

CURRICULUM VITAE

Stephen William Spencer McKeever

Vice President for Research and Technology Transfer
MOST Chair of Experimental Physics,
Regents Professor, and Noble Research Fellow
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PERSONAL DETAILS

Born: September 22, 1950
Birthplace: Widnes, England, UK
Married, two children
US Citizen

EDUCATION

University College of North Wales, U. K.

Ph.D. Materials Science, June, 1975. Thesis title: "The Investigation of Localized States in Inorganic Insulators" Adviser: Dr. D. M. Hughes
M. S. (distinction) in Materials Science, June, 1973.
B. S. (honors) in Electronic Engineering, June, 1972.

HONORS AND AWARDS

Royal Society (U. K.) Travel Awards: U. S. A. (1977), Spain (1980).
U. K. Science Research Council Postdoctoral Fellowship, 11/77 - 10/79.
Sigma Xi
Sigma Pi Sigma
Mid-America State Universities Association (MASUA) Honor Lecturer, 1987-88.
Marquis Who's Who in Science and Technology, 1984-present
Noble Research Fellow in Optical Materials, 1987 - present.
Oklahoma State University, Board of Faculty Representatives Award for Scholarly Excellence, 1987
Oklahoma State University, Burlington Northern Faculty Achievement Award, 1988
Regents Professorship, 1990-present
More Oklahoma Science and Technology Chair of Experimental Physics, 1999 - present
OSU Eminent Faculty Award, 1999
OSU President's Service Award, 2000
Sigma Xi, OSU Chapter, Lectureship Award, 2002

MEMBERSHIP AND PROFESSIONAL ACTIVITIES

Fellow, Institute of Physics (U. K.) FInstP C Phys.
Member, American Physical Society
Member, Health Physics Society
Fellow, Risø National Laboratory, Denmark
Co-Editor-in-Chief, *Radiation Measurements* (Elsevier), 1994 - 2004
Oklahoma Academy of Sciences:
Vice-Chairman, Physical Sciences, 1986 - 1987
Chairman, Physical Sciences, 1987 - 1988
Member, Meteoritical Society, 1975-1982
U. K. TLD Forum, 1976-1983
Conference Co-President:
10th and 11th Int. Conferences on Solid State Dosimetry, (1992 and 1995).
Invited Session Chairman:
196th ACS Nat. Meeting, Div. of Geochemistry, Los Angeles, Sept. 1988

LUMDETR' 91, '94 and '97 Conferences (1991, 1994, 1997)
 8th-13th Int. Conferences on Sol. St. Dosimetry (1986, 1989, 1992, 1995, 1998, 2001)
 7th, 8th and 9th Int. TL and ESR Dating Conferences (1993, 1996, 1999)
 Health Physics Society Annual Meeting, San Antonio, July 1996

Scientific Advisory Committee:
 LUMDETR' 91, '94, '97, '00 & '04 Conferences (1991, 1994, 1997, 2000, 2004)
 8th-15th Int. Conferences on Sol. St. Dosimetry (1986, 1989, 1992, 1995, 1998, 2001, 2004, 2007)
 7th-11th Int. TL and ESR Dating Conferences (1993, 1996, 1999, 2002, 2005)

Member, Review Panel for *Ancient TL*, 1984 - present
 Member, Editorial Board
Radiation Protection Dosimetry, 1987 – 1993
Radiation Measurements, 1994 - present

Member, Solid State Dosimetry Standing Committee, 1992-1995
 International Solid State Dosimetry Organization:
 Member, 1995-1998
 Vice-Chairman, 1998-2001
 Chairman, 2001 – 2004
 Immediate Past-Chairman, 2004-2007

Invited Papers at many National and International Conferences
 Member, National Council on Radiation Protection and Measurements
 Committee SC 46-15 on assessment of NASA Astronaut Dosimetry, 1999 – 2002
 Committee SC 1-15 on Radiation Protection for Astronauts in Short-Term Lunar Missions, 2005-present

Co-Director, Arkansas-Oklahoma Center for Space and Planetary Sciences, 2000-2003
 Co-Dean, Solid State Dosimetry Summer School (Athens, July, 2001; Yale, July 2004)
 Organizer, First North American Luminescence Dating Workshop, OSU-Tulsa, November, 2001
 Co-Organizer, 2007 Workshop on Radiation Measurements of the ISS, Stillwater, USA, September, 2007
 Member, Joint Board of the Oklahoma Technology and Research Park.
 Member, Advisory Board of the Oklahoma Nanotechnology Initiative
 Member, Advisory Board of the Oklahoma Experimental Program to Stimulate Competitive Research (EPSCoR)
 Member, OSU Technology and Business Assessment Group
 Member, Advisory Board Mid-America Industrial Park, Oklahoma, Business Incubator
 Member, Board of Trustess, Southeastern Universities Research Association
 Member, Advisory Board of University of Central Oklahoma, Department of Engineering and Physics
 Member, Stillwater Industrial Foundation Board

