

Sir E.W.J. Mitchell Collection MS 5343

The Collection covers the year's 1944-2002.

The Collection includes:

Biographical material includes obituaries, curricula vitae and bibliographies, and documentation of career, honours and awards. There is a notebook from 1944 with a record of undergraduate lectures on radio at the University of Sheffield, the earliest item in the archive, and papers relating to Mitchell's application and appointment to his Oxford Chair, his election to the Royal Society and his knighthood.

University of Reading papers chiefly relate to physics teaching, both undergraduate and postgraduate, 1965-1977. There are also a small number of papers relating to university development in the 1970s. There is a significant record of Mitchell's teaching at Oxford: the 'Optics II' lecture course, which Mitchell seems to have taken over on his move to Oxford from Reading in 1978; and 'Solid State Option Structures & Dynamics' 1983.

There is a little general research material comprising a copy of Mitchell's Ph.D. thesis (University of Bristol 1950); manuscript notes, drafts and offprints relating to molten salts, c.1972-1980; and a little research correspondence, 1966-1996, including an exchange with C.A. Coulson on energy values in interstitials and vacancies, 1966. However, the great bulk of the research material which forms by far the largest component of the archive relates to Mitchell's interest in diamond. There is documentation of diamond research at Reading and, much more extensively, the Clarendon Laboratory Oxford, 1960-1996 and Mitchell's long association with De Beers as Consultant and from 1982 Chairman of the Diamond Research Committee, the liaison committee between groups of scientists in UK universities and De Beers Industrial Diamond Division (DEBID), which sponsored the research. The papers include correspondence between Mitchell and DEBID and Mitchell and British and South African scientists undertaking diamond research, agenda and minutes of meetings, budgets, Diamond Conference papers, research reports and research proposals.

The publications record comprises documentation of both Mitchell's own publications and of his editorial work. There are drafts of Mitchell's publications, 1974-1997, including scientific papers in the areas of neutron scattering and molten salts. However, the most extensive documentation relates to a short piece published in Physics World in 1991 in which Mitchell took a sceptical view of much of the then current climate change discussion. In addition to drafts, proofs and published version of the article, there is correspondence with readers of the article and



scientists and others to whom Mitchell sent copies of the article. There is also an incomplete set of offprints of Mitchell's scientific papers, 1949-1995. Mitchell's editorial work is represented by a good record of his role as general editor of Oxford University Press's Series on Neutron Scattering in Condensed Matter, 1987-1996.

Lectures and broadcasts material cover the period 1966-1999. The two earliest items are talks by Mitchell on the science of materials for the BBC Radio programme Science Survey. Lecture topics include diamond, molten salts, neutron scattering, science funding and policy, and global climate. Major addresses on diamond include a Friday Evening Discourse at the Royal Institution in 1988 and 'Fifty Years of University / Industry Collaboration' at the 50th Diamond Conference sponsored by De Beers in 1999.

There is substantial documentation of Mitchell's association with 15 British and international, chiefly European, societies and organisations. Of particular importance are the papers documenting Mitchell's Presidency of the CERN Council in the early 1990s; his long association with the Science Research Council (SRC) / Science and Engineering Research Council (SERC) including Mitchell's Chairmanship of the SERC 1985-1990; the Science and Environmental Policy Project (SEPP), 1991-1997; and UKAEA Harwell, 1973-1978. The CERN papers document the President of the Council's role in relations with individual member countries and in such issues as the US proposal for a Superconducting Super Collider and CERN's Large Hadron Collider proposal. In addition to documentation of his SERC Chairmanship there are papers relating to the provision of neutron research facilities in Britain including papers of the Neutron Beam Research Unit, Rutherford Laboratory, the SRC Neutron Beam Committee, Rutherford Laboratory Proton Spallation Neutron Source Working Group and the SRC Science Planning Group for Spallation Neutron Source. The SEPP papers are principally Mitchell's correspondence with its director S. Fred Singer and background material sent to him for information. Mitchell was contacted by Singer after the publication of Mitchell's 1991 article in Physics World. The Harwell material includes papers relating to neutron beam facilities, the 'New Harwell LINAC' project and nuclear fusion.

Documentation of visits and conferences mostly relates to Mitchell's interest in climate change controversy. Visits to South Africa in connexion with diamond research and De Beers are to be found with the diamond research papers. Visits made in connexion with Mitchell's Presidency of the CERN Council and his Chairmanship of the SERC are to be found with related CERN and SERC papers.

The physical extent of the collection is 29 boxes, ca 600 items.



Introduction

Edgar William ('Bill') John Mitchell was born on 25 September 1925 in Kingsbridge, south Devon. He was educated at the local grammar school and Sheffield University where he studied for a degree in physics (awarded 1946). He was employed in the Metropolitan-Vickers Research Laboratory between 1946-1951 during which time he successfully studied for a PhD at the University of Bristol. He was then appointed to a lectureship in the Department of Physics at Reading University where he developed a research programme studying defects in crystalline solids, such as semiconductors, quartz and diamond. In 1957 Mitchell's first neutron scattering experiment, using the BEPO (British Experimental Pile 'O') reactor at Harwell, showed that neutron scattering could be used to determine the properties of defects in solids, and thus opened up a new field.

His managerial and administrative abilities were demonstrated both at Reading and nationally. In 1960 he set up a novel interdisciplinary course at Reading on the physical properties of materials and in 1961 he was appointed Professor of Physical Properties of Materials. He subsequently became Head of the Physics Department, 1968-1978, Dean of the Faculty of Science, 1966-1969, and Deputy Vice-Chancellor, 1976-1978. In the national field he served as Chairman of the Physics Committee of the Science Research Council (SRC), 1967-1970. In 1966 the SRC set up the Neutron Beam Research Committee (NBRC) with responsibility for the funding and organisation of university users of the nuclear reactors at Harwell and Aldermaston. Mitchell served as its chairman for the first eight years. When the government rejected the proposal to build a British high flux beam reactor in favour of joining a similar Franco-German project at Grenoble (Institut Laue-Langevin), Mitchell became heavily involved in the successful negotiations for Britain to join, and served as acting joint director in 1973 and member of the scientific council, 1973-1980. In 1974 the NBRC set up the Neutron Beam Unit at the Rutherford Laboratory, Oxfordshire to support university users of neutrons. In 1977 approval was given to convert the old Nimrod accelerator into SNS (Spallation Neutron Source), subsequently renamed ISIS. Mitchell was an initiator and strong supporter of the project, and was a member of the planning group, 1978-1985.

