List of Papers

Dennis Gabor FRS
1900–1979

Imperial College Archives
Dennis Gabor and his cathode ray oscillograph, Berlin, 1927.
Item D36/1
IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY
(University of London)

List of the papers and correspondence of

DENNIS GABOR FRS
1900 - 1979

Compiled by Jeanne Pingree

IMPERIAL COLLEGE ARCHIVES
1986
# CONTENTS

Illustrations iv

Introductory note v

Outline of the life of Dennis Gabor vi

A Biographical material 1

B Early papers, family correspondence 1

C Diplomas 4

D Photographs 5

E Scientific papers and books 9

F Patents, research contracts 21

G Imperial College 22

H Nobel prize 25

K S R Milner 26

L C B S Laboratories 26

M General correspondence 29

N Publications 51

P Tapes, slides 51

R Miscellaneous 51

Index 53
ILLUSTRATIONS

Dennis Gabor and his cathode ray oscillograph, Berlin, 1927. Item D36/1

Dennis Gabor and his brothers George and Andre. Items D/42, D7/1, D9/4

Poster for the Nobel Lecture at Imperial College, 22 February 1972. From the Imperial College Archives collection of posters.

Experimental set-up for production of holograms giving the illusion of wide space such as landscapes etc, 27 July 1967. From file LA/9

Letter from Dennis Gabor to Max Born, 15 June 1948. From file MB10/1
INTRODUCTORY NOTE

Professor Denis Gabor's papers were transferred from his former office in the Imperial College Electrical Engineering Department to the archives in the Summer of 1979, with the permission of the late Mrs Marjorie Gabor.

Subsequently Mr Andre Gabor added a number of family photographs and other items, and further material was transferred from the Department. Some administration files from the archives have also been added.

The papers were arranged in bundles in a cabinet specially designed by Professor Gabor (the drawing for this is in EB 12/6) and in filing cabinets. The arrangement of the papers has been adhered to as far as possible, and the original file or folder title given as the first sentence in each description. The general correspondence was arranged according to the language of the correspondent, French, German or Hungarian: these have been put in one sequence. Many of the professor's notes are typewritten, as is his outgoing correspondence. There are forty boxes and ancillary material.

Mr David Kitchen, Mrs M Gabor's nephew, has contributed Nobel prize memorabilia.

Unless otherwise stated the material described is in English.

J Pingree, College Archivist
November 1986
OUTLINE OF THE LIFE OF DENNIS GABOR

Born 5 June 1900, in Hungary

15 March 1918  Called up for military service

1918  Attended Technical University, Budapest, for four year course in Mechanical Engineering

1921-24  Attended course in Electrical Engineering Department, Technische Hochschule, Berlin

1924  Awarded Diplom-Arbeit

1927  Awarded Doctorate. Employed at Siemens and Halske,Siemenstadt

1934  Went to England and employed by the British Thomson Houston Company (BTH) Rugby

8 August 1936  Married Marjorie Butler

December 1938  Visit of Andre Gabor to England: persuaded by D G to become permanent resident

1939  Registered as Alien with special qualification

1942  Death of father in Hungary

1948  Appointed Reader in Electron Physics, Imperial College

1956  Elected FRS

1958  Appointed to personal Chair of Applied Electron Physics, Imperial College

1967  Retirement from Chair. Appointed Research Fellow and Professor Emeritus

December 1971  Awarded Nobel Prize in Physics

Died 9 February 1979
SECTION A

BIOGRAPHICAL MATERIAL, Newscuttings, articles on research, obituary notes

A/1 Presscuttings. One packet, including


8 June 1965 JERUSALEM POST. Visitor's gallery. Professor Dennis Gabor. A trip for Israel industry.


1977 MUSEUM OF HOLOGRAPHY NEWSLETTER, vol.1 no.2. Profile: Dr Dennis Gabor.

A/2 Presscuttings, articles on holography etc, including:


A/3 Obituary notices, including:


15 March 1979 A service of remembrance and thanksgiving for the life and work of Emeritus Professor Dennis Gabor... Holy Trinity Church, Brompton Road, London S W 7.


SECTION B

EARLY PAPERS, FAMILY CORRESPONDENCE

B/1 January-July 1911 Diary. Illustrated with pencil, pen and ink and watercolour sketches. 64pp. In blue cover with metal clasp. In Hungarian.

B/2 7 March 1918 Realiskola (Budapest Grammar School) certificate
of final examination. 2ff.

B/3 12 November 1918 Certificate of discharge from the army. In Hungarian.

B/4-7 Joseph Technical High School, Budapest

B/4 November 1918–June 1921 Records of attendance at classes; with details of teachers, subjects etc in Hungarian, with inserted German translation, attested and sealed by Bela Hajos, public notary. Two almost identical booklets.

B/5 14 May 1920 Leaving certificate. In Hungarian and German.

B/6 10 September 1921 Letter from the Rector on the award of a 'Diligenzpreis'. In Hungarian and German. 2ff.

B/7 21 October 1921 Leaving certificate with record of classes attended, marks obtained etc. 2ff. In Hungarian and German.

B/8 May 1920–August 1923 Maschinen Fabrik EPP und FEKETE and others. Testimonials for voluntary work, letters of introduction etc. In German.

B/9 24 June 1920 Identity card with photograph. Issued by the police in Aachen. In French and German.

B/10 Copy of birth certificate in Hungarian, with German translation attested and sealed by the notary Bela Hajos; 7 August 1920. 3ff.

B/11 Christening certificate: extract from the Pesth Evangelical Church records; 1919. Two copies, in Hungarian and German, authenticated and sealed by the notary Bela Hajos, 3 September 1920. 2ff.

B/12 15 September 1920 Vienna Police: permit for five days stay. Postcard. In German.

B/13 1921–22 Membership card for the Budapest skating club, with signed photograph on the back, in leather holder. In Hungarian.

B/14 Passport, with photograph. Valid until August 1922. In Hungarian, German, and French.

B/15–20 Berlin Technische Hochschule, Charlottenberg

B/15 10 November 1921 Certificate as student of mechanical engineering. In German.

B/16-21 May 1922–July 1923 Mechanical engineering course: records of classes attended, lecture fees. In German. 6 booklets.

17 July 1922-31 January 1924 Examination results for the Mechanical Engineering and Electrotechnology courses, and certificate for the Diplom-Ingenieur. Includes three copies. In German. 6 items.

Circular issued by the Old Students' Association; letter from the Rector about reprints of thesis, 4 June 1927. In German. 2 items.

22 November 1923 Residence permit valid until 1 November 1925, with cover. In German.

'Political documents: curriculum vitae documents'. Residence permits, church rate, correspondence on employment with the 'Studiengesellschaft für Hochstspannungsanlage'. In German. One file.

Small cardboard box labelled '30 Oszillogramme der Studiengesellschaft für Hochstspannungsanlagen' containing eleven small photographs and appendix to Siemens and Halske almanac.

October 1927 Carbon copy of statement of salary from Siemens and Halske. In German.

October-November 1927 Two bills for D G and his brother Andre, for rent of room, breakfast etc. In French and German.

5 and 13 May Letter from Siemens and Halske to Dr Tibor Reiter, and his reply, on patent rights etc for researches he carried out with D G while in their employ. Carbon typescript. In German. 2 letters.

British Thomson Houston Company

1934 Inventors' agreement. Correspondence on development of research on gaseous electric discharge lamps (plasma lamp): option agreement between DG and BTH. File.

March-June 1936 BTH employment. Correspondence and agreement, on three year contract as research engineer with BTH; terms of service, assignment of patents; etc, with H Warren, Chief of Research Laboratory, and others. File.

1935-1936 Termination of BTH agreement. Decision of company to give up option on patents on plasma lamp; correspondence with C C Paterson, GEC Research Laboratories, who did not wish to take up further development on this research. File.
DAVIES, L J  Director of Research
Letter on D G's resignation from BTH, 9 November 1948; letter from DG, 18 May 1951, on suggested mercury lamp as light source for interference experiments, with drawing. 2 letters.

B/40  6 December 1942 List of patents. Typewritten. 3ff.

B/50  January 1945– Correspondence with the Foreign Office, Paul Erzin, USSR Embassy, and others; enquiries about his mother in Hungary, on naturalisation; German war guilt etc. 17 items.

B/51  1958 Curricula vitae. 2 items.

B/52  1959–1969 Correspondence with Andre Gabor on family affairs, house in Italy, requests for information. One letter in Hungarian. 33 letters.

B/53  January 1963 Plan of arrangement of files in specially made wooden file cupboard.

B/54  n.d. List of publications on holography etc.

B/55  17 January 1975 Index of documents - Gabor Library. Compiled by Gladys Hayes, CBS Laboratories. Xerox copies of catalogue cards 1/1 to 15/46.

SECTION C

DIPLOMAS

C/1  ADVANCED STUDIES INSTITUTE. Sponsored by the Scientific Affairs Division of NATO. Award of honorific title for scientific contribution to conference on ultrasonics in medical diagnosis. June, 1974. Milan, Italy.


C/3  CITY AND GUILDS OF LONDON INSTITUTE. Diploma of Fellowship of the Institute, 1971.


C/5  INSTITUTE OF PHYSICS. Certificate of election as Fellow: 29 January 1943.
Dennis Gabor and his brothers George (on the right) and André. Item D4/2, D7/1, D9/4
C/6,7,8

INSTITUTION OF ELECTRICAL ENGINEERS.
Certificate of Associate membership, 1 May 1946.

C/9

INSTITUTION OF ELECTRONICS. Physics Section
Certificate of membership, 26 May 1945.

C/10

INTERKAMERA. Centre for International Cooperation in the Realm of Audiovisual technique and art creation, Prague.

C/11,12

LONDON UNIVERSITY.

SECTION D

PHOTOGRAPHS, POSTERS

Many of the photographs were added to the collection by Mr Andre Gabor, who annotated them with details of date, persons portrayed etc.

Family photographs

D/1-30 Most of the photographs are postcards or postcard size, or snapshots.

D/1,2 1922 Studio portraits of the parents of Dennis Gabor, Bertalan Gabor (1867-1942) and Adrienne Gabor (1879- ) taken in Budapest.

D/3/1-3 1904-08 Three photographs of the three Gabor brothers, Dennis, George (1901-35) and Andre (b.1903).

D/4/1,2,3 Snapshot, about 1916; studio portrait of Dennis Gabor, aged about 17, taken in Budapest, and a smaller copy.

D/5/1-3 1918 Two photographs of Dennis Gabor, in army uniform, one with his mother. Postcards.

D/6/1,2 1920c, 1930c Two photographs D G with his mother, and one alone, at Opatija, in the 1930's. Postcards.

D/7/1-3 George Gabor; photograph, at about 17 (2 copies); photograph, taken in London 1934. Postcards.

D/8

Photograph of George Gabor's grave.

D/9/1-4 Two photographs of Andre Gabor taken at Opatija about 1912, one with his mother, the other with
both parents and teddybear; two portrait studies, taken about 1917. Postcards.

D/10/1-4

Four family groups: pre-1914; in 1917; September 1922; at Opatija about 1930. Postcards.

D/11/1-4

Four photographs of the Gabor apartment, Budapest, 1915.

D/12/1,2

Mrs Adrienne Gabor posed in front of the family car, 20 March 1927; family group with the car, 1928.

D/13

House where D G lived in Rudolstadt, Germany in 1932-33. Postcard, written to Bertalan Gabor, 23 March 1933, in Hungarian.

D/14/1,2 1932, 1933

Two photographs of 'Peggie' D G's dog. See also D/22, f6

D/15 1938

Marjorie Gabor, wearing a fur coat, in front of Gilshaw Lodge, Rugby. Postcard. A smaller version is the first photograph in the album D/22.

D/16/1,2 1940

Two photographs of Dennis and Marjorie Gabor, one mounted, postcard size.

D/17 1958

D G with an unknown lady. Annotated in Hungarian.

D/18

D G and his wife on their way to a family wedding. In colour.

D/19/1-3 1970

Three colour photographs of D G and his wife, family and friends taken outside Simpsons, Strand, London on the day he received his CBE.

D/20/1

D G and his wife photographed at a Nobel prize ceremony, 10 December 1971. In colour, mounted.

D20/2

Colour photograph of D G and his wife and Mr and Mrs Andre Gabor at the Nobel prize ceremony on 10 December 1971.

D20/3

Thirteen colour photographs taken during the Nobel Festival.

D/21

The villa 'La Margioretta' Lido di Lavinio, about 30 miles south of Rome. Photographed soon after completion. In colour.

D/22/1 1936-38

Photograph album: with flowered cloth cover, 19 x 13cms, 25ff. 98 annotated snapshots, mostly 5.5 x 5.5cms. Wedding of D and M G, 8 August 1936: visits to Budapest, Vienna, Paris: family and
friends in Hungary and Rugby: domestic interiors in Rugby: D G in his research laboratory at BTH, playing tennis, drying dishes etc.

D/22/2 1936-38 Photograph album, 27 x 21 cms 20ff, 137 photographs; honeymoon photographs at Venice, etc; family and friends.

D/22/3 1939 Photograph album, 35 x 25 cms. 5ff, 104 photographs: Gabor family on visit to England, etc.

D/23/1-3 The Thomson Lecture, Royal Institution, 1963. Three photographs 16.5 x 20.5cms.

D/24/1,2 Two photographs: McDonnell Douglas Electronics Company, Missouri; D G with President David C Arnold and others, on visit 26 October 1971: photograph of holographic portrait of D G 26.5 x 20.5cms.

D/25/1-3 Svenskt Pressfoto, Stockholm. Three photographs of Nobel prize winners, with covering letter from the Nobel Foundation to Mrs Gabor, 2 December 1971.

D/26/1 D G at reception for Nobel prize winners.

D/26/2 Two coloured photographs of D G and Mrs Gabor, and with his brother Andre and Mrs A Gabor.

D/27 Two photographs: D G at the opening of the Gabor Laboratorium for research in holography, Munich, on 24 May 1972; detail of the commemorative plaque.


D/29/1-4 14 May 1975 Three photographs of D G receiving his honorary doctorate, Columbia University; commencement programme.

D/30/1,2,3 n.d Two studio portraits of D G and snapshot taken by Electro Optical System Inc.

D/31-41 Research apparatus

D/31/1,2 1917 Two photographs: D G and his brother George with the epidiascope they built together; and of the epidiascope.

D/32/1-3 1917 Three photographs of George Gabor with apparatus he built with D G during 1916-17; a large
induction coil, its primary coil, and resistance and switchgear.

D/33  1917
Four photographs: D G working on the induction coil he was building with his brother George: scientific apparatus they built together; large induction coil; switchgear.

