.C.I. (Research Project 491 on Synthetic Resins) in 1940 and was made a consultant to the Dyestuffs Group in 1943, the consultancy being terminated in 1956. His book 'Textile fibres under the X-rays' (1940) was prepared for and published by I.C.I. The Company made financial contributions to the work of Astbury's Department of Biomolecular Structure, 1946-56. The I.C.I. subsidiaries, divisions or offices involved are:

Explosives Group (Nobel House, Stevenston, Ayrshire),
 I.C.I. (Alkali) Ltd. (Northwich, Cheshire)
 Imperial Chemical House, Millbank, London
 I.C.I. (Dyestuffs Division) (Hexagon House, Blackley, Manchester)
 Plastics Division (Black Fan Road, Welwyn Garden City)
 Nobel House, Buckingham Gate, London
 Billingham Division (Billingham, Co. Durham)
 Paints Division, Slough
 Dumfries Factory, Drungans, Dumfries
 'Terylene' Council, Welwyn

The correspondence deals with: arrangements for meetings and discussions, with memos. and Minutes thereof; reports, analyses and discussions of research in progress; purchase, installation and functioning of equipment; applications for research grants, fees for work undertaken, etc.; lectures demonstrations, film shows, conferences; publication and distribution of 'Textile Fibres under The X-rays', and misc. articles on research by Astbury and colleagues. (See also D.30-D.31.)

10 folders: E.82 1940-42
 E.83 1943
 E.84 1944
 E.85 1945
 E.86 1946
 E.87 1948 (one letter 1947)
 E.88 (Aug.) 1949-50
 E.89 1951-52
 E.90 1953
 E.91 1954-56

E.92	Ingram, John Thornton	1944, 1953-1956
E.93	Iterson, G. van	1945-49
E.94	Janssen, L. W.	1940
E.95	Johnson, Paley	1949-56

E.96	Kalmus, Hans	1941-42
	Kaye, Maurice A. G.	1950-51
	Keilin, David	1942
	Kenner, James	1941-42
	Ketelaar, J. A. A.	1945-46
	Kirkwood, S.	1956
	Knibbs, N. V. S.	1945-46
	Koch, William J.	1954
	Koffler, Henry	1956
	Kolkmeyer, N. H.	1945
	Koller, P. C.	1944
	Koprowski, Hilary	1950
	Kornreich, E.	1944
	Kratky, O.	1948-55
E.97	Kellgren, Jonas Henrik	1949-54
E.98	Kellner, Lotte (see also Dingle, H.)	1940
E.99	Kendrew, John Cowdery	1953-55
E.100	Kodak Ltd.	1940-1954
E.101	Lachman, F.	1953
	Laki, Koloman	1953
	Lane, E. S.	1945
	Laue, Max von	1950
	Laves, Wolfgang	1948
	Lee, Sir Kenneth	1944
	Lendrum, F. C.	1953
	Lessing, R.	1945
	Life Wave Comb Co.	1946
	Little, Kitty	1950
	Loofbourow, John R.	1940
	Lovecy, A.	1945
E.102	de Lange, J. J.	1940-56
E.103	Lennard-Jones, Sir John	1942
E.104	Lewin, Ralph A.	1950-56
E.105	Li, Chao Hao (see also Nuffield Foundation, University of Leeds)	1949-53
E.106	Lipson, Henry Solomon (see also Institute of Physics)	1955-56
E.107	Lonsdale, Dame Kathleen	1942-53
E.108	Lorand, Laszlo (includes correspondence re Lorand's early career (with R.G. McFarlane, R.A. Kekwick))	1948-57
E.109	Low, Barbara	1950-52
E.110	McLaughlin, George D.	1941
	MacLennan, John D.	1951
	MacLeod, J. D.	1942
E.111	Manley, E. S.	1951
	Marriott, Robert H.	1946
	Marsh, J. T.	1956