UNIVERSITY ADMINISTRATION

Head, Department of Physics, Oklahoma State University, 1995-1999.
 20 faculty; 40-45 graduate students; ~25 undergraduate majors, 6 staff
 \$1.0 - \$1.5M annual research budget

Associate Dean for Research, College of Arts & Sciences, Spring 2000 - 2003
 Annual research administration budget of ~ \$0.75M. Responsible for numerous research-related programs and initiatives, including the Arts & Sciences Summer Research Programs, The Dean's Incentive Grants, the College Travel Program. Also responsible for start-up and cost-share negotiations, and liaising with the Office of the Vice President for Research, the Office of Intellectual Property and Technology Transfer, and all other research-related units on campus.

Vice President for Research and Technology Transfer, Fall 2003 - present
 In excess of \$100M annual research expenditures; approximately 1000 faculty. Responsible for university start-up and cost-share programs, all internally funded research initiatives, and university research centers. Office of Intellectual Property Management, Office of Research Compliance, Office of University Research Services,

RESEARCH INTERESTS

SOLID STATE PHYSICS/MATERIALS SCIENCE/RADIATION DOSIMETRY/DATING:

Radiation dosimetry, including personal, environmental, medical and space applications; luminescence dating; optically stimulated luminescence; thermoluminescence; thermally stimulated conductivity; characterization

and identification of defects in insulating and semiconducting materials; radiation effects; radiation history of planetary surfaces; luminescence of geological materials; deep levels in semiconductors; deep level transient spectroscopy; ionic thermocurrents; optical absorption; photoluminescence; photoconductivity; radioluminescence; radiation damage.

EMPLOYMENT

1975 - 1979; Research Fellow, University of Birmingham (U. K.), Department of Physics.
1980 - 1982; Research Fellow, University of Sussex (U. K.), School of Engineering and Applied Science
1983 - 1986; Assistant Professor, Oklahoma State University, Department of Physics.
1986 - 1987; Associate Professor, Oklahoma State University, Department of Physics.
1987 - 1989; Associate Professor and Noble Research Fellow Oklahoma State University, Department of Physics.
1989 - 1990; Professor and Noble Research Fellow, Oklahoma State University, Department of Physics.
1990 - 1995; Regents Professor and Noble Research Fellow, Oklahoma State University, Department of Physics.
1995 - 1999; Head of Department, Regents Professor and Noble Research Fellow, Oklahoma State University, Department of Physics.
1999 - 2000; MOST Chair of Experimental Physics, Regents Professor and Noble Research Fellow, Oklahoma State University, Department of Physics.
2000 - 2003; Associate Dean for Research, College of Arts & Sciences; MOST Chair of Experimental Physics, Regents Professor and Noble Research Fellow, Oklahoma State University, Department of Physics
2003-present Vice President for Research and Technology Transfer, MOST Chair of Experimental Physics, Regents Professor and Noble Research Fellow, Oklahoma State University, Department of Physics
Aug. 1989 - Feb. 1990; Visiting Scientist, Naval Research Laboratory, Washington DC.
Feb. 1990 - Aug. 1990; Visiting Professor, Univ. Sussex, Dept. Physics, UK.
Aug. 1994 - Jan. 1995; Guest Scientist, Risø National Lab., Denmark.