In 1978 Mitchell was appointed Dr Lee's Professor of Experimental Philosophy at Oxford University and to a Fellowship at Wadham College. As head of the Clarendon Laboratory he initiated research in various aspects of laser and condensed matter physics and developed his own interests in the properties of molten salts and diamonds. He continued to be active on national and international committees, most importantly as a member of the Science and Engineering Research Council (SERC), 1982-1990 and chairman, 1985-1990. The most significant development of his chairmanship was probably the



introduction of interdisciplinary research centres in universities to concentrate research funding in key areas such as materials science and electronics, while the most publicly controversial issue was the moving of the Royal Greenwich Observatory at Herstmonceux, Sussex. As a sympathetic European committed to international collaboration, he was a very appropriate choice for the Presidency of the CERN Council at a time of important decisions about its future programme, 1991-1993.

Mitchell's distinguished career was recognised by many honours including election to the Royal Society in 1986 and a knighthood in 1990. He died on 30 October 2002.

For a fuller account of Mitchell's career see the memoir by R.A. Cowley in Biographical Memoirs of Fellows of the Royal Society, vol. 50 (2004), 173-181.

MS 5343/A

Biographical 1944-2002

MS 5343/A/1

Obituaries

2002

Taken from: The Times, 8 November 2002; Independent, 11

November 2002, Guardian, 12 November 2002

MS 5343/A/2-A/6A Curriculum vitae, biographical notes and lists of publications

undated

Within MS 5343/A/6A are papers relating to Lady Mitchell

(Professor Margaret Davies)

6 folders

MS 5343/A/7

Papers relating to Mitchell's time at the University of Sheffield

1944

Mitchell's notes on lectures on radio (in original binder and

includes loose papers)



MS 5343/A/8-A/11 Papers relating to Mitchell's time at the University of Oxford

1977-1978

Application and appointment as Dr Lee's Professor of

Experimental Philosophy

4 folders

MS 5343/A/12 Papers relating to Mitchell's time at the University of Oxford

undated

Mitchell's headed notepaper as Dr Lee's Professor of

Experimental Philosophy

MS 5343/A/13 Papers relating to Mitchell's time at the University of Oxford

1992

Opening of new Molecular Beam Epitaxy facility at the

Clarendon Laboratory

MS 5343/A/14- Papers relating to the Royal Society

A/16

1985-86

Election to Fellowship in 1986

3 folders

MS 5343/A/17 Honorary Degree, Reading

1987

Presentation address

MS 5343/A/18 Honorary Degree, Budapest

1988

Presentation address. Mentions Mitchell's Hungarian scientific

connexions



MS 5343/A/19 Vice-President, European Science Foundation

1989

Press notice

MS 5343/A/20- Knighthood **A/33** 1990-1992

MS 5343/A/20- Knighthood. 'K letters Replies sent'

A/32 1990

Includes a number of other personal letters received by

Mitchell at about the same time (unindexed)

Contents of folder divided into thirteen for ease of reference

MS 5343/A/33 Knighthood

1990-1992

Miscellaneous correspondence and papers re Knighthood

MS 5343/A/34 Officer's Cross of the Order of Merit of the Federal Republic of

Germany 1990

1990

Includes letters of congratulation (unindexed)

MS 5343/A/35 Presidency of CERN

1990-1991

Letters of congratulation only



MS 5343/A/36 Foreign Associate of the Royal Society of South Africa

1993, 1995

Correspondence and papers re award

Glazebrook Medal Institute of Physics 1996 MS 5343/A/37

1995

Includes letter announcing award and citation

MS 5343/A/38- Miscellaneous biographical items

A/50 n.d, 1985-2002

MS 5343/A/38- 'EJW Mitchell Expenses'

A/43 1985-2002

Includes consultancy arrangements, travel expenses etc.

Contents of folder divided into six for ease of reference

MS 5343/A/44 Kingsbridge Grammar School Old Boy's Society

1990-1991

Membership list, newsletters. Includes mentions of Mitchell

Portrait photographs of Mitchell MS 5343/A/45-A/49

n.d.

5 folders

MS 5343/A/50 Personal correspondence

1986-2002



MS 5343/B University of Reading

1969-1970

MS 5343/B/1-

Various University of Reading papers

B/3 1969-1970

Principally duplicated papers re university development in the 1970s including a paper by Mitchell. At B/3 are 5pp typescript

notes of after dinner speech (n.d)

Contents of folder divided into three for ease of reference

MS 5343/B/4-

Teaching

B/41

1965-1970, n.d

MS 5343/B/4-

'F.U.E. Lecture Notes'

B/11 1970-1976, n.d

Duplicated typescript syllabuses, manuscript notes for `F.U.E. Physics'. `First University Examination in Science' examination

questions for Physics etc.

Contents of folder divided into eight for ease of reference

MS 5343/B/12-B/21 'Quantum Mechanics: I P.P.M [Physical Properties of

Materials] Lecture course'

1965

'Provisional' summary of course and manuscript course notes

including sequence paginated 1-159

Contents of folder divided into ten for ease of reference



MS 5343/B/22- Postgraduate Lecture Notes

B/24 1966-1976

Manuscript notes on the optical properties of solids

Contents of folder divided into three for ease of reference

MS 5343/B/25-

'Optical Properties of Defects'

B/29 1971, 1974, n.d

Manuscript notes. Also, 'Optical spectra of defects, - Related Rough Notes', abstracts of three lectures by W. Hayes on 'Colour Centres in Ionic Solids', etc. (Hayes was a Lecturer at Oxford, 1962-1987, and therefore some of the undated material may relate to the period of Mitchell's tenure of the

Oxford chair from 1987)

5 folders

MS 5343/B/41 'Relation between statistical and macroscopic parameters'

n.d

Manuscripts notes (found with other teaching material)

MS 5343/C University of Oxford

1975-1983

MS 5343/C/1- University of Oxford teaching material

C/13 1975-1983

MS 5343/C/1- Optics II **C/10** 1975-1978

Manuscript notes for lecture course, duplicated handouts and synopses, examination papers (handouts prepared by G.A. Brooker). Includes notes written on the back of both University

of Reading and Oxford University headed notepaper.