	Marshak, Alfred	1955
	Maslem, E. N.	1955
	Martin, A. J. P.	1943
	Mercer, E. H.	1956
	Meyer, Karl	1940
E.112	Middlebrook, W. R.	1954
	Miller, Michael D.	1955
	Mitchell, Robert L.	1952
	Mommaerts, E. F. H. M.	1945
	Monaghan, Edward J.	1953
	Mongar, J. L.	1954
	Moore, Dan H.	1953
	Moore, Harry	1942
	Morales, Manuel	1951-52
	Murphy, Frank	1943-45
E.113	Manton, Irene	1941-50
E.114	Marsden, Sir Ernest	1944-46
E.115	Martin, Sir Charles	1940-47
E.116	Marwick, Thora Cuthbert (Mrs. K.C. Roberts)	1941-51
E.117	Mathieu, M.	1948-55
E.118	Medawar, Sir Peter	1943-45
E.119	Melland, Amicia M.	1940-50
E.120	Melnick, Joseph L.	1951
E.121	Miles, F. D.	1944-49
E.122	Morgan, Walter J.	1941-52
E.123	Mott, Sir Nevill Francis	1951-52
E.124	Nier, H. L.	1952
	Nowacki, W.	1945-48
E.125	Needham, Joseph & Needham, Dorothy	1941-49
E.126	Neurath, Hans	1939-45
E.127	North British Rayon Ltd.	1945-46
E.128	Oldershaw, A. W.	1944
	Onions, W. J.	1952
	Ormondts, Van	1940-41
	Orowan, E.	1942
E.129	Oliver, Donald A.	1950-52
E.130	Pacsu, Eugene	1941
	Padoa, E.	1952
	Parkin, Thomas	1952
	Parry, Gwen I.	1946
	Paterson, Edith	1949
	Patterson, A. Lindo	1943
	Poutard, Frederick G. E.	1952
	Peirce, F. T.	1943

E.131	Pennycuik, C. J.	1954
	Percival, E. G. V.	1943, 1948
	Peterkin, G. A. Grant	1956
	Philpot, D.	1954
	Philpot, J. St.L.	1941
	Pijper, Adrianus	1943, 1949, 1953
	Pirie, Norman Wingate	1945
	Pitelka, Dorothy R.	1956
E.132	Palmer, Kenneth J.	1944-45
E.133	Passey, R. D. (includes committee papers of the Yorkshire Council of the British Empire Cancer Campaign of which Astbury was Acting Chairman and Passey Hon. Secretary)	1945-55
E.134	Patnaik, Brajabihari	1945-55
E.135	Pauling, Linus (includes correspondence re US State Department's refusal to grant passport to Pauling in 1952: copy of Pauling's letter to President Truman, copy of statements by Pauling dated 14 Nov. 1950 and 29 April 1952)	1943-54
E.136	Pepper, K. W.	1940-43
E.137	Perry, S. V.	1948-51
E.138	Perutz, Max Ferdinand	1942-51
E.139	Petitpas, Th.	1946, 1953, 1956
E.140	Picken, L. E. R.	1944-56
E.141	Polanyi, Michael	1943
E.142	Pratt, D. D.	1944
E.143	Preston, G. D.	1941-53
E.144	Pringsheim, E. G.	1949
E.145	Ramachandran, G. N.	1956
	Ramsey, Robert W.	1944-45
	Reed, R.	1956
	Ritchie, P. D.	1949
	Roberts, N. F.	1953
	Robinow, C.	1945
	Roe, Edna M. F.	1946
	Rogers, G. L.	1944
	Rogers, H. J.	1945
	Rook, A. J.	1950
	Rowlands, Stanley	1950
	Russell, Frederick Stratten	1954
E.146	Radley, J. A.	1941
E.147	Randall, Sir John (Turton)	1944-53
E.148	Rawlins, F. I. G.	1941-53