D/34/1-3  1917
Three photographs: spark of the induction coil; sections of the coil; X-ray taken with instrument made by D G and G G.

D/35/1-3
Three photographs of the experiment set up by D G and Tibor Reiter to explore the radiation emitted by the tips of onion roots. Berlin, 1925. One photograph annotated in Hungarian by D G.

D/36/1,2
Two photographs: D G with his cathode ray oscillograph. Berlin, 1927; detail of switchgear.

D/37
Photograph album 31 x 23 cms. Record of D G's work at the research laboratory of Wernewerke, Siemenstadt, near Berlin, during 1928-30. 12 pp. 24 photographs: of D G's cadmium charged vapour tube; staff, apparatus etc.

D/38/1,2
Two photographs: of a workshop and of apparatus; with pencil sketch on the reverse and copyright stamp of BTH.

D/39  1947-48
Specimens of the first holograph experiments; Huygens-Fresnel originals; Newton Bohr originals etc. One packet.

D/40  [1956]
Photographs of frequency compression research, flat TV tube project, etc. 3 packets.

D/41
Engineering drawings for flat TV tube, ion beam energy source and other projects. 30 items. Oversize.

D/42  1971
Holography 1948-71. Poster for lecture at Imperial College, 22 February.

D/43/1-5
Two coloured, and three black and white photographs taken on 13 April 1983 when the Mayor of Rugby unveiled a commemorative plaque outside D G's former home, Gilshaw Lodge.

D/44
Two photographs of the commemorative plaques on the outside and in one of the corridors of the former BTH Research Laboratory where D G worked from 1934-48.
SECTION E

RESEARCH PAPERS AND MSS; BOOKS AND OTHER WRITINGS

EA/1/1-12  Miscellaneous typewritten MSS.

2. Brave new world. 30 April 1940. 3ff.
3. Causality. 18 January 1941. 3ff.
4. The revival of Utopia. 3 June 1941. 2ff.
5. Thoughts on invention. 22 March 1942. 5ff.
6. Letter to Olaf Stapledon on relationship between optimism and spiritual maturity. 1f.
7. Programme of publications. 27 April 1943. 1f.
8. De Quincey. The literature of knowledge and the literature of power. 10 July 1942. 1f.
11. The prospects of peace. 31 March 1946. 6ff.
12. The sources of human happiness. n.d. 1f.

EA/2-4  Plasma theory and other papers. One bundle

EA/2/1  March-May 1933  'Rudolstadt MSS. Elektrostatische Theorie des Plasmas, original manuscripts'. Folder. Contains the following:

Theorie des Plasmas. Holograph MSS on Siemens and Halske memorandum sheets. Dated 26 April-10 May 1933. 79ff. In German.


EA/2/2  Dark discharges. Publication. Folder with the following items:


EA/2/3  Electron gun development for short tube. Folder with blueprint: Pentode electron gun for magnetic tube for extra small spot, 22 October 1938.
drawing and blueprint: of Pentode electron gun for magnetic tube, large type, 26 October 1938. 3 items.

EA/2/4

Electron lenses. Folder containing carbon copy of typescript MS: Stationary electron swarms in electromagnetic fields, 28 May 1944. 21ff. One drawing. [Another copy in ED/11/2].

EA/2/5/1 1946-47

Infra red vision. Folder with papers on provisional application for patent on improvements in or relating to devices for infra red vision.

EA/2/5/2

Memo on infra red vision. Folder: notes on smoke agents, vision through mists, photography of the far infra red etc. September 1939–June 1940.

EA/2/6 1953-55

Ultrasonic vision. Folder containing correspondence, reports on research on an instrument for ultrasonic vision by Dr C N Smyth, to be sponsored by a Royal Society Paul Instrument Fund grant, for which D G was an assessor. Letter from D G to P M S Blackett, 10 August 1955.

EA/2/7

Specimen of transparent plastic.

EA/3/1


EA/3/2

Ring binder with 21 engineering drawings of plasma lamp. With loose drawing and blueprint, 14 December 1940.

EA/4/1


EA/4/2 1949-50


EB

Optical design etc

EB/1

screen, intended to serve as a guide in its experimental development.


Follower screen. Invention of a projection screen with an image which faces the viewer from all directions: assignment of invention of improved method of and apparatus for optical projection of pictures, and correspondence on agreement between D G, Imperial College and NRDC. MS notes, drawings. One file.

Laboratory equipment. Correspondence and drawings on construction of a universal demountable vacuum chamber, steel cupboard for inflammable liquids, wood filing cabinet etc. One file.

Electron microscope


The Electron microscope. Enquiries about history of the electron microscope for lecture at Institute of Physics meeting, 1953; letters from L Marton, E Ruska, Max Knoll, V K Zworykin; text of lecture; contribution of translation of paper for Festschrift for Professor Mattia's 75th birthday; correspondence with Ruska, Knoll, Reinhold Rudenberger, Paul Hochhausler, Elektrotechnische Zeitschrift (publishers) etc. Carbon copy of typescript MS of translation of 1953 Lecture. One file. In German and English.
ED-EF  Communication theory, electron optics, statistical physics etc

ED/1/1  Lecture and correspondence. Energy conversion. Four drawings RL 1012-1015, 11 November 1943. Folder.

ED/1/2  Stationary electron swarms in electromagnetic fields. Abstract and typescript (carbon copy) of paper, 28 May 1944. 21ff. 5 copies of drawings. Folder.


ED/1/4  Theory of communication, original form of paper as submitted on 1944. Carbon copy of typescript of MS, 14 November 1944, 36pp. 9 drawings, 2 photographs. Folder.

ED/1/5  Illustrations to papers on communication theory and speech transmission. List of illustrations, 4 October 1946: 8 pencil drawings; tracings. One folder.

ED/2  [Communication theory] MS notebook, 32 cms. 3 October 1944-16 May 1945. Kinematical compression and expansion of signals; discussion of frequency compression and expansion etc. 94ff, sketches, calculations.

EE/1/1  Electromagnetic field, 1945. Typescript MS: Theory of electronics, 24 January- May 1945, 88pp; contribution to the discussion in the IEE Radio Section on March 2, 1949, to the paper by Mr E C Cherry on 'The analogies between the vibrations of elastic membranes and the elm [sic], field', 2pp. Folder.


EF/1  December 1946 to April 1947  Electron optics at high frequencies and at relativistic velocities. MS calculations: the action of electron groups, 3ff, 24 March 1947; phase focussing corrections, 3ff, 13 April 1947. Four drawings, typescript MS on electron optics etc. Folder.
EF/2 1950
Introduction to statistical physics. Correspondence with Dr Keith Macdonald, Clarendon Laboratory; letter from R Kompfner on nature of quantum interaction etc; with Methuen and Co., and other publishers on publication of 'Introduction to statistical physics'; letter from Norbert Wiener on information theory; stencil copy of postgraduate course in electronics and communication, Summer term 1950.

EF/3

EF/4

EF/5

EG-EK Stereoscopy

EG/1
Stereoscopic calculations. Computation of stereoscopic screens, ray tracing in cylindrical lens systems, etc. Typescript notes. Cylindrical lens immersed in homogeneous medium, distortion of line raster by refraction, etc. MS notes, drawings, December 1945–August 1946. Folder.

EG/2

EG/3

EG/4 1932–45
Plastic film. Printed specifications and anticipations. Collection of English and US patents on improvement in projection screens and production of stereoscopic pictures, making of
plastic material etc. Memo from D G to C H Burgess, Patent Department, 28 May 1945. Folder.

EG/5 1940-44
Stereoscopic moving pictures. US Patents. Applications and specifications of patents; method and apparatus for the production of stereoscopic animated cartoons: Improvements in or relating to optical systems composed of lenticules, etc. Folder.

EG/6

EH 1945-48
Stereoscopic projection photographs. 9 photographs of apparatus, stamped BTH. Folder.

EK/1/1

EK/2 1954-61

EK/3 1947-
Stereoscopic cinematography. Memoranda on three dimensional cinematography; Royal Society conversazione programme, 24 June 1954; article for the NEW SCIENTIST: Is the 3D Cinema without glasses a possibility? Photographs of apparatus. File.

EK/4 1951, 1953-54
Stereoscopic projection including wide screen projection. Technical notes. Correspondence with suppliers of plastic screens; MS notes, description of stereoscopy with the wide angle 'follower screen', theory of screen with three mirrors. File.

EK/5 September- November 1953
Stereoscopic projection correspondence Boyer- Goodman. Correspondence with Charles Boyer and Martin S Goodman, on 3D invention; references to Cinemascope; Cinerama; delay of Paramount Company to take up option on patents; revenue sharing agreements with NRDC, IC and D G.
EK/6  1953-54  Stereoscopic correspondence other than Boyer Goodman. Correspondence on the sale of patents on 3D movies 2351032, 33 and 34 with N T Volk, Patent Department, Hughes Aircraft Co. (comments on inventions by Sergei Fomenko) with Leven L Ryder, Paramount Pictures Corporation and Alfred N Goldsmith. File.

EL  Diffraction microscopy

EL/1  1948-50  Correspondence with Sir Lawrence Bragg and others, regarding Royal Society paper on Microscopy by reconstructed wavefronts. Includes letters to J B Le Poole, R Peierls, C R Burch. File.


EL/3  Design of electrostatic diffraction microscope. Signed pencil engineering drawing: Diffraction microscope: electronic part: 20 May 194- [The paper has been trimmed and the signature and date partially removed].


EM  Interference microscopy

EM/1  1949-53  Interference microscope. Printed notice of Royal Society meeting, 17 February 1949; provisional specification for patent 'Improvements in and relating to microscopes' 6 July 1951; report by W P Goss, and correspondence and memoranda on his research; letters on Paul Instrument Fund grant etc; notes 1953. File.

EM/3 1951-56 Correspondence with Sir Lawrence Bragg - re: Interference microscope. Correspondence and reports on research supported by the Paul Instrument Fund to Sir Lawrence (assessor). Photographs. File.


EM/7 1965-66 Wavefront reconstruction or holography. Correspondence with David Fishlock, editor NEW SCIENTIST and others on publication of article; inclusion in book on lasers, published by MacDonald. Letters from G W Stroke on quotations, Nigel Calder and others. File.


EN Information theory

EN/1 1951-52 Information retrieval. Notes on multi record selector; new methods for the rapid retrieving of information stored in files, memorandum to Jerry B Wiesner etc. File.

EN/2/1 1951 Light and information. Notes for paper for lecture at Edinburgh; correspondence with Sir Edmund Whittaker, L Rosenfeld, Jerome Rothstein and others. File.

EN/2/2 1955-56 Light and information. Advances in information theory. Notes on the visibility of atoms and of other scarcely visible objects; invitation to Congress on cybernetics at Namur; appointment to editorial board of journal 'INFORMATION AND CONTROL'. File.
EN/2/3 1960-61 Technical report and letter from Paul Bolgiano, University of Delaware; letter from Hieya Gamo, IBM. 3 items.


EN/5 1956 Theory of electron interference experiments. Draft notes on the information value of photons; notes on the Born approximation for time dependent disturbances etc; correspondence with L Marton. File.

EN/7 1957 Electron interferometry experiments. Manuscripts. Paper on requirements for interferometry by G D Kahl and F D Bennett with D G's comments; covering letter from E U Condon; letter from F D Bennett. 5 items.

EO Mathematical theory of freedom

EO/1 5 April 1951-4 February 1955 Correspondence with A Gabor re theory of freedom. Discussion of joint research, drafts, mailing lists, typescript of paper read to the Royal Statistical Society, 16 December 1953. Personal and family news; some letters in Hungarian. File.


EO/3 29 July 1952-20 February 1954 Final draft of 'Mathematical theory of freedom' 1953. Comments by Stanley James, drafts, notes on discussion at Royal Statistical Society meeting. File.

EO/4 2 February 1952-53 Correspondence re: 'Theory of freedom'. Correspondence with Michael Polanyi; letters from Sir Charles Darwin, H L Mackenzie, Benoit Mandelbrot and others; postcard from L de Broglie; copy of drawing of 'Optical file', first sketch, 28 September 1951. File.
<table>
<thead>
<tr>
<th>Code</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EO/5</td>
<td>19 January 1953–29 May 1962</td>
<td>Correspondence with Andre Gabor. Discussion of A G’s research and papers, with comments by D G, on measurable aspect of freedom etc. Correspondence, in French, on publication of their joint paper, with L Couttignal, Institut Blaise Pascal. Personal and family news, some letters in Hungarian. File.</td>
</tr>
<tr>
<td>EP</td>
<td>Thermo-nuclear power project and plasma theory</td>
<td></td>
</tr>
<tr>
<td>EP/1/1</td>
<td>1958–62</td>
<td>Ion source calculations. Memoranda to C J Powell, Miss Joyce Smith on improvements in ion tapping; application for grant to DSIR; notes by Colin Casemore on gas flow experiment. Folder.</td>
</tr>
<tr>
<td>EP/5</td>
<td>1961–65</td>
<td>Thermo-nuclear power. Eight NRDC agreements and assignments with Imperial College, D G and others.</td>
</tr>
<tr>
<td>EP/8</td>
<td>1966</td>
<td>Materials development. Letter from E B Bas,</td>
</tr>
<tr>
<td>ER</td>
<td>Flat TV tube and miscellaneous</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td>ER/1</td>
<td>1938-58</td>
<td></td>
</tr>
<tr>
<td>ER/2</td>
<td>1953-65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Television tube: instructions to P Stuart. Two memoranda: Plan for the development of the new colour television tube, 7 November 1953; Gaussian theory of the three colour gun, 24 June 1956.</td>
<td></td>
</tr>
<tr>
<td>ER/3</td>
<td>1955-56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TV tube: Agreements. Eight agreements and assignments between D G and others, Imperial College and the NRDC for research on cathode ray tubes, electron lenses etc. Two agreements include H A W Tothill and P R Stuart.</td>
<td></td>
</tr>
<tr>
<td>ER/4</td>
<td>1962-66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr P Kalman. Letter on his appointment as Research Assistant; memoranda on pre-stressing TV tube envelopes, etc. Folder.</td>
<td></td>
</tr>
<tr>
<td>ER/5</td>
<td>1962-66</td>
<td></td>
</tr>
<tr>
<td>ER/6</td>
<td>1965-66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flat tube. IEE paper. Memoranda to Hugh A W Tothill and Miss Joyce Smith on deflection systems for flat cathode ray tube etc. Drawings. File.</td>
<td></td>
</tr>
<tr>
<td>ER/7</td>
<td>1964-71</td>
<td></td>
</tr>
<tr>
<td>ER/8</td>
<td>1964-71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correspondence re new flat tube development. Grants from NRDC; letter from D G to P M S Blackett; letter from M Takahashi, Japan Broadcasting Corporation on flat tube in Japan. 5 items.</td>
<td></td>
</tr>
<tr>
<td>ER/9</td>
<td>1965-66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coherent X-rays. Correspondence with N P Allen, National Physical Laboratory, on research of Dr Franks. Folder.</td>
<td></td>
</tr>
<tr>
<td>ER/10</td>
<td>1962-68</td>
<td></td>
</tr>
<tr>
<td>ER/11</td>
<td>1962-68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rank Precision Industries. Proposal for research</td>
<td></td>
</tr>
</tbody>
</table>

ES  Inventing the future

ES/1  1959-62 Correspondence on proposed book with Andre Gabor; statistical information etc.