10 folders



MS 5343/C/11-Solid State Option Structures & Dynamics M[ichaelmas] T[erm]

C/13 1983

1983

Manuscript course notes and transparencies

Contents of folder divided into three for ease of reference

MS 5343/D Research: General

1950-1996

MS 5343/D/1-Research General

D/26 1950-1996

MS 5343/D/2-'Molten Salts' c.1972-1980. n.d. D/19A

Manuscripts notes and drafts, offprints etc.

19 folders

MS 5343/D/20 Miscellaneous - Rough

Sheets of manuscript notes found stapled together. Includes notes on University of Reading Physics Department. headed

notepaper

MS 5343/D/20- Miscellaneous notes and drafts

D/22 n.d., 1996

MS 5343/D/21 'Molten State Problems'

Manuscript draft, etc.



MS 5343/D/22 Manuscript notes, etc.

1996

Relates to the work of the National Gallery's Honorary

Scientific Advisory Committee

MS 5343/D/23- Research Correspondence

D/26 1966-1992

MS 5343/D/23 Letters

March 1966

2 letters from C.A. Coulson and note added in proof re energy

values in interstitials and vacancies

MS 5343/D/24- Letter

D/25 1970-1985

Letter from G.J. Hayland, 18 April 1985, re structure of

superfluid helium, enclosing related offprints of papers of his

own and others.

2 folders

MS 5343/D/26 Correspondence re research proposals

1991-1992

MS 5343/E Research: Diamond

1960-2002



MS 5343/E/1- Diamond 1960-2002

MS 5343/E/1- Diamond research at Reading and Oxford **E/85A** 1960-1996

MS 5343/E/1- Diamond Research Clarendon Financial & General Correspondence

1974-1983

Correspondence and papers. Includes papers relating to work

at Reading University.

MS 5343/E/1 Proposals for diamond research in the Physics Department at

Reading 1975-1980

1974

By Mitchell, January 28th, 1974

MS 5343/E/2 1975-1976

MS 5343/E/3- 1977-1978 **E/4**

2 folders



MS 5343/E/5 'DIA S Africa visit Jan 1979-

October 1978 - January 1979

MS 5343/E/6 Proposals for diamond research in the Clarendon Laboratory,

Oxford, 1979-1983

1979

By Mitchell, January 5th, 1979

MS 5343/E7-

E/9

1979

3 folders

MS 5343/E/10 Conference 'The Defect Solid State -80', University of the

Witwatersrand, Johannesburg, 14 July 1980

1979-1980

MS 5343/E/11- 1980

E/12

2 folders

MS 5343/E/13- 1981

E/15

E/17

3 folders

MS 5343/E/16- 1982



2 folders

MS 5343/E/18-E/19

Correspondence and papers re joint study between Clarendon Laboratory and IBM of laser hole burning in ionic crystals

1982

2 folders

MS 5343/E20-E/21

1983

Includes manuscript draft and duplicated typescript 'Diamond

Research Clarendon Laboratory 1984-1989'

E/49

MS 5343/E/22- Clarendon Diamond Technical Papers & Reports

1972-1982

Correspondence and papers. Much of the material relates to the research programme of J. and E.M Wilks at the Clarendon.

MS 5343/E/22- 1979

E/24

3 folders

MS 5343/E/25- 1980 E/32

For manuscript notes and transparencies of talk by Mitchell on the physics of colour in diamond see E/28, E/29

7 folders



MS 5343/E/33- 1981 E/37

5 folders

MS 5343/E/38-

1982

E/41

4 folders

MS 5343/E/42- Duplicated and printed papers

1972-c.1979 E/49

8 folders

MS 5343/E/50-

Diamond Research Clarendon

E/56

1982-1985

Correspondence and papers. The papers were found in poor

physical condition.

MS 5343/E/57- Diamond Technical Correspondence MkII

E/64

1982-1985

Correspondence and papers. Much of the material relates to the research programme of J. and E.M Wilks at the Clarendon.

MS 5343/E/57

1982

MS 5343/E/58- 1983

E/59

2 folders



MS 5343/E/60-

1984

E/61

E/60 is programme of visit to De Beers Diamond Research

Laboratory

2 folders

MS 5343/E/62 1

1985

MS 5343/E/63-

Duplicated and printed papers

E/64

1983-1985

Includes manuscript notes by Mitchell at E/64

2 folders

MS 5343/E/65-

Diamond Papers Optical & Related

E/85

1960-1983

Correspondence and papers.

MS 5343/E/65 1974-1977

MS 5343/E/66 1978-1979

MS 5343/E/67 1980



MS 5343/E/68 1982-1983

MS 5343/E/69- Duplicated and printed papers

E/85 1960-c.1981

E/69 are manuscripts notes for lecture by Mitchell on diamond

17 folders

MS De Beers and the Simon Instrument Group

5343/E/85A 1995-1996

Correspondence and papers re financial administration

MS 5343/E/86- Diamond Research Committee/Consultancy

E/166 1983-2000

MS 5343/E/86- Diamond Cttee 1986-1995, n.d.

Correspondence and papers, including minutes, budgets and

papers re Diamond Conferences

MS 5343/E/86 1986-1987

MS 5343/E/87 1988

MS 5343/E/88 1989



MS 5343/E/89 1990

MS 5343/E/90-E/91

1991

E/91 is Mitchell's draft report on De Beers/University

collaboration

2 folders

MS 5343/E/92-E/93

1992

2 folders

MS 5343/E/94-E/95

1993

2 folders

MS 5343/E/96- 1994

E/97

2 folders

MS 5343/E/98-

1995

E/99

2 folders

MS 5343/E/100 n.d.