W.T.A. C.S.A.C. 33/10/75

		1944-51
E.149	Rideal, Sir Eric	1941-53
E.150	Riley, Dennis	1941-56
E.151	Robertson, J. Montearth	1939-56
E.152-E.154	The Rockefeller Foundation	
	The Foundation was the chief single source of financial support for Astbury's work, its first grant being made in 1934.	
	Reports and discussions of research in progress and programmes for future work, especially on protein structure, collagen, nucleic acids.	
	Research grants for Astbury and colleagues.	
	Installation of first electron microscope at Leeds University (1943).	
	Establishment of Department of Biomolecular Structure at Leeds University.	
	Conferences and meetings, travel arrangements, etc.	
	Many letters give an attractive insight into Astbury's personality, in addition to the scientific information they contain.	
	3 folders:	
	E.152	1939-45
	E.153	1946-50 (1 letter only Dec.1947) (1 letter only March 1949)
	E.154	1951-56
E.155	Rothschild, Lord Victor	1953
E.156	Ruskin, Simon	1951-54
E.157	Sanger, F.	1948
	Saville, W. B.	1941, 1943
	Saxl, Erwin J.	1940-41
	Schmidt, Gerhard (to Rudall)	1944
	Schwarz, Peter	1953
	Sen, J. R.	1951
	Sen, M. K.	1955
	Senti, F. R.	1945
	Seville, R. H.	1952
E.158	Sheffield, F. M. L.	1945
	Simons, Lewis	1951
	Smith, James H.	1941
	Smith, J. L. B.	1953
	Spearman, Richard	1955
	Spence, David	1943-49
	Steer, A. T.	1941
	Sternberg, J.	1950
	Stevenson, Margaret F.	1946
	Stora, C.	1946
	Straub, F. B.	1949
	Straub, Ir. J.	1945
E.159	Sadron, Charles	1947-52

E.160	Saha, Narendra Nath	1945-57
E.161	Savill, Agnes	1941-56
E.162	Schmidt, W. J.	1946-57
E.163	Schmitt, Francis O.	1945-56
E.164	Seifriz, William	1941-53
E.165, E.166	Shell Refining and Marketing Co. Ltd. (especially Lubricating Oil Laboratory, Thornton-le-Moors, Chester, <u>later</u> Thornton Research Centre)	1945-55
	2 folders:	
	E.165	1945-55
	E.166	Reports
E.167	Singleton, Leslie	1950-57
E.168	Sisson, Wayne A.	1940-56
E.169	Slater, Sir William (re W.T.A.'s unsuccessful application to Agricultural Research Council for grant)	1953
E.170	Speakman, J. B.	1940-56
E.171	Springall, H. D.	1943-44
E.172	Stacey, M.	1945-54
E.173	Stanley, W. M. (photocopy of Astbury's letter of 13 Oct. 1939)	1945-53
E.174	Sutherland, Gordon (Brims Black Mclvor)	1941-56
E.175	Szent-Györgyi, Albert (includes correspondence with George Rozsa, Clara W. Mayer, Andrew Szent-Györgyi)	1946-54
E.176	Taylor, C. V.	1940
	Taylor, F. Sherwood	1943
	Taylor, Hugh S.	1949
	Thompson, Sir Harold Warris	1949
	Trepka, E.	1948
	Tristram, G. R.	1954-55
	Trueman, E. R.	1948
	Turner, A. J.	1943-44
E.177	Taylor, Charles A.	1955
E.178	Taylor, W. H. (much of the file consists of correspondence and committee papers of the Manchester Branch of the Institute of Physics of which W.H. Taylor was Hon. Sec. and W.T.A. a member)	1940-48
E.179	Thompson, Sir D'Arcy Wentworth	1945
E.180	Tiselius, Arne	1948-52
E.181	Todd, Alexander Robertus (Baron Todd of Trumpington)	1945-51