ES/3  1960-61 Correspondence with editor of ENCOUNTER, Melvin J Lasky; with Joachim Moras, of MERKUR, (In German) on German translation of article; letters of appreciation from Mrs Clare Ash and others. File.

ES/4  1960 Cambridge University. Heretics. Inventing the future. Correspondence with the Heretics Secretary, I M Somervelle, and covering letters and replies to and from persons who were sent a copy of the paper: Earl Russell, 30.12.60, etc. Talk to the Heretics on 'Inventing the future', 29 October 1960; typescript and correspondence with Fredric Warburg and others. File.


ES/7/1,2 Correspondence on French and German translations. Eight items.

ES/8  1963-64 Correspondence on Penguin paperback edition. 11 letters.

ES/9  1962-70 Correspondence with readers. Letters from P M S Blackett and other members of Imperial College staff; Sir Harold Hartley, Lord Halsbury, Sir Julian Huxley, J F Engelberger, Yehudi Menuhin and others; some letters in Hungarian. File.

ES/10  1971 BBC. Negotiations for proposed programme on HORIZON; correspondence with Robert Vas, the producer, agreement etc. (The contract was cancelled). File.

ES/11  1952- Correspondence on INTO THE XXI CENTURY.
Discussion of 'Inventing the future' and other books. Letter from Lewis Mumford.

ET The Mature society

ET/1/1,2 1961-74 The Mature society and other books. Correspondence with Andre Gabor and others on 'Innovations'; 'The Mature society'; notes, statistics, personal information. Two letters from Orl, April 1970. Carbon typescript of talk to Personalist Group, 10 October 1964. Some letters in French and Hungarian. 2 files.

ET/2 1971-72 Correspondence with Secker and Warburg (T G Rosenthal and others) on the publication of 'The Mature society'. File.

ET/3 1972 Correspondence with Yujirō Hayashi of Kodansha Ltd on the Japanese translation; book reviews. File.

EU/1 Block of graph paper with notes on COR Working Party, 22 October 1973; Atlantic Institute, 29 October 1973; calculations: notes on transparent top conductor 22 March 1974 etc.

EU/2 Writing block with notes on 'How 3 dimensional is stereoscopy?' 19 January 1974. 2ff. On the second sheet is written 'Can I write any better?'

SECTION F

PATENTS

F/1 1933 Germany: lamp. Letter from German patent agent on patents DRP 295310 and 313085; manuscript notes. In German. Folder.

F/2 Patent renewals and fees. 'List of Dr Gabor's patents' with covering letter from the London Patent Department, 12 June 1937: also typescript list of patents in Hungarian.

F/3 1934-38 Patents for improvements in or relating to electric lamp for Belgium, Chile, Holland, Italy, Jugoslavia, Latvia, Spain, Sweden, Switzerland and Turkey, in the language of the country of origin. One packet.


F/5/1 A project for the promotion and study of very high

F/5/2


F/6/1,2 1960-64

Thermionic generators. Correspondence with H W Grace, NRDC; John Prior, patent agent; negotiations for German and US patents; specifications, drawings. Patents include 21755/59, 38030/59, and 43662/59. 2 files.

F/7 1965-66


F/8

Collection of printed patents. Packet.

SECTION G

IMPERIAL COLLEGE

GA/1-4 National Research Development Corporation.
Correspondence on research grants between officers of Imperial College Administration Department and NRDC, Professor Gabor and others. Collection of files transferred from the Research contracts office papers in the Imperial College Records Office.

GA/1 1953-54

Dr Gabor and Mr Fourcin. Patent application 30466/59 Ferromagnetic media. Receipts for invention, unforeseen expenditure. File.

GA/2/1,2 1953-72

Television development research. Budgetting, quotations for apparatus, appointment of research assistants Peter C Kalman and H A W Tothill etc. 2 files. Files 365a, 365e, Vols. 1-3.

GA/3 1960-67

Thermoelectric generation. Patent applications 21755/59 and 3803/59; agreements etc; funding of research; payment of research assistants, H A W Tothill and John A Nilson etc. File.

GA/4 1960

Television bandwidth compression. Professor Gabor and Mr Hill. Patent application no. 507/60. Correspondence on agreement with D G and P C J Hill; complete specification (duplicated typescript). File.

GA/5 1955-67

Miscellaneous correspondence. Patent applications with NRDC etc.

GB/1 1948-67

Appointment as Mullard Reader in electronics:
The Nobel Lecture

Professor
DENNIS GABOR, CBE, FRS

Emeritus Professor of Applied Electron Physics, Senior Research Fellow in the Department of Electrical Engineering, Fellow of Imperial College

In the Chair: The Rector

HOLOGRAPHY 1948-71

The lecture will be a repeat of Professor Gabor's Stockholm lecture when he received the 1971 Nobel Prize for Physics

Tuesday 22 February 1972 at 17.45 hours
Lecture Theatre A, Mechanical Engineering, Exhibition Road, SW7

Imperial College All members of the College are invited to attend
curriculum vitae, application, letters from the University of London; appointments to Chair of Applied Electron Physics: award of Emeritus Professorship. File.

GB/2 1970-79


GC/1 1949-73

Correspondence with Rectors of Imperial College. Memorandum on secondary education, 26 March 1957. File.

GC/2

Correspondence on possible benefactions by D G to Imperial College: villa in Italy etc; copy of will.

GC/3 1960-75

Correspondence inside Imperial College, outside the department [of Electrical Engineering.] Duplicated typescript of General Studies Lecture, 6 October, 1966 on 'The future of Western civilisation.' File.

GD  Electrical Engineering Department

GD/1 1960-68

Correspondence with Willis Jackson, Lord Jackson of Burnley, Head of the Department 1961-67.

GD/2/1-9 Correspondence with staff and research students

GD/2/1 1963-64

ALI, Ahmad Glassblower in D G's laboratory workshop. List of duties, testimonial. 7 items.

GD/2/2 1961-65

BIRSS, Robert Raymond (1932- ) Testimonials etc. 8 items.

GD/2/3 1962-68

COWAN, Jack David (1933- ) Includes duplicated typescript of lectures on 'The theory of information processing' given in the Departmen from January 1964. File.

GD/2/4 1963-67

DICKSON, Donald James (1939- ) Research for DSIR studentship, paper for the Royal Society with A von Engel. 11 items.

GD/2/5 1964-67


GD/2/6


GD/2/7 1955-70
JULL, George Walter (1927- ) Memoranda: holography with incoherent light sources, 2 December 1966 etc. 7 items.

GD/2/8 1966-72
KOZMA, Adam Memoranda on research on holography, letters and photographs of HRMR prototype holographic information processor. 5 items.

GD/2/9 1964-67
WILLIAMS, Mary Bearden (1936- ) Official papers as post doctoral research student. File.

GD/3 1951-55
Correspondence on supply of apparatus with Smethurst High Light Ltd and other firms. Letter from I Martinon. Photograph of electron microscope, University of Toronto, 1938. File.

GD/4 1952-54
Correspondence with Ediswan Electric Company, A S Baxter, Physics Department, Cambridge University and others on beryllium copper multipliers. File.

GE Lecture notes

GE/1 Postgraduate course in electronics and communication. Duplicated typescripts of lecture notes.

GE/1/1,2,3 Winter term, 1948. Advanced electromagnetism and electron dynamics: Ten lectures. Drafts, typescript (158 pp.) printed syllabus; Physical aspects of advanced circuit theory and other papers. 3 files.


GE/1/6 Autumn term, 1951. The electromagnetic field. 63, 2pp.


SECTION H

THE NOBEL PRIZE

H/1 1971-72
Stockholm December, 7-17, 1971. Correspondence: award of the Nobel prize; arrangements for the ceremonies in Stockholm and lecture; visits to institutions, etc. Two letters from Edward Heath; copy of congratulatory letter from Richard Nixon. File.

H/2/1-4 1971
Two programmes for Nobel prize ceremonies; translation of addresses; list of guests and table plan at banquet. 4 items.

H/2/5
Nobel prize laureate's briefcase containing invitations, special issue of stamps, etc. and Mrs Gabor's annotated copy of the official programme.

H/2/6 8 December 1971
George W Stroke. Letter of thanks for invitation to Nobel prize ceremonies, and for recognition of his contribution to research on holography.

H/3 1971
Nobel Lecture. Letter from G W Stroke with photograph; two photographs from Akurai Tinomura, and other miscellaneous items relating to publication of the lecture. File.

H/4
Letters of congratulation on Nobel Prize award; including letter from Hermann Engelberger and D G's reply, 30 November 1971 with account of life in past 37 years; letter with enclosures and photographs from Willi Marz on Kiprelais etc. Also 192 telegrams. 16 packets.

H/5 1973-74
NOBEL SYMPOSIUM Stockholm 1974. Programme, invitation, D G's suggestion for discussion. (Some xerox copies). D G was unable to attend owing to illness. 11 items.

H/6 1972-78
Correspondence with the Swedish Royal Academy of Sciences on nominations for Nobel prizes in chemistry and physics. D G proposed Professors R M Barrer and Abdus Salam. File.
SECTION K

SAMUEL ROSLINGTON MILNER (1875-1958)

S R Milner FRS retired as a Professor Emeritus of Sheffield University to live in Rugby near his son C J Milner, a colleague of D G.


K/1/2 Studio photograph of S R Milner.


K/6 1949-67 C J Milner: correspondence. Many detailed accounts of activities, research, ideas, family news (C J M went to work in Australia in 1952) discussion of careers, advice on staff. Letters from Mrs Winifred Milner, widow of S R M: family photographs. File.

SECTION L

CBS LABORATORIES. A division of Columbia Broadcasting System, Inc.

LA/1-11 Correspondence with Peter Carl Goldmark (b. 1906-) P C Goldmark was a personal friend of Professor Gabor and head of the CBS
EXPERIMENTAL SET-UP FOR THE PRODUCTION OF HOLOGRAPHY GIVING THE ILLUSION OF OTHER STAGES, SUCH AS PARTIALITY ETC.

Comparable platform, to equalise path lengths

Reference beam

Illuminating beam

Focal surface

The model is built up in front of this, with real angular and reduced depth dimensions.

Scale about 1:5

Technical drawing from a CBS file, LA/9
Laboratories for 35 years, retiring in 1972 when he established his own company, Goldmark Communications.

LA/1 1942-55 P C G's visit to England, 1943; invitations to D G to work in US; personal news; colour television tube, notes, memoranda; letter on D G's consultancy for CBS, 6 September 1951. File.

LA/2 1956-57 D G's visit to US and illness; stereophonic recording; letter on D G's consultancy, 19 March 1957; drafts of patent application for improvements to magnetic recording devices. File.


LA/4 1959 Appointment of D G as Special Staff Consultant; difficulties about publicity reports on television compression. File.

LA/5 1960 Rights of NRDC and CBS to D G's inventions on plasma-type thermoelectric generators; optical transformer; offer of appointment by CBS to G T Wright; experiments on scanning heads; notes on CBS video recording system. File.

LA/6 1961 Patent for optical demodulation apparatus, reports, including new VFR system with flying spot scanner. File.

LA/6A 1962-63 Reports and memoranda; research on VFR; US patents for optical demodulation apparatus, magnetic recording medium, 1962; enquiries about staff, letters from D G on photography with lasers, 4 September 1962; visit to Hungary, 27 September 1962. File.

LA/7 1962-63 Reports on ionoscope film printer for VFR etc; letter on photography with lasers, 1 September 1962; US patent for magnetic recording medium, 4 September 1962; letter on visit to Hungary, 27 September 1962; VFR techniques. File.

LA/8 1964-65 System for reproducing television pictures from magnetic tape recorder etc; US patent for optical recording reproducing scanning system, 1965; personal news. File.

LA/9 1966-67 Visits to US, to lecture on holography, etc proposed consultancy with IBM; arrangements for life consultancy with CBS; sonography project: memo on research on holography for CBS [March 1967].

LA/11 1971-72  Copies of presscuttings on P C G's retirement from CBS and establishment of his company; legal opinion on D G's life consultancy contract with CBS; citation for award to P C G by National Academy of Science; draft agreement between CBS and Goldmark Co. for D G's services. File.

LB/1 1958-60  Correspondence with Benjamin B Bauer, Vice President, on research on magnetic recording devices, stereophonic heads etc. Three letters from V E Coslett, Cavendish Laboratory; 13 photographs of magnetic tape pictures. File.


LB/3 April 1959  Electrophotography. Notes on penetration of light; proposed arrangements for electrophotography symposium. Folder.

LB/4 1961-63  Correspondence with Benjamin B Bauer, John W Christensen (Associate Director of Research) J Kenneth More (Manager, Digital Systems) and others; includes US patent 3064087, magnetic recording devices, 13 November 1962; copies of engineers' data. File.


LB/6 1964-68  US patent for bandwidth compression system; work on image sections; 8th amendment to original consultation agreement, with covering letter from P C Goldmark, 24 March 1965; speech compression scheme; correspondence with B J Bauer, Frank A Comerci (Manager, Magnetic Branch) William E Glenn (General Manager, Applied Research Department) two letters from Paul Rudolf on holograms, January 1968. Letter from Frank B Gorman referring to possible Nobel prize, 10 January 1968. File.


LB/8 1968  US Patent application: Improvements in communication and information storage. Correspondence
with patent agent, abstract of specification.
4 items.

LB/9 1969
Permanent magnetic field: Frank J Cook. Memoranda on permanent magnetic focusing field; correspondence, drawings of equipotentials, calculations. File.

LB/10 1972-75
Correspondence with Renville H McMann, Jr. President, CBS; John W Christensen, Leo Beiser, and others; patent for photoelectric imaging and apparatus; reports on solar power; three dimensional X-ray photographs etc; patent on ultrasonic cameras. File.