MS

General correspondence and papers

5343/E/101-E/166 1983-2002

MS

1983-1984

5343/E/101

Reports on university research programmes.

MS 5343/E/102 1986

Diamond Research Report from the University of Cambridge (J.E. Field) and Royal Holloway and Bedford New College

(Moreton Moore), and related correspondence

MS 5343/E/103 1990

Diamond Research Report from the University of Bristol (A.R. Lang) and memorandum from DEBID on 'Potential for 'new'

diamond heatsinking in electronics'.

MS 5343/E/104 1991

'The Next Decade A report prepared by Sir William Mitchell for

the Diamond Research Committee and DEBID'

MS 5343/E/1 1992

5343/E/105-E/106



MS 5343/E/105 'Innovation in Diamond Technology Initiative (1)'

Report by B.L. Jones (DEBID) and Mitchell (Consultant to

DEBID), May 1992

MS 5343/E/106 Report on '3rd European Conference on Diamond, Diamond Like and Related Coatings', Heidelberg, September 1992

MS 5343/E/107 University Visit Report Issue 1

Reports on a number of university research programmes including Mitchell's visit to King's College, London, 29 October

1992.

MS 5343/E/107A University Visit Report Issue 2

Reports on a number of university research programmes

including universities in South Africa.

MS 5343/E/108-

E/121

1993

MS 5343/E/108 January



MS

February

5343/E/109-E/110

E/109 is a manuscript draft of a report by Mitchell on a visit to Diamond Research Laboratory, 25 January - 5 February 1993

2 folders

MS

March-April

5343/E/111-E/112

Includes papers re workshop on diamond coatings, Bristol, 26

April 1993

2 folders

MS

March-May

5343/E/113

University visit reports

MS 5343/E/114 June

Includes laser patent proposal sent to Mitchell for comment and photograph of members of the Diamond Committee (C.A. Brookes, T. Evans, Sir Charles Frank and J.E. Mitchell) and B.L. Jones of DEBID. The Chairman (Mitchell) was absent through illness.

MS 5343/E/115 July

Includes Mitchell's review of 'The properties of natural & synthetic diamonds' edited by J.E. Filed for the Industrial

Diamond Annual Indiaqua

MS 5343/E/116 August

Includes papers re work at Royal Marsden Hospital on the use of thermo-luminescence in diamond as a radiation monitor for medical use.



MS

September

5343/E/117-E/118

E/117 is a report on work at Royal Marsden Hospital on the use of thermo-luminescence in diamond as a radiation monitor for medical use.

MS 5343/E/119 October

Includes report by Mitchell on visit to Royal Marsden Hospital on behalf of the Diamond Research Committee.

MS 5343/E/120 November

Includes report on visit by Mitchell to Clarendon Laboratory on behalf of the Diamond Research Committee.

MS 5343/E/121 December

Includes proposal relating to Diamond Electronics sent to Mitchell for comment and correspondence and papers re 1994 research budget.

MS 5343/E/122-E/128 1994



MS

January

5343/E/122

Includes report by Mitchell on Diamond Electronics, 11

January.

MS

February

5343/E/123-E/125

Correspondence and papers re meeting on 'cloud defects in

synthetic diamond' held this month.

3 folders

MS

February-November

5343/E/126-

E/127A Correspondence and papers re 'Diamond Detectors'

3 folders

MS

July

5343/E/128

Correspondence and papers re Diamond Conference and

meeting of Diamond Research Committee, 11-13 July.

MS

1995

5343/E/129-

E/132

MS

February

5343/E/129-

E/131

'Half-Year Diamond Research Reports'

3 folders



MS

July-November

5343/E/132

Includes research proposal and covering letter on

cathodoluminescence, '1995 University Budget', November.

MS

1996

5343/E/133-E/147

MS

January

5343/E/133-

E/134

Grant letters

2 folders

MS

February-March

5343/E/135

Correspondence and papers re visits to the Cavendish Laboratory, Cambridge and University of Liverpool etc. Includes Mitchell's manuscript notes on diamond research at

the Cavendish.

MS 5343/E/136 April

Includes memorandum on the benefits of support for university

research.

MS 5343/E/137May

E/138

Papers re Diamond Research Committee visit to King's College London. Mitchell's manuscript notes are at E/137

2 folders



MS

5343/E/139-

E/140

May-June

Correspondence and papers re visit to Hull University.

Mitchell's manuscript notes are at E/139

2 folders

MS

5343/E/141-E/143 June

Correspondence and papers re visit to Electronic Material Centre, Swansea University of Wales (E/141) and re 'Forward

Look' document on UK University Research on Diamond

sponsored by De Beers for the period 1996-2001 (E142-E/143)

3 folders

MS

5343/E/144

July

Correspondence and papers re Diamond Conference and

Diamond Research Committee meeting.

MS

5343/E/145

August

Synopsis of research project with covering letter.

MS

5343/E/146

October-November

Includes grant letters.

MS

5343/E/147

December



MS

1997

5343/E/148-E/153

MS

January

5343/E148-

E/149

Includes correspondence re grants.

2 folders

MS

5343/E/150

February-April

MS

May

5343/E/151-

E/152

Includes research proposals.

2 folders

MS

June-August

5343/E/153

Includes research proposal and programme of Diamond

Conference.

MS

1998

5343/E/154-

E/159

MS

May-June

5343/E/154-

E/156 Papers re work of J.F. Prins on diamond electronics including

patent proposal sent to Mitchell for comment.



3 folders

MS 5343/E/157 July

Includes Notes and Action Points from a meeting on University

Research, 6 July.

MS 5343/E/158 August

Includes report on 'N Doping' sent to Mitchell for comment.

MS 5343/E/159 October-November

Includes Notes and Action Points from a meeting on University

Research, 21 October.

MS

January

5343/E/160

Includes research report and research application.