E.182-E.185	Tootal Broadhurst Lee Co. Ltd. (Research Dept., Manchester). Astbury undertook investigations and experimental work for this firm from 1940. Correspondence on analyses of natural and synthetic fibres. Equipment (including electron microscope), visits and meetings, publications, lectures and demonstrations.	1940-52
	4 folders: E.182 1940-42 E.183 1943-44 E.184 1945-46 (1947 missing) E.185 1948-52	
E.186	Troensegaard, N.	1950-54
E.187	Truter, M. R.	1955-56
E.188	Tsáó, T. C.	1949-51
E.189	Tyndall, Arthur Mannering	1944-45
E.190	Vickery, H. B. Virtanen, Artturi I.	1943 1950
E.191	Vickers, A. Eric J.	1940-48
E.192	Waddington, C. H. Warburg, Otto Wassermann, Albert Watkins, Kathleen E. Watson-Jones, K. Weber, Hans H. Weidinger, A. Weiler, G. Whinfield, J. R.	1941 1939 1945 1943 1951 1946-54 1939-40 1942 1943
E.193	White, Michael J. D. Wildschut, A. J. Wilkins, M. H. F. (from Astbury) Williams, E. F. Williams, Robley C. Wilson, D. P. Wolf, Ing. Kurt Wolken, Jerome J. Woodger, J. H. Woodward, F. N. Worden, Alastair N. Wrinch, Dorothy Wynne-Jones, William Francis Kenrick	1941 1946 1953 1942 1954 1945 1939 1953 1946, 1948 1945 1952 1950 1941
E.194	Weibull, Claes	1948-56
E.195	Weiss, Henri	1946
E.196	Weissenberg, Karl	1939
E.197	Williams, J. W.	1940-41
E.198	Wool Textile Research Council	1954-56

E.199	Wormall, A.	1939-56
E.200, E.201	Wyckoff, Ralph Walter Greystone (includes much editorial correspondence for <u>BBA</u> : letters from contributors (not indexed), forwarding of Mss for publication, etc.)	1945-55
	2 folders: E.200 1945-52 E.201 1953-55	
E.202	Yorke, Allan Young, John Zwick, Karl G.	1952 1944, 1945 1940
E.203-E.206	Requests for information, references to published work, etc. (not indexed)	1939-56
	4 folders: E.203 1939-43 E.204 1944-48 E.205 1949-51 E.206 1952-56	
E.207-E.209	Requests for reprints, copies of published articles, exchange of reprints, acknowledgements (not indexed)	1939-56
	3 folders: E.207 1939-43 E.208 1944-48 E.209 1949-56	
E.210, E.211	Misc. references (not indexed) 2 folders	
E.212	Examinations and Theses (not indexed)	1940-54
<u>F.</u>	<u>Conferences</u> F.1 - F.15	
F.1	Correspondence re:	1945-48
	'The structural proteins of the cell', Biochemical Society discussion, London, 10 Nov. 1945	
	Conference on 'Science and Education' Association of Scientific Workers, June 1945	
	Symposium on Shrinkage and Cracking of Cementive Material, London 1946 (invitation declined)	
	British Institute of Radiology Conference, 1946	
	VIIe Congrès de Chimie Biologique, 1946 (invitation declined)	
	High Polymer Forum, 1948 (invitation declined)	
	High Polymer Conference, 1948 (invitation declined)	
	International Rheological Congress, 1948	

- F.2 Correspondence re conferences and symposia: 1949-51
- Colloquium on 'Nature et Rôle des Virus dans le Cancer', during 5th International Cancer Congress, 1950
- Electron Microscopy Congress, 1950
- Congrès des Sciences Appliquées à l'Industrie Textile, 1951 (invitation declined)
- Division 15, Plant Cell-Wall Constituents, XIIIth International Congress of Pure and Applied Chemistry, 1951 (invitation declined)
- Discussion on the comparative biology of natural fibres, Royal Society of Medicine, 1950
- F.3 Visit to USA to attend American Crystallographic Association meeting (21-25 Aug.), Gordon Research Conference (28 Aug.-1 Sept.), International Congress for Cell Biology (4-8 Sept.), Connective Tissue Conference (6-7 Oct.) 1950. 1950-51
- The correspondence includes arrangements for travel to US, discussion of Astbury's contribution to The Gordon Conference 'X-ray Diffraction Studies on Proteins and Nucleic Acids', programme of Crystallographic meeting, plans to visit various individuals and laboratories (RCA, A.L. Patterson, Ray Pepinsky, Maurice Huggins, Milton Harris). See also Item D.20 re the Harvey Lecture which Astbury delivered in New York on 29 Sept. Astbury corresponded with the Rockefeller Foundation, F.O. Schmitt, A. Szent-Györgyi, R. Wyckoff, W. Sisson, and M. Heidelberger re his visit; see the appropriate files in Section E.
- F.4 Conference on 'Submicroscopic structure of protoplasm', Naples Zoological Station, 22-25 May 1951. 1951-52
- Correspondence with A. Monroy re conference arrangements, with P. and R. Dohrn re publication of conference proceedings, with Silvio Ranzi re Astbury's lecture in Milan, with H.G. Callan re payment of travelling expenses.
- Typescript of Astbury's reconstruction of his remarks during discussion of papers by Wilkins, Chantrenne, and Buchthal with note 'I (Astbury) think these remarks correspond at least to the sense of what I said at the actual symposium, but with probably a little additional matter!'
- (See also correspondence with A. Bairati.)
- (See also R. Olby, The path to the double helix, Macmillan 1974, pp.338-340.)
- F.5 Invitations and related correspondence re Astbury's proposed trip to the USA to attend the XIIIth International Conference of Pure and Applied Chemistry (visit was cancelled). Invitations from Detroit Institute of Cancer Research, American Cyanamid Co., Chemistry Dept. McGill University, National Dairy Research Laboratory, Division of Cellulose Chemistry, American Chemical Society. 1951