SECTION M

GENERAL CORRESPONDENCE

MA/1 1971-72
Patent case: opposition to Agfa Gevaert's patent application no 1204873 by RCA Corporation. Includes D G's declaration in favour of the defendants and copies of other statements, correspondence with A M Dowler etc. In English and German. File.

MA/2 1963
ACZEL, Tamas ( )
Article, Europa Jouvoje, 13 November 1963, with covering letter by D G and reply from T A. In Hungarian. 3 items.

MA/3
Letter from D G: enquiry about evidence for or against his hypothesis of unstable conduction in adjacent Levre fibres apropos of his research on aural communication.

MA/4
January-
February 1973
AGRICULTURAL RESEARCH COUNCIL.
Enquiry from G M P Myers on research of Dr R W Gerchberg on electron microscopy and D G's reply. 2 letters.

MA/5 1952-53
ALEXANDER, Jerome ( )
Proposed article on diffraction microscopy for 'RESEARCH'. 5 items.

MA/6/1-3 1932-37
ALLIBONE, Thomas Edward (1903- )
Detailed accounts of appointments, research, personal life, includes consultancy with BTH and AEI; work on diffraction microscopy, ion beam source, TV tube; publication of S R Milner's papers: enquiries about staff, Peter Farago and others: organisation of industrial research in
England and correspondence with Nigel Calder. Some in French. 3 files.

MA/7 1971

ALTERNATIVE SOCIETY
Invitation to be Patron of the Society and reply from D G. 2 letters.

MA/8

AMERICAN HUNGARIAN STUDIES FOUNDATION

MA/9 December 1971

AMERICAN PHYSICAL SOCIETY
Invitation from W W Havens Jr. to talk at Distinguished Speaker session and reply from D G. 2 letters.

MA/10 1955-56

ARDENNE, Manfred von. Baron (1907- )
Request to be on list for offprints of papers; regrets that they have not met: quotations from D G's papers in his book on electrophysics. In German. 3 letters.

MA/11 1974

ASH, Eric Albert (1928- )
Recommendation for award of University of London DSc. 7 items.

MA/12 1973

ASHBY, Eric Baron Ashby (1904- )
Letter from E A expressing enjoyment of 'The Mature Society' and enquiry about computer simulations dealing with exponentials, and D G's reply. 2 letters.

MA/13/1 1961-67

ASSOCIATED ELECTRICAL INDUSTRIES LTD (AEI)
Consultancy file. Correspondence with Ivor Williams and others. Date of invention of holography; consultancy arrangements; whereabouts of demonstration equipment for holography; xerography. File.

MA/13/2 1966-67

See also MH/2, below

MA/14 1965

ASSOCIATED REDIFFUSION
MA/15 1958  THE ATHENAEUM
Election to the club; letter from the Secretary and reply, circulars. 5 items.

MA/16 1973  ATLANTIC INSTITUTE FOR INTERNATIONAL AFFAIRS.
Invitation to international conference in Tokyo. 5 items.

MA/17 1966, 1974  AUSBURN, Kenneth J
Enquiry about research on scattering of electrons from graphite surfaces; need for publicity for D G's social engineering in Australia. 4 letters.

MB/1 3 December 1971  BADER, Ernest
Letter thanking Gabor for birthday greetings etc with two photographs of birthday celebration.

MB/2 18 December 1964  BAGRIT, Sir Leon (1902-1979)
Thanks for copy of NEW SCIENTIST ARTICLE. One letter.

MB/3 1949, May 1966  BAKER, Robert (1916-)
Request for picture of hologram; enquiry about progress in research on holography and reply. 3 letters.

MB/4 February-May 1967  BERG, Wolfgang F. ETH Zurich
Creation of high-reflectance holographic mirrors. Three letters with replies.

MB/5 June, July 1974  BERNHARD, Prince of the Netherlands (1911-)
Comment on 'The Mature Society' and reply.

MB/6 1952, 1974  BERTELE, Hans
Invitation to D G to speak at IEE meeting: on his retirement, research, visits to London. In German. 2 letters.

D G's comments on Blackett's book on 'Atomic weapons and east west relations' 2ff; two short notes from P M S B.

MB/8 9 January 1968  BOERSCH, Hans

MB/9 1952, 1969  BOHM, David Joseph (1917-)
Comments on D G's letter on energy loss; relationships between holography and philosophy. 2 letters.

MB/10/1-4 1943-65  BORN, Max (1882-1970)
Analogy between quantum mechanics and acoustics; discussion of appointment for Dr Furth and
reference to D G's position as foreigner at BTH; detailed correspondence on the publication of English translation of Born's Optick; arrangements with collaborators, discussion of translation of technical terms, M B's annoyance with project, D G's contribution, difficulties with publisher; arrangements for D G's Ritchie Lecture; comments on Norbert Wiener; D G's first return visit to Germany, 1956, and comments on Otto Hahn; comments on 'learning filter'; colour television and Newton's Optick's; M B's criticism of 'The scientists speculates', and 'Inventing the future'; H A Fatmi's research. 4 packets.

MB/10/5  1949-52  Publication of English edition of Born's 'Optick'. Correspondence with P Rosband, H H Hopkins, W Franz, E Wolf, H Bremmer and others; agreement with the publishers, Butterworths. File.


MB/12  1971-72  BRADLEY, Daniel Joseph (1928- ) Work with lasers; application for Imperial College Chair of Applied Optics. 14 items.


MB/15  1955, 1959  BRILLOUIN, Leon Contribution to proposed yearbook on information theory to be published by the Academic Press. 9 letters.

MB/16  1960  BRISTOL COUNCIL OF SOCIAL SERVICE Typescript of talk on 'Leisure in a prosperous society' 10 November 1960; letters from H D Dickinson, Sir John Wolfenden, Lord Chandos. 9 items.


15th June 1948

Dear Professor Born,

I enclose, with my kindest regards, two of my latest publications. The long one is the continuation of my Theory of Communication in a practical direction, towards improved methods of telephony. But the short one is a new thing, and I have no doubt that it is my luckiest find yet. I thought of just a little over a year ago, and I disclosed the idea to Sir Lawrence Bragg, just on the day when I met you last, at Cambridge. Sir Lawrence would not believe it at first, but he encouraged me to try the experiment. It is not surprising that he would not believe it, as my primitive theory, - the same which is briefly explained in Nature, - was neither complete nor convincing. I have produced the correct theory only later, after the success of the first experiments. In the meantime I have also much perfected the experimental method, and I can now produce really pretty reconstructions from apparently hopelessly muddled diffraction patterns.

These results have made me happier than anything I have done in the last 20 years. The first electron microscope was made at the Berliner Technische Hochschule, about 17 years ago, by my successor Dr. Max Knoll out of the cathode ray oscillograph which I built for my doctor's thesis, and I could never forgive myself for not having done it myself. For years I have been searching for ways to get square with the electron microscope, by finding a way of improving its resolution beyond the theoretical limit set by the unavoidable imperfection of electron lenses. After several wrong starts I think I have found at last the real method. I think it is not too much to hope that it will be possible to reduce the resolution limit to 1 Angstrom, and directly resolve atomic lattices or the structure of complicated molecules.

I have followed with great pleasure the successful development of your theory of liquids. Your fundamental idea was quite new when I visited you in Edinburgh in November 1945, when you let me read the manuscript of your first, unpublished paper.

Hoping that you are in good health and in as creative a mood as ever, I am

yours very sincerely

Letter to Max Born from file MB10/1


MB/21 1965 BURGER, Peter (1936- ) Unsuccessful application for NATO Postdoctoral Fellowship in Science for research with D G. 7 items.

MB/22 29 October 1954 BURGESS, Charles Family news etc. One letter.


MC/4 1963-64 CAWS, Peter James (1931- ) Plans for a conference on problems of the future. 4 letters.


MC/6/1 1965-74 CENTER FOR THE STUDY OF DEMOCRATIC INSTITUTIONS. Santa Barbara, California
Copies of papers for meetings, including. A new autonopology, 19 February 1969; correspondence with Lord Ritchie-Calder.

MC/6/2 March-May 1973 CONFERENCE ON GUIDELINES FOR A GLOBAL SCIENCE POLICY.

MC/7 CENTRE OF ADMINISTRATIVE STUDIES ON SCIENCE AND TECHNOLOGY.

MC/8 January 1972 CHAMBERS, V (Miss) Polytechnic of the South Bank Postcard with thanks for interview, and aide-memoire. 2 items.

MC/9 1973-74 CHELTENHAM COLLEGE
Inaugural Bowra lecture, 6 October 1973; Thoughts on the future. 6pp, typescript. Correspondence on arrangements with Sir Ronald L Prain, invitation card, printed copy of speech. 10 items.

MC/10 1954, 1961-62 CHICK, D R. Associated Electrical Industries. Simple mass spectrograph: particles in non-uniform electric and magnetic fields, anxiety at AEI over ion source project etc. 7 items.

MC/11 1971-72 CITY UNIVERSITY
Second Edwards Memorial Lecture. Invitation to speak from T E Allibone, letter from F S B Murrells. Graduation ceremony, 4 December 1972. speech on award of DSc degree, 3pp, typescript. 3 items.

MC/12 7 February 1962 CLARKE, Mr and Mrs D Hamburg
Letter of thanks for their hospitality and care.

MC/13 1966 CLAUSEN, Hugh
Offprint of lecture by H C, 'Humanity and technology' presented to the Society of Engineers 7 November 1966; letter with comments from D G; reply from H C with copy of letter to THE ENGINEER.

MC/14/1-4 1972-75 CLUB OF ROME
D G was founder member. Correspondence with Mihajito Mesarovic, Aurelio Peccel, E Pestel, Umiberto Colombo, Norman W Pirie and others:
arrangements for meetings, research, circulars: Tokyo meeting 1973. 4 files.

MC/15 7 June 1949
COLLIE, Carl Howard and others, Clarendon Laboratory.
Collective letter on the Betatron.

MC/16
COLUMBIA UNIVERSITY
Citations for honorary degrees, at ceremony on 14 May 1975. Xerox copy.

MC/17 8 June 1966
CUZZER, Aldo
Enquiry from D G about housing situation near Rome: life long plans to have retirement home in Italy.

MD/1 10 January 1972
DAINTON, Sir Frederick (1914- )
Comments on D G's Fawley lecture. One letter.

MD/2 1944-52
DARWIN, Sir Charles Galton (1887-1962)
The origin of formula for momentum of electron in an electromagnetic field; D G's comment on Darwin's article on cosmic rays etc. 11 items.

MD/3 June to November 1971
DEUTSCHE GESELLSCHAFT FUR PHOTOGRAPHIE, Cologne.
Award of 1971 Kulturpreis: arrangements for visit, press conference, hologram portrait etc. Includes photograph of D G, hologram of the professor and his wife. In German. 12 items.

MD/4 1968-74
DOXIADIS, C A (Dinos)
CADS article on Ecumenopoles; 1970 Delos symposium, etc. 7 items.

MD/5 1968, 1969
DUPOUY, Gaston
Letter from D G and reply on holography.
In French. Two letters.

MD/6 1966-67
DYSON, J
Letter on scheme for seeing with sound with reply from D G.

ME/1 1965-68
ECONOMIC RESEARCH COUNCIL
Lecture: The promise and the threat of the age of leisure, 3 March 1966, 7pp, duplicated typescript. Correspondence on arrangements, economic crisis etc with Anthony Vickers, Edward A Holloway (Hon. Sec.) and others. Certificate of membership of the ERC, 28 March 1966. File. See also ERNST, M L; MARLOWE FOUNDATION

ME/2 23 February 1961
EDMUNDS,
Letter from D G on mechanical processing of photographs of tracks in the bubble chamber.

ME/3 1963
EHRENBERG, Werner
Characteristics of polystyrene. 3 letters.
| ME/4  | October-December 1974  | EINSTEIN, Peter  |
|       |                        | Get well letter with personal news and acknowledgements from D G's secretary. Two letters. |
| ME/5  | 1962-1967              | ENGELBERGER, Joseph F  |
|       |                        | Consolidated Controls Corporation. |
| ME/6  | 1960-72                | ERNST, Morris Leopold (1888-1976)  |
|       |                        | Notes on Israel; mental health; copies of column in 'The Villager' etc. File. |
| MF/1  | April 1953             | FELLGETT, Peter  |
|       |                        | Enquiry about fluctuations in radiation due to wave interference and D G's reply. 2 letters. |
| MF/2  | November 1963          | FOYLES LECTURE AGENCY  |
|       |                        | Letter from Christina Foyle and reply from D G refusing to speak to lecture societies. 2 letters. |
| MF/3  | 24 January 1966        | FRAULO, J B  |
|       |                        | Letter from D G about his health. |
| MF/4  | 11 May 1944            | FRIEDLANDER, E  |
|       |                        | Distressing family news, mother in Germany etc. |
| MF/5  | 4 January 1972         | FUORTES, M G F  |
|       |                        | Comments on 'Inventing the future'. |
| MG/1  | 1971-75                | GALLOP, J W  |
|       |                        | Milner's electromagnetic theory: article for 'Il Nuovo Cimento'; refusal by Royal Society etc. File. |
| MG/2  | 1972-74                | GAL-OR, Benjamin Tecnia Israel (1933-  )  |
|       |                        | D G's foreword for book 'Modern developments in thermodynamics; the origin of irreversibility'; papers etc B G's proposal for establishment of Institute of Advanced Studies with D G as Chairman of Trustees. File. |
| MG/3  | 1971-72                | GOLDEN PLATE AWARDS COMMITTEE  |
|       |                        | Correspondence on banquet organised by the American Academy of Achievement at Salt Lake City: presscuttings etc. 9 items. |
MG/4 1957-58, 1968  GRIVET, Pierre
Work of the Laboratoire d'Electronique; D G's preface to Grivet and Blacquiere's book 'Bruit de fond'; comments on French situation (in English). In French. 8 items.

MH/1 29 January 1971  HADDOW, Sir Alexander (1907-1976)
Appreciation of hearing D G at the Royal Society Club. One letter.

MH/2 1943-68  HAINE, Michael Edward AEI Research Laboratory.
Long very detailed correspondence on research in diffraction microscopy; rebuilding of electron microscope originally made for Professor L C Martin, Imperial College in 1936; visit of K J Ausburn to Met. Vick; proposed appointment of G L Rogers; E A Ash's experiments, 24 March 1952; reference to experiments to obtain good holograms; death of Gerhard Liebmann: work for emigre Hungarians; appointments and research of Dr P Farago, Peter Zollmann, Peter Stuart and others; the flat TV tube; cable TV; brightness invariance principle in electron optics; changes in staffing and closing of research laboratories at AEI; new post for MEH; letter from Lord Blackett, 22 October 1963; developments in Universities.