MS

1999

5343/E/160-E/164

MS 5343/E/161 February



MS

March

5343/E/162-

E/164

Includes research report, papers for project meeting in Oxford

and visit to Royal Holloway University of London.

3 folders

MS

2002

5343/E/165

Printed-out email with news of death of J.P.F. Sellschop.

MS

Papers

5343/E/166

n.d

Includes typescript draft of article by Mitchell 'What Price

Synthetic Gem Diamonds?'

MS 5343/F

Publications

1949-1997

MS 5343/F/1-

Publications

F/74

1949-1997

MS 5343/F1-

Own publications

F/57

1949-1997

MS 5343/F/1- Drafts

F/34

1974-1997



MS 5343/F/1-F2 'Some comments on the occurrence of exponential tails to the absorption edges of disordered materials'. Not listed in

bibliography.

1974

Manuscripts and typescript drafts.

2 folders

MS 5343/F/3

Temperature dependence of phonon spectra in alkali halide

crystals (with C. Raptis)'. Not listed in bibliography

n.d

Typescript draft, latest bibliographical reference 1983.

MS 5343/F/4

'Inelastic neutron scattering studies of collective modes in molten CsCl (with R.L. McGreevy, F.M.A. Margaca and M.A.

Howe)', J. Phys. C.18 (1985) 5235-5247.

1985

Corrected proof.

MS 5343/F/5

'Diffuse scattering from alpha-Agl (with M.A. Howe and R.L.

McGreevy), z. f. Phys. B (1985), 15-19

1985

Typescript draft.

MS 5343/F/6-F/11 'Raman scattering from molten Li and Rb halides (with C.

Raptis)', J. Phys. C. 20 (1987) 4513-4528

1986-1987

Manuscript and typescript drafts, correspondence etc.



6 folders

MS 5343/F/12-F/16 'The femtosecond optical Kerr effect in molten casesium chloride (with C.W.W. Bradley, R.A. Taylor, J.F. Ryan)', J.

Phys. Condens Matter 1 (1989) 2715-2719

1989

Manuscript and typescript drafts, background material etc.

5 folders

MS 5343/F/17-F/30 'Reflections on global climate change', Physics World, August

1991

1989-1992

Mitchell was a climate sceptic. For Mitchell's association with the Science and Environmental Policy Project and its Director S. Fred Singer arising from this article see section H. For climate change meetings to which Mitchell was invited subsequent to the publication of the article see section J.

MS 5343/F/17

'Reflections on global climate change', Physics World, August

1991 1991

Typescript drafts, proofs, published version.

MS 5343/F/18-F/24 'Reflections on global climate change', Physics World, August

1991

1991-1992

Correspondence with readers of article and scientists and

others to whom Mitchell sent copies of the article.

7 folders

MS 5343/F25-F/30 'Reflections on global climate change', Physics World, August

1991

1989-1992

Background material.



6 folders

MS 5343/F/31-

'The structure and dynamics of molten salts'

F/32

1993-1994

Synopsis of book of this title for Oxford University Press,

correspondence with publishers etc.

2 folders

MS 5343/F/33

'A great opportunity wasted', New Scientist, 26 August 1995

Typescript and published version of article etc. Mitchell's

original title was 'Government responsibility for the research

councils'

MS 5343/F/34

Nevil Mott - some personal reminiscences

1997

Mitchell's contribution to 'Nevil Mott - reminiscences and

appreciations' edited by E.A. Davis.

MS 5343/F/35-

Offprints

1949-1995

Not a complete sequence.

MS 5343/F/35-

1940s, 1950s

F/37

F/57

At F/35 are manuscript notes found with the offprints.

3 folders

MS 5343/F/38- 1960s

F/46



9 folders

MS 5343/F/47- 1970s F/48

2 folders

MS 5343/F/49-

F/55

1980s

7 folders

MS 5343/F/56

1990s

MS 5343/F/57

Undated

n.d

MS 5343/F/58- Editorial and advisory

F/74

1987-1997

MS 5343/F/58- Oxford University Press

F/71

1987-1996

Correspondence and papers. Mitchell was a general editor in the Oxford series on Neutron Scattering in Condensed Matter. Correspondents include D. Degenhardt (for OUP) and fellow

editor S.W,Lovesey.



MS 5343/F/58 1987

MS 5343/F/59- 1988 **F/60**

2 folders

MS 5343/F/61 1989

MS 5343/F/62- 1991 **F/64**

3 folders

MS 5343/F/65- 1992 **F/68**

4 folders

MS 5343/F/69- 1993 **F/70**

2 folders

MS 5343/F/71 1994-1996



MS 5343/F/72 Philosophical Magazine A

1997

Report by Mitchell on paper submitted to the journal.

MS 5343/F/73- Royal Society Transactions A

F/74 1992-1994

Correspondence and papers re Mitchell's suggestion of a

themed issue on 'Melting and the molten state'.

2 folders

MS 5343/G Lectures and Broadcasts

1964-1999

MS 5343/G/1- Lectures and Broadcasts

G/51A 1964-1999

MS 5343/G/1 The Science of Materials 1. What is this stuff'?

1964

Duplicated typescript of talk by Mitchell for BBC radio

programme Science Survey.

MS 5343/G/2 The Science of Materials 2. The fascination of Imperfect

Crystals 1964

Duplicated typescript of talk by Mitchell for BBC radio

programme Science Survey.



MS 5343/G/3-G/10

Neutron Scattering Lectures, Kings College 1971. Rutherford

Lectures 1971 + Reading Lectures 1971.

1971

Manuscript notes and drafts, transparency, correspondence. Contents of folder divided into eight for ease of reference.

MS

Gallium Arsenide Lecture

5343/G/11-

1975-1978

G/17

Manuscript notes for talks at Warwick, Imperial Imperial

College, Nice and Saclay, typescript paper and photocopies of published papers by Mitchell and colleagues, transparencies, correspondence. Contents of folder divided into seven for ease

of reference.

MS 5343/G/18

Notes for Cavendish Colloquium, 8 February 1977

1977

18pp manuscript draft.