- F.10 Visit to USA to attend: 14 Aug.-14 Oct. 1953
- Gordon Conference on Proteins and Nucleic Acids (24-27. Aug.)
- Pasadena Conference on the Structure of Proteins (21-22 Sept.).
- Correspondence with organisers of Gordon Conference (Kurt Stern, M. L. Anson)
- Programme of Pasadena Conference, list of participants.
- Correspondence re: obtaining visas
travel arrangements
finances
scheduling visits to various universities, labs. and meetings:
- Symposium on 'Biochemical Research in Europe', sponsored by American Society of European Chemists and Pharmacists, Study Group on Rheumatic Diseases
- See also correspondence in Section E with: R. Wyckoff, W. Sisson, D. Wrinch, A. Szent-Györgyi, W.M. Stanley, Linus Pauling, E. Chargoff, Simon Ruskin, J. Edsall, M. Heidelburger, Chao Hao Li, Rockefeller Foundation.
- F.11 International Congress on Scientific Research Applied to the Textile Industry, 27-29 June 1955, Brussels. 1954-55
- Correspondence re conference arrangements and re publication of Astbury's lecture 'Textile, Fibres and Molecular Biology'. Conference programme.
- F.12 Conference on 'Macromolecules of the Organism', sponsored by the Istituto Lombardo di Scienza e Lettere, Pallanza, Italy, 28-30 July 1955. 1954-56
- Astbury, a Corresponding Member of the Institute, was responsible for organising the programme. The file is composed of correspondence with H. Ephrussi-Taylor and G. Weber re their participation in the conference and with S. Ranzi re publication of proceedings. Astbury also corresponded with B.B.M. Sutherland, L. Pauling, F.O. Schmitt, R. Corey, W.L. Bragg, J.D. Bernal, J. Kendrew, H.H. Weber and M. Stacey re the conference; see the appropriate files in Section E.
- F.13 International Wool Textile Research Conference, sponsored by Commonwealth Scientific Industrial Research Organisation, Australia, August 1955. Astbury delivered the Inaugural Lecture 'In Praise of Wool', and a paper entitled 'X-rays and the Stoichiometry of Keratin: a Renewed Enquiry'. (A 1-page typescript outline of the Inaugural Lecture, a summary of the paper and a Mss and typescript of Astbury's amended contributions to discussions are included in the file.) The correspondence deals with the content and scheduling of Astbury's contributions, intricate travel arrangements (handled by the Australian Scientific Liaison Office in London), the publication of the Conference proceedings, visits to other parts of Australia to see labs. and university departments. Printed matter re the Conference (summary of subjects, programme) have been kept with the file. 1954-56

- F.14 Visit to Rubber Research Institute of Malaya on return from Australian conference: invitation from Director (C.E.T. Mann), flight schedules, letters of thanks after visit, personal correspondence. 1955
- F.15 Invitations to: 1955-56
- Gordon Research Conference, 1955, with programme attached (invitation declined).
 - 3rd International Congress of Biochemistry, Brussels, 1955 (invitation to chair a meeting on 'Structure of Polypeptides and Proteins' declined).
 - Symposium on Visible Structures of the Bacterial Cell, sponsored by Society of General Microbiology, 1956 (invitation to contribute a paper on 'Flagella' originally accepted, then declined due to pressure of other commitments); list of contributors attached.
 - Symposium on 'Physics of Solid State' during Session of National Academy of Science, India, 1955 (declined).
 - Meeting of the Verein der Textilchemiker und Coloristen, Baden-Baden, 1956 (invitation to deliver opening lecture declined due to poor health).
 - Symposium on X-ray Microscopy and Microradiology, Cambridge, 1956 (not attended).