MH/3 19 January 1961  HALDANE, John Burdon Sanderson (1892-1964)
Evolution of man; comments on eugenics.

MH/4 1949-71  HALSBURY, John Anthony Hardinge Giffard. 3rd Earl (1908-)
Utilisation of solar energy; thermoelectric generators; Royal Institution and Professor E N da C Andrade; protein synthesis; H's paper 'The semantics of determinism', definition of noise; D G's comments on H's papers on epistemology and communication theory; D G's inaugural lecture; observations on Kinepex; negative attitude of British industrial research; the flat TV tube; Wiener memorial lecture; Touchstone weekend, December 1964; biographical letter from D G, 5 October 1966. 2 files.

MH/5 1974  HAMILTON, Iain Bertram (1920-)
Two letters from the biographer of Arthur Koestler and reply from D G with comments on scientific aspect of Koestler's writings. 3 letters.

MH/6 15 October 1971  HAMLYN, [Edward] C
Need for technology by the mind. One letter.

MH/7 1970-73  HANSZEN, Karl Joseph (1921-)
Progress of research on electron microscope: letter from H J Bojen enclosing K J H's curriculum
vitae, D G's replies with comments on K J H's inaugural dissertation; paper (in English) on holographic reconstruction with three sheets of photographs. In German. 9 items.

MH/8 1959-66
HARTLEY, Sir Harold (1878-1972)
D G's introduction to Morris Ernst; comments on the Duke of Edinburgh's study conference; invitation to give the George Thomson lecture, Society of Instrument Technology, 1963; the Robbins Report; suggestions for Prince Philip's tele lecture to radio engineers.

MH/9 June 1961
HEPBURN, Ronald William (1927- )
Comments on D G's 'The dimensions of consciousness' and reply. 2 items.

MH/10 1971
HILBERG, Wolfgang (1932- )
Enquiry from D G about possible mistaken calculations in paper by W H and reply. In German. 2 letters.

MH/11 1971-73
HOFFMANN, Malcolm A
Congratulations on Nobel Prize: Talk Club meetings at Harvard Club. 4 items.

MH/12 1973
HOLOCONCEPTS CORPORATION OF AMERICA
Letter from the Vice President Richard E Leavitt with reprint from 'Display World' on holographic display in Cartier's, and other presscuttings.

MH/13 12 May 1973
Letter from D G to R V Huddleston on means of identification for diamonds by laser or hologram.

MH/14 1967-72
HUNGARIAN ACADEMY OF SCIENCES

MH/15 1965, 1971
HUXLEY, Sir Julian Sorell (1887-1975)
Feeding animals at the Zoo; congratulations on Nobel prize; T H Huxley's sale of his Royal Society medal to pay brother's debts. 2 letters.

MI/1 1972
ILLINOIS UNIVERSITY
Invitation and arrangements to give the Tykociner Memorial Lecture, 1 May 1972. Programme, typescript of lecture: 'The scientist in the new society', 9pp. Also correspondence on participation in the Grisson Chaffee Memorial Seminar at Purdue University on 2 May 1972. Typescript of contribution: 'Proper priorities for our civilisation'. File.
| MI/2  | 1943-67 | INSTITUTE OF PHYSICS AND THE PHYSICAL SOCIETY  
D G's comments as referee of papers, etc; reviews; award of the 1967 Thomas Young medal and prize. File. |
|-------|---------|----------------------------------------------------------------------------------------------------------------------------------|
| MI/3  | 1957-65 | INSTITUTION OF ELECTRICAL ENGINEERS  
A new cathode ray tube for monochrome and colour television: joint paper with P R Stuart and P G Kalman: drawings, correspondence; Professor Beddoes' research, and memoranda by E C Cherry; work on professional group committee. |
| MI/4  | 1971-72 | INTERKAMERA  
Correspondence with the Director, Jan Jemelka, on arrangements for D G's participation in Colloquium on new methods of recording images etc. 7 items. |
Arrangements for attendance at the conference and typescript copy of paper: Sketching the development of mankind our outlook for the future.  
Letters from Michael Young Warder, Secretary General. Programme, menu of commemorative banquet. File. |
| MI/6  | 1973-74 | 8th INTERNATIONAL CONGRESS ON ELECTRON MICROSCOPY, Canberra, 25-31 August 1974.  
Correspondence with John L Farrant on arrangements for D G's visit and his paper on pioneers in electron microscopy: first draft, 15 March 1974.  
One letter with reply from George Stroke. File. |
| MI/7  | 1972-74 | INTERNATIONAL FEDERATION OF INSTITUTES FOR ADVANCED STUDY [established in 1972 under the auspices of the Nobel and Rockefeller Foundations].  
Correspondence with Nils K Stahle chairman of the organizing committee, and Jan Nilsson, General Secretary, about meetings. Letters from D G to Sir Alan Cottrell, on energy crisis and reply; letters from Amory Lovins Friends of the Earth. File. |
| MI/9  | 1972-73 | ISTITUTO RICERCHE APPLICATE DOCUMENTAZIONE E STUDI (IRADES).  
Papers of scientific committee meetings etc. Letters from Eleonora Masini. File. |
MJ/1 1972  
JAEGGER, Jean-François (1936– )  
Request for testimonial with c.v letter from D G to Dr Pierre Immer. 6 items.

MJ/2 1972  
JAPAN BROADCASTING CORPORATION  
Invitation and arrangements for lectures etc. Xerox copies of scripts of television talks, 30 March, 1 April 1972. File.

MJ/3 16 August 1967  
JAPAN ECONOMIC RESEARCH CENTER  
Request for D G to give public lecture at conference. One letter.

MJ/4 27 May 1968  
Letter from D G to Bernard de Jouvenel on events in France.

MK/1 1958  
KAISER AIRCRAFT AND ELECTRONICS LTD  
Reports on non-organic phosphor bonding material, phosphor settling procedure; programme for visit of staff to Imperial College and details of items to be demonstrated, research in electron optics etc. 3 items.

MK/2 1957  
KASTLER, A. University of Paris  

MK/3 1975  
KERSTEN, Martin  
Sends German translation of paper given by D G at Genoa conference: arrangements for visit to London; D G's ill health etc. In English and German. 4 items. See also MN/7/2

MK/3A  
KISS, Ulrich Louvain University  
Letter with reply from D G. In Hungarian. 2 letters.

MK/4 14 February 1968  
KLUG, Aaron (1926– )  
Comments on D G's letter about paper in NATURE and work on extracting three dimensional information from electron microscope images. One letter.

MK/5 1974  
KOCH, Robert  
Techniques for the finance of nuclear fuel cores. 3 letters.

MK/6 1946–73  
KOESTLER, Arthur (1905–1983)  
Functions of the brain: possible models, diagrams etc; discussion of each other's books; typescript of A K's 'Manchester Lectures'; arrangements for meetings. 2 files.
<table>
<thead>
<tr>
<th>ML/1</th>
<th>January 1975</th>
<th>LAITHWAITE, Eric Roberts (1921- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Letter about his Christmas lecture on gyroscopic experiments, with diagram, and acknowledgement from D G. 2 items.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/2</th>
<th>20 November 1973</th>
<th>LAMB, John (1922- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Research in his department at Glasgow University. One letter.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/3</th>
<th>16 July 1943</th>
<th>LANGDON DAVIES, John (1897-1971)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Note of reply to D G's comments on a lecture etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/4</th>
<th>1972</th>
<th>LEITH, Emmett Norman (1927- )</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>ML/5</th>
<th>11 April 1967</th>
<th>LEONARD, Carl University of Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Memorandum to D G and Professor G W Stroke: computer calculations and autocorrelation experiment. Folder.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/6</th>
<th>1974</th>
<th>LEWIS, W Bennett</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lethal doses of plutonium; manufacture of atomic bombs. 4 letters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/7</th>
<th>1962</th>
<th>LIEBOWITZ, Benjamín (1890- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sends copies of papers: note on a proposed experiment to test the photon concept versus the post concentration hypothesis. 4 items.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/8</th>
<th>1971-75</th>
<th>LIGHTHILL, Sir James (1924- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Congratulations on the award of the Cristoforo Colombo prize. 2 letters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/9</th>
<th>1966, 1971</th>
<th>LINDSAY, Peter A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Discussion of his paper on new formation of noise in collision free systems; testimonial. 10 items.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ML/10</th>
<th>1966, 1971</th>
<th>LIPSON, Henry Solomon (1910- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Impossibility of coherent X-rays with large intensities; background material for Nobel lecture. 6 items.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/1</th>
<th>1949-50</th>
<th>MACDONALD, D Keith C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Enquiry about physical realisability of filter functions; lecture on 'noise' and invitation to French symposium. 7 letters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/2</th>
<th>1950, 1952</th>
<th>MacKAY, Donald MacCrimmon (1922- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Shannon's communication theory, etc; D G's comments on verbatim copy of his Macy 'lecture'; summary of work since 1967. 3 letters.</td>
</tr>
<tr>
<td>MM/3</td>
<td>November 1966</td>
<td>McLAUGHLIN, C Harry</td>
</tr>
<tr>
<td>-------</td>
<td>---------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Letter on holography as a model of memory with reply from D G. 2 letters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/4</th>
<th>1964-67</th>
<th>MANKIND 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Correspondence on meetings with the President, Kenneth Lee, and others; from Sir Peter Scott on display at Slimbridge Wildfowl Trust; from Hugh Trevor-Roper on D G's paper at Oslo, 1967. File.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/5</th>
<th>1965-67</th>
<th>MARLOWE FOUNDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Correspondence with Anthony Vickers on dinner for Robert Theobald; steering committee for seminar on cybernetics. 7 items.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/6</th>
<th>1971-72</th>
<th>MARTON, Ladislaus Laszlo (1901- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Congratulations on Nobel prize; panel discussion at IEEE convention. 4 items.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/7</th>
<th>1964, 1966</th>
<th>MEDAWAR, Sir Peter (Brian) (1915- )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Signature for a Royal Society certificate; social arrangements. 3 letters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/8</th>
<th>1974</th>
<th>MEDICAL AND SCIENTIFIC COMMITTEE FOR SOVIET JEWRY.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Correspondence on Dr Polsky, a Moscow Jewish physicist. 4 letters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/9</th>
<th>1953</th>
<th>MENZIES, A C. Hilger and Watts.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Problem of communication theory: discussion of D G's suggestions. 3 letters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/10</th>
<th>1971-74</th>
<th>MEYER-FRANCK, Gisela and Herbert.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Typescript of paper 'Der Bevollmachtigte Mensch'; paper on the Club of Rome: possible film on club; xerox copy of possible film script; arrangements for visit to Germany; Watergate; letters from Andre Gabor. In German and English. File.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MM/11</th>
<th>1963-64</th>
<th>MINERVA</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>MM/12/1</th>
<th>1952-54</th>
<th>MINISTRY OF SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Appointment as Consultant to the Guided Weapons Department; First and second reports on radar problems'. File.</td>
</tr>
</tbody>
</table>

|---------|-------------------|-----------------------------------------------|

<table>
<thead>
<tr>
<th>MM/13</th>
<th>1964</th>
<th>MISAWA, S. Sheffield University</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Comments on D G's joint paper with E A Ash and another on the Langmuir Paradox etc. 6 letters.</td>
</tr>
</tbody>
</table>
MITTERAUER, Johannes
Publication of letter to NATURE on dynamic field emission on mercury film cathode. Photographs. Letter from Professor D J Bradley. In German and English.

MORLEY, L
Appreciation of D G's interest in his book; congratulations on Nobel prize. 2 letters.

MOTT, Sir Neville (Francis) (1905–)
Signature of certificate for Fellowship of the Royal Society for V E Cosslett. 2 letters.

MOUNTBATTEN OF BURMA, 1st Earl (1909–1979)
Note of acknowledgement for copy of book on the electron microscope.

MULVEY, Thomas. AEI, Aston University
Comments on T M's history of the electron microscope: meeting at Canberra and gifts from Australians for D G. 7 letters.

MUSEUM OF HOLOGRAPHY
Thanks for gift and request for foreword to catalogue for exhibition. One letter.

NAGY, F L
Testimonial for post at University of Oxford. 2 items.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
George C Marshall Space Flight Center.

NATIONAL SCIENCE FOUNDATION
US - Japan science cooperation seminar on pattern information processing in ultrasonic imaging, 8-13 January 1973, University of Hawaii. Paper by D G: A project of ultra-sonic tomography; three letters; programme. 6 items.

NEDERLANDSE VERENIGING VOOR MANAGEMENT (NIVE).

NELSON, Clifford V
Copy of joint paper with D G: Determination of the resultant dipole of the heart from measurements on the body surface; with covering letter of further calculations, 7 February 1969, 4ff. 2 items.
THE NEW SCIENTIST
Article: The next ten years in engineering and technology; two letters with relevant information from Professors Hugh Ford and H B Squire; notes for a profile (4pp.) and covering letter on his Jewish origin; eminent Hungarians, etc. Typescript of a letter: Better use of scientific man power, 2pp. File.

NORTH ATLANTIC TREATY ORGANISATION (NATO).
Seminar on optical and acoustical holography, Milan, 24 May - 4 June 1971; arrangements, copy of paper. General theory of holography I and II; notes on three dimensional information on holography. File.


NOVA UNIVERSITY, Florida
Letter of appointment as Adjunct Professor.

IL NUOVO CIMENTO
Invitation to join Editorial Board; circulars on policy, etc. In English and Italian. File.

NUCLEAR MEDICINE SOCIETY (Gesellschaft fur Nuklearmedizin).

OBERLIN, Agnes
Suggestions for reunion, possibly at congress in Montreal. Reply from D G with personal news. 2 letters.

OMEGA. The International Journal of Management Science
Two letters from the editor, Professor Samuel Eilon, and xerox copy of contribution by D G; Technology and society in the last quarter of the twentieth century. 3 items.

OROVAN, Egon (1902-)
Includes one letter from L J Davies to E O about visit to BTH. In Hungarian and English 12 letters.