MS

What's new in solid state physics? P.C.L. [Physical Chemistry

5343/G/19-

Laboratory Oxford?], 14 February 1983

1979-1983 G/21

Manuscript draft, transparencies, offprints etc.

3 folders

MS 5343/G/22Hamburg Lecture

1982, c.1986

G/24

Offprints, manuscript notes, transparencies. Contents of folder

divided into three for ease of reference.



MS Diamond, Royal Institution Friday Evening Discourse, 19

5343/G/25- February 1988. **G/33** 1987-1988

MS Diamond, Royal Institution Friday Evening Discourse, 19

5343/G/25- February 1988.

G/27 1988

Manuscript and typescript drafts of lecture, transparencies.

3 folders

MS Dia Lecture Misc Papers

5343/G/28- 1987-1988

G/32 Correspondence re arrangements, background material etc.

Contents of folder divided into five for ease of reference.

MS 5343/G/33 EWJM transcript of diamond lecture

[1988]

16pp typescript.

MS 5343/G/34 'A Policy for the Funding of Science in the UK', Tenth W.E.S.

Turner Memorial Lecture, University of Sheffield, 5 May 1988.

1988-1989

Typescript draft, letter arising and published text 'Glass

Technology' Vol 30 No 2 April 1989.

MS Contribution for Professor E.W.J. Mitchell to the Prime

5343/G/34A Minister's seminar on Global Climate.

1989

5pp typescript, 2 pages at least appear to have been faxed on

4.25.1989.



MS 5343G/35- Molten Salts c.1990

Manuscript notes and transparencies for lecture or lectures. Contents of envelope divided into four for ease of reference. Envelope postmarked with date of 13 December 1990.

MS 5343/G/39-G/42 Manuscript notes and drafts, transparencies etc. for lectures on science funding, the SERC [Science and Engineering

Research Council], European scientific collaboration, etc.

1990

Includes notes for lectures in Oslo and Edinburgh. The Edinburgh occasion was held on 8 November 1990.

4 folders

MS 5343/G/43

'Physics - doing and funding', School of Physics and Space Research, University of Birmingham, 27 November 1991 1991

Manuscript draft, transparencies, etc.

MS 5343/G/44

I.O.P [Institute of Physics] speech, 26 January 1995

1995

11pp typescript draft, letter of thanks for Institute of Physics

President, Sir Arnold Wolfendale.

MS 5343/G/45

'Fifty Years of University/Industry Collaboration', 50th Diamond

Conference sponsored by De Beers, St Catherine's College,

Oxford, 4-7 July 1999

1987,1999

16pp typescript and manuscript draft, transparency, offprint.



MS 5343/G/46 Manuscript notes for speech at 50th Diamond Conference

Banquet, St. Catherine's College, Oxford, 4-7 July 1999

1999

MS 5343/G/47 What Price Synthetic Gem Diamonds?

n.d

13pp typescript draft.

MS 5343/G/48 Transparencies for unidentified lecture

n.d

MS Manuscript notes for after dinner speeches.

5343/G/49- n.d., 1998 **G/51**

3 folders

MS Record of after dinner speech by M.S. Longair sent to Mitchell,

5343/G/51A 23 October 1989

1989

The topic of Longair's speech was 'Astrophysics Cosmology

and Particle Physics. An Astronomical perspective'.

MS 5343/H Societies and Organisations

1973-1999



MS 5343/H/1- Societies and Organisations

H/219 1973-1999

MS 5343/H/1 Academia Europaea

1990-1997

In 1990 Mitchell was invited to contribute to the nominations process by serving on the advisory group for physics. In 1996

Mitchell became Emeritus Member of the Academy.

MS 5343/H/2- CERN 1990-1994

Papers document relations with individual member countries and such issues as the Superconducting Super Collider (SSC)

and CERN's Large Hadron Collider (LHC) proposal.

Correspondents include CERN Director General Carlo Rubbia,

the UK Dept. For Education and Science, Cabinet Office, Office for Science and Technology and US Department of

Energy.

MS 5343/H/2- CERN **H/3** 1990

General correspondence and papers. Includes papers re US proposal for a Superconducting Super Collider (SSC) including

'Framework for International Participation' May 1990.

2 folders

MS 5343/H/4- CERN 1991-1993

Correspondence and papers re relations with Portugal.

Includes papers re visit of Mitchell as President of the Council

to Portugal, May 1992.



MS 5343/H/8- CERN

H/12 March-May 1991

General correspondence and papers. Includes papers re 'SC 33' symposium and Commemorative Ceremony, 22 April and

relations with Portugal and Spain.

5 folders

MS 5343/H/13 CERN

June-August 1991

General correspondence and papers. Includes papers re SSC,

LHC Portuguese contribution etc.

MS 5343/H/14- CERN

H/16 October-December 1991

Includes papers re Czechoslovak application for membership, CERN management structure etc. At H/16 is Mitchell's afterdinner speech given to CERN Council and Observers, 18 December, as revised for offering Physics World for publication

and Council Resolution on LHC.

3 folders

MS 5343/H/17- CERN **H/20** 1991-1993

Correspondence and papers re relations with Greece.

4 folders

MS 5343/H/21- CERN **H/26** 1992-1993

Correspondence and papers re relations with Japan. Much of the correspondence is between Mitchell and the UK Cabinet

Office, Office of Science and Technology. At H/26 is publication 'Presenting CERN to Japan', December 1992.



MS 5343/H/27- CERN

H/28 April-June 1992

Includes papers re SSC.

2 folders

MS 5343/H/29- CERN

H/30 July-October 1992

Includes papers re SSC, LHC, German contribution etc.

2 folders

MS 5343/H/31 CERN

September 1992 Estimates for 1994.

MS 5343/H/32 CERN

Papers re 'CERN Day of Honour', Universal Exhibition Sevilla

'92, Spain, 30 September 1992.

MS 5343/H/33- CERN

H/34 October 1992-January 1993

Correspondence and papers re award of 1992 Nobel Prize for

Physics to Georges Charpak.