G. Societies and Committees G.1 - G.27

- G.1 Association of Scientific Workers (Astbury was President, Leeds and District Branch). 1943-46
Misc. correspondence on committee meetings, conferences, lectures to be given or chaired by Astbury at branches of the Association.
- G.2 British Association for the Advancement of Science. 1944-46,
1952
Correspondence re conferences, paper by Astbury 'What Industry owes to Science' to be read at B.A. conference; invitation to serve on Organizing Committee for B.A. meeting at Dundee in 1947.
- G.3 The British Council. 1944-56
Misc. correspondence re: exchanges of publications, visits and research facilities with scientific colleagues, holders of British Council Scholarships, etc.; articles contributed by Astbury to British Science News; arrangements and schedules for lecture tours.
Astbury undertook a lecture tour of the Netherlands, sponsored by the British Council, in March 1951; he visited Italy in March 1952 on a tour jointly sponsored by the Council and the Italian Chemical Society.

- G.4 The Chemical Society. 1941-52
Misc. correspondence with officers re publications by Astbury in *J. Chem. Soc.*, contribution by Astbury to proposed symposium 'The Chemistry of Cell Division', scheduled but not held on 15 March 1951, visits of foreign scientists K.U. Linderström-Lang, and Arne Tiselius.
- G.5-G.7 Department of Scientific and Industrial Research. 1940-57
Scientific and administrative correspondence, arranged chronologically.
The correspondence deals with: natural and synthetic fibre analysis; adhesion; reticulin; flagella; equipment; visits and inspections; committee meetings and arrangements; conferences and papers.
Laboratories involved are:
Forest Products Research Laboratory, Princes Risborough
Chemical Research Laboratory, Teddington
Low Temperature Research Station, Cambridge
Torry Research Station, Aberdeen
- Astbury served on
the Forest Products Research Board 1946-50, 1951-55
the Food Investigation Board 1946-52, 1953-56, 1956-57
the Joint Committee (D.S.I.R./Ministry of Food) on
Physics and Engineering in Food Research and Development
- 3 folders: G.5 1940-49
G.6 1950-51
G.7 1952-57
- G.8 Electron Microscopy Group (see also Institute of Physics). 1946-54
Astbury was a founder member of the Electron Microscopy Group within the Institute of Physics, and Chairman 1950-52. The correspondence deals with negotiations for the constitution of the Group, and with conferences, meetings, lectures, papers, etc. Some scientific correspondence with colleagues in the group is also included.
- G.9 The Faraday Society. 1940-55
Astbury served on the Publications Committee 1945-50. Correspondence on papers, contributions to discussions, etc. written by Astbury, submitted to him as referee, or for review; meetings of Publications Committee; attendance at Society's Discussion including *The Hydrogen Bond*, May 1940 and correspondence arising; *The Physical Chemistry of Proteins*, Aug. 1952 and discussion.
- G.10 The Institute of Physics. 1941-56
(see also Electron Microscopy Group, X-ray Analysis Group, W.H. Taylor).
References for members and fellows, misc. articles and papers, invitations to lecture at the Society's branches and Groups, reviews, meetings and conferences.