OSTROVSKY, Y I
Brief note with gift of book.
<table>
<thead>
<tr>
<th>Code</th>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP/2</td>
<td>1945-50</td>
<td>PEIERLS, Sir Rudolf (Ernst) (1907- ). Research on holography: D G's appointment at Imperial College. 11 letters.</td>
</tr>
<tr>
<td>MP/3</td>
<td>1972</td>
<td>PENNSYLVANIA UNIVERSITY. Annenberg School of Communications. Keynote address: Social control through communications? 23 March 1972, at International Symposium on Communications; correspondence with George Gerbner. 8 items.</td>
</tr>
<tr>
<td>MP/4</td>
<td>December 1946</td>
<td>PERCIVAL, W S. Letter on D G's paper on theory of communication and reply.</td>
</tr>
<tr>
<td>MP/5</td>
<td>1945</td>
<td>PIAGGIO, Henry Thomas Herbert (1884-1967). D G's claim to have found an acoustic relation analogous to Heisenberg's uncertainty relation; questions, soundness of argument in D G's 'Theory of communication'. 2 letters.</td>
</tr>
<tr>
<td>MP/7</td>
<td>1953-64</td>
<td>POLANYI, Michael (1891-1976). Comments on M P's paper on pure and applied science; M P's contribution to 'The scientist speculates'; joint discussion with E Wigner on Haldane's paper on natural selection. D G's comments on M P's paper on 'Tacit knowing'; advice on funding for project of Professor A Tustin. 4 files.</td>
</tr>
<tr>
<td>MP/8</td>
<td>1964-72</td>
<td>POPPER, Sir Karl (Raimund) (1902- ). Arrangements for meeting; D G's comments on K P's papers on the arrow of time; congratulations on Nobel prize. 13 items.</td>
</tr>
<tr>
<td>MP/9</td>
<td>1957, 1964</td>
<td>PRIESTLEY, John Boynton (1894-1984). Three letters to J B P from D G; on the atom bomb; progress in Russia; invitation to dinner and reply from J B P. 4 letters.</td>
</tr>
</tbody>
</table>
MR/1  May 1963  RAND CORPORATION
Letter from Olaf Helmer on project for prediction
of future trends in science and technology with
reply from D G.  2 letters.

MR/2  1963, 1966  REITER, Tibor
Testosterone implantation: correspondence on
letter to NATURE; analysis by infrared
spectrography.  5 items.

MR/3  1968, 1969  RENOLD, Hans
Replies to letters from D G on trade unions, grass
roots plan.  2 letters.

MR/4/1  1957  ROGERS, Gordon Leonard
Advice about career; testimonials: references of
paper on holography.  File.

MR/4/2  1971  ROGERS, Gordon Leonard and others
Information for D G's lecture to Royal Society
from G L Rogers, J N Butters, J D Redman:
deblurring by Fourier filterings etc.  7 letters.

MR/5  1973-74  ROYAL AERONAUTICAL SOCIETY
Spring convention, 15-16 May 1974.  Talk: Aviation
during the fuel crisis and after.  Typescripts,
correspondence.  File.

MR/6  1968-73  ROYAL INSTITUTION
Lecture, 7 February 1969: The hologram.
Correspondence etc. Laser symposium, 22 March

MR/7/1-7  ROYAL SOCIETY
MR/7/1  1958-74  Nominations for Fellowship, notices etc.  File.

MR/7/2  1961-67  Paul Instrument Fund. Applications, assessors,
reports on research of D W Turner, P B Hirsch.
File.

MR/7/3  1963  Committee on Technology. Invitation to be member,
circulars, memoranda.  File.

MR/7/4  1967  The next 30 years. Meeting, 12 May 1967. Letter
and notes from Mr A Gabor, draft of paper
'Industry and society' by D G.  5 items.

MR/7/5  1966-67  Joint lecture, 1 February 1968 with G W Stroke;
Theory of deep holograms. Correspondence with
G W S, poster etc.  9 items.

MR/7/6  March 1969  Report on visit to Hungary; xerox, 5 pp.
Reference to Professors I Ruzsnyak, G Szigeti
and others.

MR/8    1966    ROYAL SOCIETY OF ARTS
Lecture, 7 December 1966: Holography. Invitation, programme. 3 items.

MR/9    11 January 1967    RUSKA, Ernst (1906–   )
Thanks for article on 60th anniversary in optics. In German. One letter.

MR/10    1950; 1975    RYLE, Sir Martin (1918–   )
Colloquium in Cambridge; enquiry about the history of the beginning of civilisation and the end of the world. 6 letters.

MS/1    1974    SALTER, Stephen
Paper on 'Wave power'; vertical vanes as wave absorbers. 4 items.

MS/2    1973–74    SCHWEIZERISCHER INGENIEUR UND ARCHITEKTEN VEREIN (SIA).

MS/3    1972–73    SCIENCE MUSEUM
Loan of the hologram portrait made by Macdonnel Douglas to the Museum. Letters from Sir David Follett, Dr Sahiar. File.

MS/4    1972    SCIENCE POLICY FOUNDATION

MS/5    1964, 1972    SCOTT, Sir Peter (Markham) (1909–   )
Enquiry about population explosion and D G's reply etc. 4 letters.

MS/6    1969    SCOTT, William John
Details of career, retirement etc, and reply from D G. 2 letters.

MS/7    1951, 1952    SELWYN, E W H. Kodak Ltd.
Interference microscopy; enquiry about illumination of energy required for one datum of information in photographic record. 2 letters.

MS/8    1960    SHOCKLEY, William Bradford (1910–   ) Shockley Transistor Corporation
Comments on inaugural lecture: arrangements for
visit to London and lecture in Physics Department, Imperial College. 11 letters.

MS/9 1974
SIBTHORP, M M Miss. David Davies Memorial Institute of International Studies. Comments on nuclear energy and D G's reply. 2 letters.

MS/10 1972-73
SIEGHAERT, Paul (1927- ) Arrangements for meeting of the Science and Society Council. 5 items.

MS/11 1961
SNOW, Charles Percy, Baron Snow (Life peer) (1905-1980). Two brief notes and letter from D G; comments on proposals of Walter C Morgan. 3 letters.

MS/12 1963
SOCIETY OF INSTRUMENT TECHNOLOGY The Thomson Lecture, 24 October 1963: Technology, life and leisure, given at the Royal Institution. Typescript etc. 5 items.

MS/13 1971-72
SOUTHAMPTON UNIVERSITY 18th Fawley Lecture, 16 November 1972. Arrangements etc. Correspondence with Professor L C B Gower, G D Sims and others. File.

MS/14 5 May 1943
STAPLEDON, William Olaf (1886-1950) Disadvantages of maturing late; his training and background as a writer. One letter.

MS/15 1971-73
STROKE, George Wilhelm (1924- ) Information for Nobel prize lecture; general solution for deblurring of images: the 'wobbling' method; President's Science Medal for Peter Goldmark; conference on ultrasonic imaging; NSF grant; cervical holography, etc. File.

MS/16 1972
STRONG, Donald S Holography and art history. Letter and reply from D G; xerox copy of article in FORTUNE, September 1971. 3 items.

MS/17 1953, 1961
SUNDAY TIMES Article: Living with the hydrogen bomb, 5 March 1961. Correspondence with E H S Burhop, C A R Crosland, Andre Gabor, P M S Blackett, and others; duplicated copies of P M S B's papers on operational research, nuclear war, and contemporary defence. File.

MS/18 9 March 1973

MS/19 1948, 1967
SZIGETI, Gyorgy and RUSZNYAN, Istram In Hungarian. 3 letters.

MT/1  
TEXTIL WIRTSCHAFT

MT/2  20 November 1971  THORPE, William Homan (1902- )
Invitation to join advisory council of the Anti-Concorde project. One letter.

MT/3  1972-73  TORONTO UNIVERSITY


MT/5  1966  TUCKER, David Gordon (1914- )
Assessment of MSc thesis by R A K Said. 5 letters.

MT/6  18 June 1947  TUMARKIN, Alexander
Various aspects of the mechanics of hearing. One letter.

MV/1  1972  VOLKSWAGENWERK
Use of holography in research; ten photographs, with list, for use at meeting of German Optical Society at Bad Hersfeld. In German. 3 letters.

MW/1  November 1950  WAGNER, Karl Willy
Invitation from D G to Symposium on information theory, with account of his research in past twenty years; reply from K W W with details of post war work in German. 2 letters.

MW/2  1974-75  WAIDELICH, Wilhelm
Invitation to congress on Nuclear Medicine at Munich; regrets at D G's ill health. In German and English. 4 letters.

MW/3  1943-51  WARREN, Sir (Henry William) Hugh (1891-1961)
Explanation of research failure, on cathode ray tube etc; hopelessness of gas discharge lamp with good efficiency; congratulations on knighthood. Includes letter from E H Ball. 8 letters.

MW/4  28 April 1975  WATERHOUSE, Richard V
Comments on possible mathematical error in a paper by D G. One letter.
WEINBERG, Alvin Martin (1915-     )  
Phytoplankton as source of phosphorus.  3 items.

WEIZMANN INSTITUTE OF SCIENCE  

WHITTLER, Sir Edmund Taylor (1873-1956)  
Postcard about lecture on electron optics. Letter from D G with manuscript of lecture on communication theory and reply.  3 items.

WHYTE, Lancelot Law  
Direct measurement of electron velocities: research on fundamental particles and grant for D L Richards; Touchstone lecture; bibliography of L L W's books. Includes letters from E C Bullard, A M Tyndall. File.

WILSON, Carroll L (1910-     )  
The energy crisis; Steady State Society etc. File.

WILSON, W Proctor  
Two letters with reply from D G. Laguerre functions, etc. Death of E S C Megaw.  3 letters.

WOLF, Emil  
Differential equation for the propagation of light. Letter with reply from D G.  2 letters.

WORLD FUTURE SOCIETY  
Invitation to serve on committee, speak at meeting etc.  11 items.

WORLD FUTURE RESEARCH CONFERENCE  
Invitation to be member of Continuing Committee. Correspondence with Arne Sorensen, Secretary General.  7 items.

YOUNG, John Zachary (1907-     )  
Covering letter for reprint on evolution of the nervous system and D G's reply.  3 items.

YOUNG PRESIDENTS' ORGANISATION  
Fourth International University aboard Queen Elizabeth II. 'Odyssey of Knowledge', May 14-21 1973. Invitation to join cruise, arrangements for lecture etc.
SECTION N

PUBLICATIONS, REVIEWS ETC


SECTION P

TAPES, SLIDES

P/1 Interview between Professor Gabor and Rex Keating. Tape and cassette.

P/2 1964 Interview with Budapest Radio. Tape and cassette.

P/3 1966 Experimental demonstration tape for compression and expansion of speech.

P/4 Collection of slides for lectures.

P/5 1971 Slides for the Nobel prize lecture. 38 items.

P/6 9 November 1971 Recording of interview on programme, Hierzulande - Neuzutage, WDR Television, after award of the Nobel prize and DGP Kulturpreis. In German, cassette.

P/7 22 February 1972 Tape recording of the lecture on holography given at Imperial College. Tape and cassette.

SECTION R

MISCELLANEOUS

R/1 1947 'First stereoscopic colour film. Underexposed'.

R/2 1948 Helical discs for optical depth variation.

R/3 Slide rule in leather case.

R/4 1966 Slide rule manufactured by Keuffil and Esser Company, in plastic case.


There are also three models or 'poster' type displays of research projects


R/7 [1956] Gabor-NRDC flat television tube development. Framed board, 2ft x 4ft x 4ins.

Framed wooden board, 2ft x 4ft x 4ins.

Includes model of inert gas filled thermionic triode converter, 1961; collectors for inert gas thermionic converters; components of a diode with quarter inch cathode, 1965, etc.
<table>
<thead>
<tr>
<th>Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ABEL AND IMRAY</td>
<td>MA/1</td>
</tr>
<tr>
<td>ACZEL, Tamas</td>
<td>MA/2</td>
</tr>
<tr>
<td>ADRIAN, Edgar Douglas</td>
<td>MA/3</td>
</tr>
<tr>
<td>1st Baron Adrian (1889–1977)</td>
<td></td>
</tr>
<tr>
<td>Advanced Studies Institute</td>
<td>C/1</td>
</tr>
<tr>
<td>Agfa Gevaert</td>
<td>MA/1</td>
</tr>
<tr>
<td>Agricultural Research Council</td>
<td>MA/4</td>
</tr>
<tr>
<td>Michael Joseph (1933–)</td>
<td></td>
</tr>
<tr>
<td>ALBERT, M J</td>
<td>R/8</td>
</tr>
<tr>
<td>ALEXANDER, Jerome</td>
<td>MA/5</td>
</tr>
<tr>
<td>ALI, Ahmad</td>
<td>GD/2/1</td>
</tr>
<tr>
<td>ALLEN, N P</td>
<td>ER/9</td>
</tr>
<tr>
<td>ALLIBONE, Thomas Edward (1903–)</td>
<td>A/3, K/1/1, K/2, K/4, K/5, MA/6, MC/11</td>
</tr>
<tr>
<td>Alternative Society</td>
<td>MA/7</td>
</tr>
<tr>
<td>American Academy of Arts and Sciences</td>
<td>C/2</td>
</tr>
<tr>
<td>American Academy of Achievement</td>
<td>MG/3</td>
</tr>
<tr>
<td>American Hungarian Studies Foundation</td>
<td>MA/8</td>
</tr>
<tr>
<td>American Physical Society</td>
<td>MA/9</td>
</tr>
<tr>
<td>ANDRADE, Edward Neville da Costa (1887–1971)</td>
<td>MH/4</td>
</tr>
<tr>
<td>Annenberg School of Communications</td>
<td>MP/3</td>
</tr>
<tr>
<td>Anti-Concorde project</td>
<td>MT/2</td>
</tr>
<tr>
<td>ARDENNE, Manfred von (1910–)</td>
<td>MA/10</td>
</tr>
<tr>
<td>Army, discharge from</td>
<td>B/3</td>
</tr>
<tr>
<td>ARNOLD, David Clement (1919–)</td>
<td>D/24</td>
</tr>
<tr>
<td>ASH, Clare</td>
<td>ES/3</td>
</tr>
<tr>
<td>ASH, Eric Albert (1928–)</td>
<td>MA/11, MH/2, MM/13</td>
</tr>
<tr>
<td>ASHBY, Eric Baron Ashby (1904–)</td>
<td>MA/12</td>
</tr>
<tr>
<td>Associated Electrical Industries</td>
<td>EL/4, MA/6, MA/13, MC/10, MH/2</td>
</tr>
</tbody>
</table>
Associated Rediffusion

The Athenaeum

Atlantic Institute for International Affairs

Atom bomb

Manzur Ahmad (1936– )

ATTA, M A

AUSBURN, Kenneth J

BADER, Ernest

BAGRIT, Sir Leon (1902–1979)

BALL, E H

Bandwith compression

BARER, Robert (1916– )

BARRER, Richard Maling (1910– )

BARTELL, Lawrence Sims (1923– )

BAR-ZAKAY, Samuel N

BAS, E B

BAUER, Benjamin Baumzweiger (1913– )

BAXTER, A S

BEAUREGARD, Oliver de

BEDDOES,

BEISER, Leo

BENNETT, F D

BERG, Wolfgang F

Berlin Technische Hochschule

BERNHARD, Prince of the Netherlands (1911– )