2 folders

MS 5343/H/35- CERN

H/36 December 1992-June 1993

Correspondence and papers re collaboration between CERN

and Russian research centres.



MS 5343/H/37 CERN

February 1993

Correspondence and papers re US SSC project. Include letter from Mitchell to UK Office of Science and Technology, 25

February.

MS 5343/H/38 CERN

February-December 1993

Correspondence and papers re relations with Spain.

MS 5343/H/39 CERN

April-May 1993

Correspondence and papers re CERN and Serbian physicists.

MS 5343/H/40- CERN

H/44 April 1993-February 1994

Correspondence and papers re relations with Portugal. Includes papers re visit of Mitchell to Portugal as CERN

President of Council, 25-27 October.

5 folders

MS 5343/H/45- CERN

H/49 February-December 1993

General correspondence and papers. At H/46 are papers re relations between CERN and US Department of Energy.

5 folders

MS 5343/H/50 CERN

November-December 1993

Correspondence and papers re LHC.



MS 5343/H/51 **CERN Council**

December 1993

Includes special LHC Session.

MS 5343/H/52 **CERN**

January-June 1994

General correspondence and papers,

H/59

MS 5343/H/53- Miscellaneous papers

MS 5343/H/53 Convention for the Establishment of a European Organisation

for Nuclear Research, Paris 1st July, 1953. As amended

MS 5343/H54-H/56

John Adams Engineer Extraordinary A Tribute by Michael

Crowley-Milling

Typescript draft.

3 folders

MS 5343/H/57 **Transparencies Book**

These cover the following topics: CERN general, user figures,

CERN_USA comparisons, user participation in CERN programmes, CERN budgets & related data and LHC.



MS **Transparencies**

Related to member contributions. 5343/H//58-

2 folders H/59

MS 5343/H/60-H/79

European Science and Technology Assembly (ESTA)

1992-1997

Correspondence and papers. Mitchell was a member of the Assembly at the outset and served on a working party on Inertial Confinement Options to Controlled Nuclear Fusion.

MS 5343/H/60 1994

Includes Commission decision to establish an ESTA and the

rules of procedure for the Assembly.

MS 5343/H/61- 1996 H/69

Includes drafts of report of ESTA working party on controlled

nuclear fusion.

9 folders

MS 5343/H/70- 1997

H/71

2 folders

MS 5343/H/72-

1992-1997

H/79

Background papers re nuclear fusion, European science policy

etc.



MS 5343/H/80-

European Science Foundation (ESF)

H/81

1989-1992

Correspondence and papers. At H/80 is Mitchell's 'Comments on the Structure of the ESF' prepared at the invitation of the

ESF Board.

2 folders

H/90

MS 5343/H/82- House of Commons Science and Technology Committee

1995-1996

Correspondence and papers re inquiry into the Particle Physics

and Astronomy Council.

9 folders

MS 5343/H/91

Institut Laune-Langevin, Grenoble

1974

Background papers only.

MS 5343/H/92

International Thermonuclear Experimental Reactor (ITER)

1995-1996

Letter and interim Design Report

MS 5343/H/93

NATO Science Committee

1996-1997

Correspondence and papers re review of Outreach Programme

and possible participation by Mitchell in the review.

MS 5343/H/94-H/95

Queen Elizabeth House (Department of International

Development), University of Oxford

1992

Correspondence and papers re Queen Elizabeth House review

committee.



MS 5343/H/96 Royal Society

1990, 1999

Brief correspondence re science policy and funding.

MS 5343/H/97- Schools Council

H/108 1976

Schools Council 18 + Research Programme based on N&F

Proposals Reports.

MS 5343/H/97- Schools Council

H/100 1976

Reports of the Physics Commissioned Group.

4 folders

MS Schools Council

5343/H/101- 1976

H/108 Reports of the Mathematics Commissioned Group.

8 folders

MS Science and Environmental Policy Project (SEPP)

5343/H/109- 1991-1997

H/117 Correspondence with Director S. Fred Singer and background

papers sent to Mitchell for information.

9 folders

MS Science Research Council/Science and Engineering Research

5343/H/118- Council **H/196** 1973-1996

The papers principally relate to the provision of facilities for neutron science and to Mitchell's period as Chairman of the

Council.



MS

Neutron Science Facilities.

5343/H/118-

1973-1984

H/156

Correspondence and papers. The papers were found in considerable disorder. They are presented as far as possible in chronological order. Includes papers of the Neutron Beam Research Unit, Rutherford Laboratory, the SRC Neutron Beam Committee, Rutherford Laboratory Proton Spallation Neutron Source Working Group and the SRC Science Planning Group

for Spallation Neutron Source.

MS 5343/H/118 **Neutron Science Facilities 1973**

MS 5343/H/119-H/120

Neutron Science Facilities 1974

2 folders

MS 5343/H/121-H/126

Neutron Science Facilities 1975

MS 5343/H/127-H/129

Neutron Science Facilities 1976

At H/127 is a copy of 'A Study Commissioned by ULCC to identify the Computational Requirements of Research in the Field of Condensed Matter Physics' by Mitchell.

3 folders

MS 5343/H/130-H/133

Neutron Science Facilities 1977



MS 5343/H/134-H/137

Neutron Science Facilities 1978

4 folders

MS 5343/H/138-H/140

Neutron Science Facilities 1980

At H/138 is conference handbook for conference on high resolution neutron spectroscopy, Oxford, 31 March-1 April

1980.

MS 5343/H/141 Neutron Science Facilities 1981-1984

MS 5343/H/142Neutron Science Facilities n.d.

H/146

5 folders

n.d

MS 5343/H/147Neutron Science Facilities.

1979-1984

H/156

Printed and duplicated papers.

10 folders

MS

Membership and Chairmanship of the SERC.

5343/H/157-

H/196

1982-1996

MS

Membership and Chairmanship of the SERC.

5343/H/157-

1982-1990

H/166

General correspondence and papers.



MS 5343/H/157 1982, 1985-1986

Includes correspondence and papers re Mitchell's appointment as member and chairman of the SERC.