- G.11 International Union of Pure and Applied Chemistry Commission on Macromolecules. 1948-56
Lists of members, schedule of meetings, programmes, correspondence and papers re Symposium on Macromolecules, Liège, 5-8 April 1948 (Astbury was unable to attend), list of laboratories.
- G.12 Joint Services Materials (Non-Metallic) Advisory Board, Ministry of Supply. 1954-57
Astbury served as Vice-Chairman.
Committee papers, correspondence.
- G.13 Medical Research Council. 1945-54
Includes correspondence (Nov. 1945-March 1946) with Sir Edward Mellanby (Sec. to the Council) on Astbury's plans for biomolecular research and hope for support from M.R.C. The Council did not make him a grant, as his research was not exclusively biological, and Astbury wrote (22 March 1946) of his disappointment that neither the textile industry nor medical science gave him financial help despite his services to both. See also R. Olby The path to the double helix, Macmillan, 1974, p.327, who quotes a letter from Sir Harold Himsworth, 1968, giving a summary of this episode.
Astbury served on the Biophysics Committee of the Council (Sec. J.W. Boag) 1948-54, when the Committee was discharged. Correspondence on research in progress, Committee meetings and visits, including programme of visits to M.R.C. Unit for Research on the Molecular Structure of Biological Systems, Cambridge, May 1951, and Research Unit (Director J.T. Randall) King's College, London, Dec. 1952.
- G.14 The Nuffield Foundation. 1949-57
(see also C.H. Li, J.H. Kellgren, Medical Research Council)
Astbury served on the Oliver Bird Fund committee on chemical and physical research in rheumatism (later Rheumatism Committee) set up in 1949 and on the Selection Committee for the Foundation's Biological Scholarships and Bursaries (from 1951).
Scientific and administrative correspondence on research programmes and requirements (including scheme for research on rheumatism to be carried out by Astbury's Dept. in Leeds in collaboration with J.H. Kellgren in Manchester), grants from the Foundation and reports by Astbury on research in progress, applications and references for research grants, etc.
- G.15 The Royal Institution. 1943-52
(see also E.N.daC. Andrade)
Misc. correspondence on scientific equipment, and on Friday Evening Discourses given by Astbury, and subsequent publication.

- G.16, G.17 The Royal Society. 1940-56
 Misc. correspondence on papers written by Astbury and colleagues, or submitted to him for comment; elections, travel and research grants, reports on work sponsored by Society, etc.; invitation to deliver the Croonian Lecture (July 1945) and ensuing arrangements.
 2 folders: G.16 1940-49
 G.17 1950-56
- G.18 The Society of Dyers and Colourists. 1941-48
 Mainly correspondence on lectures to be given by Astbury to various Sections of the Society, and reviews by him for the Journal.
- G.19, G.20 Society for Experimental Biology. 1940-56
 Correspondence on research, conferences, meetings, lectures and publications.
 Astbury served on the Biophysics Sub-Committee of the Society and on the Organising Committees of several of its Symposia.
 2 folders: G.19 1940-52
 G.20 1953-56
- G.21 Society for Visiting Scientists, and a few earlier items 1952
- G.22 The Textile Institute. 1940-56
- G.23 Wool Industries Research Association. 1939-50
- G.24 Wool Publicity and Research Secretariat. 1939-52
 (later International Wool Secretariat)
 The secretariat provided help for Astbury and his team by Research Fellowships and grants 1938-52).
 Applications for research grants, progress reports on research in progress, arrangements for meetings, lectures and talks.
 Some autobiographical information appears in the correspondence.
- G.25 Wool Working Party. 1946-48
 Astbury was invited (6 March 1946) by Sir Stafford Cripps (then President of the Board of Trade) to act as an independent member on the Working Party for the Wool industry.
 (See A.2 for letters of appointment and of thanks from Sir Stafford Cripps.)
- G.26 X-Ray Analysis Group. 1943-56
 (see also Electron Microscopy Group, Institute of Physics)
 Scientific and administrative correspondence on research in progress, lectures and papers, conferences and committees.
 (Includes note of informal meeting held 1 April 1944 at house of Dorothy Hodgkin 'to discuss post-war plans and requirements for X-ray crystallography'.)
- G.27 Misc. Committees and Associations. 1940-54
 British Refractories Research Association, 1940
 Anglo-Soviet Public Relations Association, 1942
 Anglo-French Society of Science, 1945

Propellants Sub-Committee, Armament Research Dept., 1945

Meteorological Research Committee, Air Ministry, 1945

Scientific Computing Service Ltd., demonstration of
X-ray Fourier Synthesis, 1945

Natural Resources (Technical) Committee, 1954

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