Beryllium copper multipliers

BERZ, Mrs
BIRSS, Robert Raymond (1932- )  GD/2/2
BLACKETT, Patrick Maynard Stuart  EA/2/6, ER/8, ES/9, F/5/2, MB/7, Baron Blackett (1897-1974)  MH/2, MS/17
BOERSCH, Hans Paul (1909- )  MB/8
BOHM, David Joseph (1917- )  MB/9
BOLGIANO, Louis Paul (1922- )  EN/2/3
BORN, Max (1882-1970)  EC/1, EN/3, MB/10
BOWDEN, Bertram Vivian Baron Bowden  MB/11 (1910- )
Bowra Lecture  MC/9
BOYER, Charles  EK/5
BRADLEY, Daniel Joseph (1928- )  MB/12, MM/14
BRAGG, Sir (William) Lawrence (1890-1971)  EL/1, EL/2, EN/3, MB/13
BREMERM, H  MB/10/5
BRIGHT, William  MB/14
BRILLOUIN, Leon  MB/15
Bristol Council of Social Service  MB/16
British Association for the Advancement of Science  MB/17
British Broadcasting Corporation  ES/10, MB/18
British Thomson Houston (BTH) Company  B/36-39, EA/3/1, /MA/6, MB/10
BROGLIE, Louis Cesar Victor Maurice de  MB/19 (1875-1960)
Budapest: Joseph Technical High School  B/4-7 Skating club  B/13
BULLARD, Sir Edward Crisp (1907-1980)  MW/8
BURCH, Cecil Reginald (1901-1983)  EL/1, MB/20
BURGER, Peter (1936- )  MB/21
BURGESS, Charles  MB/22
BURHOP, Eric Henry Stoneley (1911-1980)  MS/17
BUTTERS, J N  MR/4/2
<table>
<thead>
<tr>
<th>Entity</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butterworths, Publishers</td>
<td>MB/10/5</td>
</tr>
<tr>
<td>CALDER, Nigel David Ritchie (1931-</td>
<td>EM/7, MA/6</td>
</tr>
<tr>
<td>California University Institute of</td>
<td></td>
</tr>
<tr>
<td>Government and Public Affairs</td>
<td>MC/1</td>
</tr>
<tr>
<td>Cambridge Heretics</td>
<td>ES/4</td>
</tr>
<tr>
<td>Cambridge University Physics Society</td>
<td>MC/2</td>
</tr>
<tr>
<td>CAMPBELL, Norman R</td>
<td>MC/3</td>
</tr>
<tr>
<td>Cartier, jewellers</td>
<td>MB/12</td>
</tr>
<tr>
<td>CASEMORE, Colin</td>
<td>EP/1/1, EP/1/3</td>
</tr>
<tr>
<td>Cathode ray tube</td>
<td>MW/3</td>
</tr>
<tr>
<td>CAWS, Peter James (1931-</td>
<td>MC/4</td>
</tr>
<tr>
<td>CAZES, Bernard</td>
<td>MC/5</td>
</tr>
<tr>
<td>CBS Laboratories</td>
<td>B/55, L</td>
</tr>
<tr>
<td>Center for the Study of Democratic</td>
<td></td>
</tr>
<tr>
<td>Institutions, California</td>
<td>MC/6</td>
</tr>
<tr>
<td>Centre of Administrative Studies on</td>
<td></td>
</tr>
<tr>
<td>Science and Technology</td>
<td>MC/7</td>
</tr>
<tr>
<td>Cervical holography</td>
<td>MS/15</td>
</tr>
<tr>
<td>CHAMBERS, V. (Miss)</td>
<td>MC/8</td>
</tr>
<tr>
<td>CHANDOS, 1st Viscount (1893-1972)</td>
<td>MB/16</td>
</tr>
<tr>
<td>Character recognition</td>
<td>F/7</td>
</tr>
<tr>
<td>Cheltenham College</td>
<td>MC/9</td>
</tr>
<tr>
<td>CHERRY, Edward Colin (1914-1979)</td>
<td>MI/3</td>
</tr>
<tr>
<td>CHICK, D R</td>
<td>MC/10</td>
</tr>
<tr>
<td>CHRISTENSEN, John Whittaker (1915-</td>
<td>LB/10</td>
</tr>
<tr>
<td>Cinerama</td>
<td>EK/5</td>
</tr>
<tr>
<td>City and Guilds of London Institute</td>
<td>C/3</td>
</tr>
<tr>
<td>City University</td>
<td>MC/11</td>
</tr>
<tr>
<td>Clarendon Laboratory</td>
<td>MC/15</td>
</tr>
</tbody>
</table>
CLARKE, D
CLARKE, J R
CLAUSEN, Hugh
Club of Rome
COLLIE, Carl Howard
COLOMBO, Umberto P. (1927- )
Colour television
Columbia Broadcasting System
Columbia University
COMERCI, Frank A
Communication theory

Communications. International Symposium of, 1972
Computers: memory store
CONDON, Edwin Uhler (1902-1974)
Consolidated Controls Corporation
COTTRELL, Sir Alan (1919- )
COUTTIGNAL, L
COWAN, Jack David (1933- )
COSSLETT, Vernon Ellis (1908- )
Cristoforo Colombo prize
CROSLAND, Charles Anthony (Raven) (1918-1977)
Crystal reflection amplifier
CURRAN, Sir Charles (John) (1921-1980)
CUZZER, Aldo
Cybernetics
Cybernetics Society
DAINTON, Sir Frederick (1914– ) MD/1
DANTZIG, George Bernhard (1914– ) MC/1
Dark discharges EA/2/2, EA/3/1, F/4
DARWIN, Sir Charles (Galton) (1887-1962) EL/2, EO/4, MD/2
David Davies Memorial Institute of International Studies MS/9
DAVIES, L J BTH B/39
Deblurring of images MR/4/2, MS/15
Department of Industrial and Scientific Research EP/1/1, GD/2/4
Deutsche Gesellschaft fur Photographie C/4, MD/3, P/6
DICKINSON, H D MB/16
DICKSON, Donald James (1939– ) GD/2/4
Diffraction microscopy EL, MH/2
'The dimensions of consciousness' MH/9
DIRAC, Paul Adrian Maurice (1902– ) EE/1/2, K/4
DOWLER, A M MA/1
DOXiADIS, C A MD/4
DUNSMUIR, R MA/13/2
DUPOUY, Gaston MD/5
DYSON, J MD/6
Economic Research Council ME/1
Ediswan Electric Company GD/4
EDMUNDS ME/2
EDSON, Lee A/1
Edwards Memorial Lecture (second) MC/11
EHRENBerg, Werner ME/3
EILON, Samuel (1923– ) MO/2
EINSTEIN, Peter ME/4
Electrical Engineering Department, ICST

Electromagnetism

Electron guns

Electron lenses

Electronics, 10th Congress of

Electron microscopy

Electron optics

Electrophotography

EL SUN, Hussein M A

'Encounter'

Energy conversion

Energy crisis

Energy utilization

ENGEL, Alfred von (1898-1986

ENGELBERGER, Hermann

ENGELBERGER, Joseph F

'The Engineer'

ERNST, Morris Leopold (1888-1976

ERZIN, Paul

FARAGO, Peter

FARRANT, John L

FATMI, Haneef Akhtar (1933--)

Fawley Lecture

FELLGETT, Peter (1922--)

Filing cabinet

FISHLOCK, David

GD

EB/2/3, EE/1/1, EE/1/2, GE/1, K/2, MC/10, MD/2

EA/2/3, EF/4

EA/2/4

ER/7

EC/2, EL/4-6, GD/3, MA/4, MA/13, MB/19, MH/2, MH/7, MI/6, MK/4, MM/18

EC/1, EF/1, MH/2, MK/1

LB/3

EM/8

ES/3, MM/11

ED/1/1

MI/7, MR/9, MW/9

MN/7/2

GD/2/4

H/4

ES/9, ME/5

MC/13

ME/6

B/50

MA/6, MH/2, MK/2

MI/6

MB/10/4, R/8

MD/1, MS/13

MF/1

EB/2/6

EM/7
Flat TV tube see TV tube, flat

FOLLETT, Sir David (Henry) (1907- ) MS/3
Follower screen EB/2/4, EK/4
FOMENKO, Sergei EK/6
FORD, Sir Hugh (1913- ) MN/6
FOURCIN, Adrian John (1927- ) GA/1
FOYLE, Christina Agnes Lilian MF/2
FRANZ, W MB/10/5
FRAULO, J B MF/3
Frequency compression research D/40, ED/2, ER/10
FRIEDLANDER, E MF/4
FUORTES, M G F MF/5
FURTH, R MB/10
GABOR, Adrienne (1879- ) B/50, B/52, D/2, D/10, D/12, D/22
GABOR, Andre (1903- ) B/34, B/52, D/3/3, D/9, EO, ES/1, MM/10, MR/7/4, MS/17
GABOR, Bertalan (1867-1942) D/1, D/22
GABOR, George (1901-35) D/3, D/7, D/8, D/31-34
GABOR, Marjorie D/15, D/16, D/18, D/19, D/20, D/22
GALLOP, John Winston MG/1
GAL-OR, Benjamin MG/2
GAMO, Hieya EN/2/3
Gas discharge lamp MW/3
General Electric Company B/38
George Thomson Lecture MH/8, MS/12
GERBNER, George (1919- ) MF/3
GERCHBERG, R W MA/4
Germany: wartime, postwar conditions MF/4, MW/1
GLEN, William, E
Golden Plate Awards Committee
GOLDMARK, Peter Carl (1906–)
GOLDSMITH, Alfred N
GOODMAN, Martin S
GORMAN, Frank B
GOSS, Walter Percival (1927–)
GOWER, L C B
GRACE, H W
GREENSMITH, J
Grisson Chaffee Memorial Seminar
GRIVET, Pierre
Guided Weapons Department
HADDOW, Sir Alexander (1907–1976)
HAHN, Otto
HAIN, Michael Edward
HADLANE, John Burdon Sanderson (1892–1964)
HALSBURY, John Anthony Hardinge Giffard
3rd Earl of Halsbury (1908–)
HAMILTON, Iain Bertram (1920–)
HAMLYN, Edward C
HANSZEN, Karl Joseph (1921–)
HARTLEY, Sir Harold (Brewer) (1878–1972)
Harvard Club
HAVENS, William Westerfield (1920–)
HAYASHI, Yujiro
HEATH, Edward (1916–)
HELMER, Olaf (1910–)
HEPBURN, Ronald William (1927- )
Heretics, Cambridge
HILBERG, Wolfgang (1932- )
Hilger and Watts
HILL, Peter Charles John (1934- )
HIRSCH, Sir Peter (Bernhard) (1925- )
HOCHHAUSLER, Paul
HOFFMANN, Malcolm A
HOLLOWAY, Edward A
Holoconcepts Corporation of America
Hologram portrait of Dennis Gabor
Holography

Holy Trinity Church, Brompton Road
HOPKINS, Harold Horace (1918- )
Horizon. BBC programme
HUDDLESTONE, R V
Hungarian Academy of Sciences
Hungarians emigré: MH/2; eminent MN/6
Hungary: visit 1962, LA/7; visit 1969, MR/7/6
HUXLEY, Sir Julian Sorell (1887-1975)
HUXLEY, Thomas Henry (1825-1895)
IBM
Illinois University
IMMER, Pierre

MH/9
ES/4
MH/10
MM/9
GA/4, GD/2/6
MR/7/2
EC/2
MH/11
ME/1
MH/12
MS/3
D/39, EL/2, EM/7-9, F/7, GD/2/7, GD/2/8, LA/9, LA/10, LB/6, MA/13/2, MB/8, MB/9, MB/13, MD/5, MH/2, MH/7, MH/13, ML/4, MM/3, MM/19, MN/2, MN/7/1, MP/2, MR/6, MR/7, MR/7/5, MR/7/7, MR/8, MS/15, MS/16, MV/1
A/3
MB/10/5
ES/10
MH/13
MH/14
ES/9, MH/15
MH/15
F/7
MI/1
MJ/1
<table>
<thead>
<tr>
<th>Term</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperial Chemical Industries. Research Fellowship Committee</td>
<td>EF/4</td>
</tr>
<tr>
<td>Imperial College</td>
<td>EB/2/4, ER/3, G, MB/12, MH/2, MK/1, MP/2, MS/8</td>
</tr>
<tr>
<td>Inaugural lecture, ICST</td>
<td>GB/2, MH/4, MS/8</td>
</tr>
<tr>
<td>Industrial research, British</td>
<td>MH/4</td>
</tr>
<tr>
<td>Information processing</td>
<td>GD/2/3</td>
</tr>
<tr>
<td>Information retrieval</td>
<td>EN/1</td>
</tr>
<tr>
<td>Information theory</td>
<td>EF/2, EN/2</td>
</tr>
<tr>
<td>Infrared spectrograph</td>
<td>MR/2</td>
</tr>
<tr>
<td>Infrared vision</td>
<td>EA/2</td>
</tr>
<tr>
<td>'Innovations'</td>
<td>ET/1</td>
</tr>
<tr>
<td>Institut Henri Poincare</td>
<td>MB/19</td>
</tr>
<tr>
<td>Institute of Physics and Physical Society</td>
<td>C/5, EC/2, MI/2</td>
</tr>
<tr>
<td>Institution of Electrical and Electronics Engineers, US</td>
<td>MM/6</td>
</tr>
<tr>
<td>Institution of Electrical Engineers</td>
<td>C/6-8, EE/1/1, MI/3</td>
</tr>
<tr>
<td>Interference microscopy</td>
<td>EM, MS/7</td>
</tr>
<tr>
<td>Interkamera</td>
<td>C/10</td>
</tr>
<tr>
<td>International Conference on the Unity of the Sciences</td>
<td>MI/5</td>
</tr>
<tr>
<td>International Congress on Electron Microscopy, Canberra</td>
<td>MI/6, MM/18</td>
</tr>
<tr>
<td>International Federation of Institutes for Advanced Study</td>
<td>MI/7</td>
</tr>
<tr>
<td>'Inventing the future'</td>
<td>ES, MB/10, MF/5</td>
</tr>
<tr>
<td>Ion beam energy source</td>
<td>D/41, EP</td>
</tr>
<tr>
<td>Israel</td>
<td>ME/6</td>
</tr>
<tr>
<td>Israel Tecnion</td>
<td>MG/2</td>
</tr>
<tr>
<td>Istituto Ricerche Applicate Documentazione e Studi</td>
<td>MI/8</td>
</tr>
</tbody>
</table>
Italy: radio
Italy: villa