MS 5343/H/158 1987

MS 5343/H/159 Report of Chairman's visit to Japan 7-12 August 1987

Bound volume.

MS 5343/H/160 1988

MS 5343/H/161 1989

MS 5343/H/162 Forward Look 1989 1990/91 to 1992/93

Bound volume.



MS Report of the Chairman's visit to the People's Republic of

5343/H/163 China 25 March - 1 April 1989

MS 5343/H/164-H/166 1990

3 folders

MS 5343/H/167 Notebook

Used by Mitchell from September 1985.

MS Chairman's weekly diary sheets

5343/H/168-

1987-1990

H/176 The sequence begins with the week beginning 28 September

1987.

9 folders

MS 5343/H177-H/180 Correspondence and papers re Directorship of the Royal

Greenwich Observatory.

0 1987

4 folders

MS 5343/H/181-H/186 Correspondence and papers re sale of Herstmonceux Castle.

1990-1996

Papers principally relate to inquiry into the sale by the House of Commons Public Accounts Committee. Papers at H/183-H/186

are retained in original SERC folders.



MS 5343/H/187Later miscellaneous correspondence and papers re science

policy and funding

H/194

1991-1995

Includes articles by Mitchell for New Scientist and EPSRC

online.

MS

5343/H/187-H/191

1991

5 folders

MS

5343/H/192

1992

MS

5343/H/193

1993,1995

MS

5343/H/194

Membership and Chairmanship of the SERC n.d.

n.d

MS

5343/H/195-H/196

Printed papers 1990-1992

2 folders

MS

Science Research Foundation (SRF)

5343/H/197

1995-1996

Correspondence and papers. The SRF's activities relate to the

establishment of a science park in the Bristol area.



MS 5343/H/198-H/219 United Kingdom Atomic Energy Research Establishment,

Harwell

MS 5343/H198-H/219 United Kingdom Atomic Energy Research Establishment,

Harwell 1973-1978

These papers were found together in very poor physical condition. They have received minimal examination at time of processing. Papers are presented in the order as found which was a very approximate reverse chronological order. Includes papers re neutron beam facilities, New Harwell LINAC project,

nuclear fusion etc.

22 folders

MS 5343/J

Visits and Conferences

1963-1997

MS 5343/J/1-J/17 Visits and Conferences

1963-1997

For Diamond conferences see section E. For visits and meetings in connection with Mitchell's roles at CERN and

SERC see section H.

MS 5343/J/1

Symposium on Radiation Damage in Semiconductors, Paris,

July 1964 1963,1964

Carbon copy of letter of invitation to C. A. Coulson with offprint

of paper by Coulson and colleagues.



MS 5343/J/2

4th Annual Meeting of the Society of Magnetic Resonance, London, August 1985

Invitation from M.F. Wood, Oxford Instruments, to cocktail party held in association with the meeting.

MS 5343/J/3

Visit to Prague, 1985

One letter only arising from visit.

MS 5343/J/4

Symposium on Climate Research, Impacts Assessment and Policy Making, Green College, Oxford, 1-2 April 1992

Invitation with draft programme and invitation list from Crispin Tickell.

MS 5343/J/5

Symposium on Global Environment Accords, Massachusetts Institute of Technology, 24-25 September 1992

Invitation (declined) because of another meeting in Geneva.

MS 5343/J/6-J/11 Visit to International Institute for Applied Systems Analysis (IIASA), 5-6 November 1992

Correspondence re arrangements, schedule of visits, draft of Mitchell's lecture, background papers re IIASA etc. At J/11 is a 1997 enquiry re global climate change found with IIASA papers. Mitchell gave a seminar on 'Reflections on global warming'



MS 5343/J/12 Seminar on Environmental Studies, Oxford, 12 November 1992

Invitation from Environmental Change Unit, programme and 'Database on Environmental Studies at the University of Oxford'.

MS 5343/J/13-J/14 Forum Engleberg on Energy and Environment: A question of Survival, Germany, 16-19 March 1993.

Correspondence re arrangements, list of participants, programme.

2 folders

MS 5343/J/15

European Academy of Environment Affairs International Symposium on 'The Greenhouse Controversy', Leipzig, Germany, November 1995.

Invitation for Mitchell to participate.

MS 5343/J/16-J/17 Symposium on 'Applications of Electromagnetic Radiation', Royal Society of Edinburgh, 27 March 1997

Correspondence re arrangements, programme, abstracts etc. Papers relating to 1997 Diamond Conference at Heriot-Watt University, Edinburgh were found with the symposium material (see J/16).

2 folders

MS 5343/K

References and Recommendations 1991-2000



MS 5343/K/1- References and recommendations

K/46 1991-2001

MS 5343/K/1- Appointments, promotions, prizes, honours etc. **K/30** 1991-1999

0 1991-1999 Unindexed.

MS 5343/K/1 1991

MS 5343/K/2 1992

MS 5343/K/3 1993

MS 5343/K/4- 1994 **K/7**



MS 5343/K/8-1995 K/15

8 folders

MS 5343/K/16- 1996 K/18

3 folders

MS 5343/K/19- 1997 **K/22**

4 folders

MS 5343/K/23- 1998 K/29

7 folders

MS 5343/K/30 1999

MS 5343/K/31- Academia Europaea

K/38 1992-2001

Membership proposals. Unindexed.

MS 5343/K/31 1992



MS 5343/K/32 1993

MS 5343/K/33 1998

MS 5343/K/34 1998-1999

MS 5343/K/35 1999

MS 5343/K/36 2000

MS 5343/K/37- 2001 K/38



MS 5343/K/39 Nobel Prize Committee (Physics)

1993

Nomination. Unindexed.

MS 5343/K/40- Royal Society **K/46** 1992-1999

Elections etc. Unindexed.

MS 5343/K/40 1992

MS 5343/K/41 1995

MS 5343/K/42 1995-1997

MS 5343/K/43 1996-1997

MS 5343/K/44 1998



MS 5343/K/45 1999

MS 5343/K/46 Royal Society n.d. n.d.