JACKSON, Willis Baron Jackson of Burnley (1904–1970)

JAEGGER, Jean-Francois (1936– )

JAMES, Stanley

Japan Broadcasting Corporation

Japan Economic Research Centre

Japan: Ministry of International Trade and Industry

JEMELKA, Jan

Jewish origin, D G's

Jewry, Soviet

JOUVAINE', Bernard de

JULL, George Walter (1929– )

KAHL, G D

Kaiser Aircraft and Electronics Ltd

KAISER, Arthur

KALMAN, Peter G

KASTLER, A

KERSTEN, Martin (1906– )

KILMISTER, Clive William

KLUG, Aaron (1926– )

KNOLL, Max Hams Hermann (1897– )

KOCH, Robert

Kodak Ltd

Kodansha Ltd

KOESTLER, Arthur (1905–1983)

KOMPFTER, R

EF/5
D/21, GC/2
GD/1
MJ/1
EO/3
ER/8, MJ/2
MJ/3
MI/8
MI/4
MN/6
MM/8
MJ/4
GD/2/7
EN/7
MK/1
LB/7
ER/4, GA/2, MI/3
MK/2
MK/3, MN/7/2
K/5
MK/4
EC/2
MK/5
MS/7
ET/3
MC/1, MH/5, MK/6
EF/2
KOVACH, Eugene George (1922- ) MN/7/2
KOZMA, Adam GD/2/8, ML/4
Kulturpreis, Deutsche Gesellschaft fur Photographie C/4, MD/3, P/6
KURTI, Sir Nicholas (1908- ) MN/7/2
KURTZ, Robert L MN/2
Lady Spencer Churchill College of Education MO/4
Laguerre functions MW/10
LAITHWAITE, Eric Roberts (1921- ) ML/1
La Margioretta (Italian villa) D/21, GC/2
LAMB, John (1922- ) ML/2
LANGDON-DAVIES, John (1897-1971) ML/3
LANGMUIR, Irving (1881-1957) EA/4/1
Langmuir paradox MM/13
Lasers EM/7, LA/6A, MB/12, ML/4, MR/6
LAWSON, Robert W K/3
Learning filters EN/5
LEAVITT, Richard E MH/12
LEE, Kenneth MM/4
LEITH, Emmett Norman (1927- ) A/2, ML/4
LEONARD, Carl ML/5
LE POOLE, J B EL/1
LEWIS, Wilfred Bennett ML/6
LIEBMAN, Gerhard (d.1956) MH/2
LIEBOWITZ, Benjamin (1890- ) ML/7
Light and information EN/2/1-4
LIGHTHILL, Sir James (1924- ) ML/8
LINDSAY, Peter Alexander ML/9
<table>
<thead>
<tr>
<th>Name</th>
<th>Company/Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIPSON, Henry Solomon (1910-</td>
<td></td>
<td>ML/10</td>
</tr>
<tr>
<td>LINSTEAD, Lady (Marjorie)</td>
<td></td>
<td>MO/5</td>
</tr>
<tr>
<td>LYTTELTON, Oliver lst Viscount Chandos (1893-1972)</td>
<td></td>
<td>MB/16</td>
</tr>
<tr>
<td>Living with the hydrogen bomb</td>
<td></td>
<td>MS/17</td>
</tr>
<tr>
<td>London University</td>
<td></td>
<td>C/11, C/12, GB/1, MA/11</td>
</tr>
<tr>
<td>MACDONALD, Publishers</td>
<td></td>
<td>EM/7</td>
</tr>
<tr>
<td>MACDONALD, David Keith and Chalmers (1920-1963)</td>
<td></td>
<td>EF/2, MM/1</td>
</tr>
<tr>
<td>MACKENZIE, H L</td>
<td></td>
<td>EO/4</td>
</tr>
<tr>
<td>McDonnell Douglas Electronics Company, Missouri</td>
<td></td>
<td>D/24, MS/3</td>
</tr>
<tr>
<td>MCKAY, Donald MacCrimmon (1922-</td>
<td></td>
<td>MM/2</td>
</tr>
<tr>
<td>McLAUGHLIN, C Harry</td>
<td></td>
<td>MM/3</td>
</tr>
<tr>
<td>McMANN, Renville</td>
<td></td>
<td>LB/10</td>
</tr>
<tr>
<td>McVITTIE, George Cunliffe (1904-</td>
<td></td>
<td>K/2</td>
</tr>
<tr>
<td>Magnetic recording devices</td>
<td></td>
<td>LA/2, LA/7, LA/8, LB/1, LB/4</td>
</tr>
<tr>
<td>MANDELBROT, Benoit</td>
<td></td>
<td>EO/4</td>
</tr>
<tr>
<td>Mankind 2000</td>
<td></td>
<td>MM/4</td>
</tr>
<tr>
<td>Marlowe Foundation</td>
<td></td>
<td>MM/5</td>
</tr>
<tr>
<td>MARTIN, Sir David (Christie) (1914-1976)</td>
<td></td>
<td>K/5</td>
</tr>
<tr>
<td>MARTIN, Louis Claude (1891-1981)</td>
<td></td>
<td>EC/1, MH/2</td>
</tr>
<tr>
<td>MARTON, Ladislaus Laszlo (1901-</td>
<td></td>
<td>EC/2, EN/6, GD/3, MM/6</td>
</tr>
<tr>
<td>MARZ, Willi</td>
<td></td>
<td>H/4</td>
</tr>
<tr>
<td>Mathematical theory of freedom</td>
<td></td>
<td>EO</td>
</tr>
<tr>
<td>'The Mature Society'</td>
<td></td>
<td>ET, MA/12</td>
</tr>
<tr>
<td>MEDAWAR, Sir Peter (Brian) (1915-</td>
<td></td>
<td>MM/7</td>
</tr>
<tr>
<td>Medical and Scientific Committee for Soviet Jewry</td>
<td></td>
<td>MM/8</td>
</tr>
</tbody>
</table>
MEGAW, E S C

MENHIN, Yehudi (1916– )

MENZIES, A C

'Merkur'

MESAROVIC, Mihajito

Metropolitan Vickers Ltd

MEYER-FRANCK, Gisela and Herbert

Microscopy by reconstructed wave fronts

MILNER, Christopher J

MILNER, Samuel Roslington (1875–1958)

'Minerva'

Ministry of Supply

MISAWA, S

MITTERAUER, Johannes

MORAS, Joachim

MORE, J Kenneth

MORGAN, Walter C

MORLEY, L

MOTT, Sir Neville (Francis) (1905– )

MOUNTBATTEN OF BURMA, Earl (1909–1979)

MULVEY, Thomas

Munich: Gabor Laboratorium

MUMFORD, Lewis (1895– )

MURRELLS, F S R

Museum of Holography

MYERS, Geoffrey Morris Price (1927– )

NAGY, F L

National Academy of Science, USA
PATENTS
electric discharge devices, ferromagnetic media, etc
frequency compression systems
interference microscope
magnetic recording devices
reflecting lens systems
stereoscopic pictures
thermionic generation
TV tube
TV bandwidth compression

PATerson, C C
pATTISON, J G

Paul Instrument Fund

PEARCE, A F
PECCEI, Aurelio (1908-)
PEGGIE (dog)
PEIERLS, Sir Rudolf (Ernst) (1907-) Penguin paperback
Pennsylvania University
PERCIVAL, W S
Personalist Group
PEstEL, Eduard Christian Kurt (1914-)
Pesth Evangelical Church
PHILIP, Duke of Edinburgh (1921-)
Photoelectric imaging
Physics Department, Imperial College
PIAGGIO, Henry Thomas Herbert (1884-1967)
PINCHER, (Henry) Chapman (1914-)
PIRIE, Norman Wingate (1907-)
Plasma dynamics course
Plasma theory
Plasma physics

L
EA/2/2
GA/1-4
ER/10
EM/1
LB/4-10
EB/2/1
EG/4-6, EK/1,2,5,6
GA/3
ER/1,2
GA/4
B/38
ES/5
EA/2/6, EM/1, EM/3, EM/4, MR/7/2
EP/6
MC/14
D/14
EC/1, EL/1, MP/2
ES/8
MP/3
MP/4
ET/1
MC/14, MN/7/2
B/11
MH/8
LB/10
MB/12, MS/8
MP/5
MP/6
MC/14
GE/3
EA/2, EA/3-4, EP, F/1
MC/2
<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic screens</td>
<td>EK/4</td>
</tr>
<tr>
<td>POLANYI, Michael (1891–1976)</td>
<td>EO/4, MP/7</td>
</tr>
<tr>
<td>POLSKY, Soviet physicist</td>
<td>MM/8</td>
</tr>
<tr>
<td>POPPER, Sir Karl (Raimund) (1902–</td>
<td>MP/8</td>
</tr>
<tr>
<td>Population explosion</td>
<td>MS/5</td>
</tr>
<tr>
<td>PORTER, Arthur</td>
<td>MT/3</td>
</tr>
<tr>
<td>POWELL, Cedric J</td>
<td>EP/1–3, EP/6</td>
</tr>
<tr>
<td>PRAIN, Sir Ronald (Lindsay) (1907–</td>
<td>MC/9</td>
</tr>
<tr>
<td>PRIESTLEY, John Boynton (1894–1984)</td>
<td>MP/9</td>
</tr>
<tr>
<td>PRIOR, John</td>
<td>F/6/1,2</td>
</tr>
<tr>
<td>Projection screens</td>
<td>EG/2</td>
</tr>
<tr>
<td>Protein synthesis</td>
<td>MH/4</td>
</tr>
<tr>
<td>Purdue University</td>
<td>MI/1</td>
</tr>
<tr>
<td>Quantum mechanics</td>
<td>MB/10</td>
</tr>
<tr>
<td>Radar</td>
<td>MM/12</td>
</tr>
<tr>
<td>Radiation emission from onion roots</td>
<td>D/35</td>
</tr>
<tr>
<td>Rand Corporation</td>
<td>MC/1, MR/1</td>
</tr>
<tr>
<td>Realiskola, Budapest</td>
<td>B/2</td>
</tr>
<tr>
<td>REDMAN, J D</td>
<td>MR/4/2</td>
</tr>
<tr>
<td>Reflecting lens systems</td>
<td>EB/2/1</td>
</tr>
<tr>
<td>REITER, Tibor</td>
<td>B/35, D/35, MR/2</td>
</tr>
<tr>
<td>Relay screen</td>
<td>EB/1</td>
</tr>
<tr>
<td>RENOLD, Hans</td>
<td>MR/3</td>
</tr>
<tr>
<td>RICHARDS, D David Llewellyn</td>
<td>MW/8</td>
</tr>
<tr>
<td>RITCHIE–CALDER, Lord (1906–</td>
<td>MB/17, MC/6</td>
</tr>
<tr>
<td>Ritchie Lecture</td>
<td>MB/10</td>
</tr>
<tr>
<td>Robbins Report</td>
<td>MH/8</td>
</tr>
</tbody>
</table>
Rockefeller Foundation
ROGERS, Gordon Leonard
ROSBAND, P
ROSENFELD, Leon (1904–1974)
ROSENTHAL, T G
ROTHSTEIN, Jerome
Royal Aeronautical Society
Royal Institution
Royal Society
Royal Society Club
Royal Society of Arts
Royal Statistical Society
Rudolstadt house
RUDOLF, Paul
Rugby flat
RUSKA, Ernst (1906– )
RUSSELL, Bertrand Arthur William
3rd Earl Russell (1872–1970)
RYDER, Leven L
RYLE, Sir Martin (1918– )
SAHARI,
SAID, R A K
SALAM, Abdus (1926– )
SALTER, Stephen
SAUNDERS, Sir Owen (Alfred) (1904– )
Schweizerischer Ingenieur und Architekten Verein
Science and Society Council
Science Museum
Science Policy Foundation
'The Scientist speculates'
SCOTT, Sir Peter (Markham) (1909–)
SCOTT, William John
Secker and Warburg, publishers
SELWYN, E W H
SHANE, June Grant
SHARZ, Harold G
SHOCKLEY, William Bradford (1910–)
SIBTHORP, M M (Miss)
SIEGHART, Paul (1927–)
Siemens and Halske Research Laboratory
SIMS, G D
Slimbridge Wildfowl Trust
Smethurst High Light Ltd
SMITH, Joyce
SMYTH, C N
SNOW, Charles Percy Baron Snow (1905–1980)
Society of Engineers
Society of Instrument Technology
Solar energy
SOMERVILLE, I M
SORENSEN, Arne
Southampton University
Soviet Jewry, Medical and Scientific Committee for
Space Flight Center, George C Marshall
Thermonuclear power project
Thomson Lecture
THORPE, William Homan (1902-)
Three dimensional cinema
TINOMURA, Akurai
Tomography, ultrasonic
Toronto University
TOTHILL, Hugh Alfred William
Touchstone Weekend 1964
TRAIN, Russell Erroll (1920-)
Treasury, HM
TREVOR-ROPER, Hugh Redwald Baron Dacre of Glanton (1914-)
TUCKER, David Gordon (1914-)
TUDOR-Owen, Ronald Llewellyn Trevor
TUMARKIN, Alexander
TURNER, David Warren (1927-)
TUSTIN, Arnold (1899-)
TV tube, flat
TV tube, colour
Twentieth Century Fox Film Corporation
Tykociner Memorial Lecture
TYNDALL, Arthur Mannering (1881-1961)
Ultrasonic imaging
VAS, Robert
VICKERS, Anthony
Video recording system
<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOLFENDEN, Sir John Frederick</td>
<td>1906-</td>
<td>MB/16</td>
</tr>
<tr>
<td>World Future Society</td>
<td></td>
<td>MW/12</td>
</tr>
<tr>
<td>World Future Research</td>
<td></td>
<td>MW/13</td>
</tr>
<tr>
<td>Conference</td>
<td></td>
<td>LA/5</td>
</tr>
<tr>
<td>WRIGHT, Gordon Thomas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-rays, coherent</td>
<td></td>
<td>ER/9, ML/10</td>
</tr>
<tr>
<td>YOUNG, John Zachary</td>
<td>1907-</td>
<td>MY/1</td>
</tr>
<tr>
<td>Young Presidents' Organization</td>
<td></td>
<td>ME/5, MY/2</td>
</tr>
<tr>
<td>ZOGLYMAN, Peter</td>
<td></td>
<td>MH/2</td>
</tr>
<tr>
<td>Zurich ETH</td>
<td></td>
<td>EP/8</td>
</tr>
<tr>
<td>ZWORYKIN, Vladimir Kosma</td>
<td>1889-</td>
<td>EC/2</td>
</tr>
</tbody>
</table>