RESEARCH GRANTS AND CONTRACTS

11/79 - 10/79 Science Research Council (U. K.) *Thermoluminescence of Extra-Terrestrial Materials*, \$21,000
11/79 - 10/81 Science Research Council (U. K.) *Thermoluminescence Studies of Terrestrial and Extra-Terrestrial Materials* with S.A. Durrani, \$55,000.
04/84 - 04/85 Naval Surface Weapons Center *Thermoluminescence Processes in Mn-doped CaF₂* with L. E. Halliburton, \$25,000.
06/85 - 06/86 Oklahoma State University *Dean's Incentive Grant*, \$2,500.
06/85 - 1/89 Naval Surface Weapons Center *Thermoluminescence Processes in CaF₂:Mn* \$150,000.
10/86 - 03/88 Naval Research Laboratories *An Investigation of the Factors Governing the Effects of Charged Particle Beams on Insulating Materials for Use in Thermoluminescence Dosimetry*, \$145,000.
10/86 - 10/89 National Science Foundation, *Defect Characterization of the Pre-Dose Effect in Quartz as Used in Radiation Dosimetry and Dating*, \$145,000.
07/88 - 08/88 National Science Foundation, Research Opportunities Award, Supplement to above grant, \$11,551.
06/88 - 08/89 National Science Foundation, Research Experience for Undergraduates, supplement to above grant, \$6,000.
06/89 - 08/88 National Science Foundation, Research Opportunities Award, Supplement to above grant, \$6,000.
01/87 - 09/88 Defense Advanced Research Projects Agency with R. C. Powell, L. E. Halliburton, T. M. Wilson and J. P. Wicksted, \$750,000.
06/88 - 08/88 National Science Foundation *Nonlinear Optical Materials* REU Program with G. S. Dixon (P.I.), L. E. Halliburton, J. D. Wicksted, R. C. Powell, J. J. Song, D. K. Bandy, J. J. Martin, \$39,000.
06/87 - 08/87 National Science Foundation *Nonlinear Optical Materials* REU Program with G. S. Dixon, (P.I.) R. C. Powell, L. E. Halliburton, J.J. Martin, and J. P. Wicksted, \$39,150.

08/88 - 08/91 US-Israeli Bi-National Science Foundation, *Development of a Stable, Highly-Sensitive Thermoluminescence Dosimeter based on LiF:Mg,Cu,P* with Y. S. Horowitz and A. Horowitz, \$145,000.

01/89 - 04/92 Defense Advanced Research Projects Agency, *Characterization of II - VI Materials for Optical Technology Applications* with R. C. Powell, L. E. Halliburton, J. J. Song, J. P. Wicksted, T. M. Wilson and E. Cantwell, \$2,539,294.

09/89 - 09/93 Oklahoma Center for the Advancement of Science and Technology, *Development of a LiF:Cu,Mg,P Radiation Dosimeter*, \$76,650.

10/89 - 03/92 Naval Surface Warfare Center, *Electronic Structure Calculations of [Mn/F] Complexes in Mn-doped CaF₂* with T. M. Wilson, \$25,000.

08/89 - 08/90 National Science Foundation *Long-Term Research Visit to the United Kingdom*, \$12,200

06/89 - 08/89 OSU Center for Energy Research, *Research Experience for Undergraduates* with G. S. Dixon, R. C. Powell, D. K. Bandy, J. J. Song, J. P. Wicksted and L. E. Halliburton, \$25,000.

09/90 - 09/91 National Science Foundation, *Acquisition of a Spectrophotometric Facility*, \$74,000.

03/92 - 09/95 National Science Foundation, *Advanced Materials for Photonics and Laser Applications*, with J.J. Martin, G.S. Dixon, R. Hauenstein, E.R. Knobbe, R. Zaroni, E.M. Holt, \$1,000,000.

01/92-01/93 Department of Energy, *10th Solid State Dosimetry Conference* with M. Moscovitch (Georgetown Univ.), \$5,000

01/92-01/93 National Institute of Health, *10th Solid State Dosimetry Conference* with M. Moscovitch (Georgetown Univ.), \$5,000

08/94-12/94 National Science Foundation, *US-Denmark Cooperative Research on Dosimetric Applications of OSL*, \$7,965.

08/95-07/96 University Center for Energy Research, Oklahoma State University, *Retrospective Radiation Dose Reconstruction and Radiation Dose Monitoring Using Pulsed Optically Stimulated Luminescence of Natural Materials*, \$16,997.

11/95-12/00 Landauer Inc., *Development of a Pulsed Optically Stimulated Luminescence Personal Dosimetry System based on Aluminum Oxide*, \$905,508.

01/96-01/99 NATO, *Collaboration Grant: Retrospective Dosimetry*, with Dr. Lars Bøtter-Jensen, Risø National Laboratory, Denmark. \$12,000

08/97-07/98 NSF EPSCoR, *Development of an Integrating UVB Dosimeter*, \$28,113.

06/97-12/97 Stillwater Sciences/SBIR/Dept. Commerce, *Development of Al₂O₃ Detector Material for High Dose Dosimetry in Industrial Processing*, \$12,212

07/97-06/98 OSU Environmental Institute/Center for Sensors and Sensor Technology, *An Integrating UVB Dosimeter*, \$25,000.

01/97-12/98 Stillwater Sciences/OCAST, *Development of a Aluminum Oxide for Optically Stimulated Luminescence Dosimetry*, \$24,000

01/98-12/98 NSF/EPSCoR, *TL/OSL Equipment for a UVB Integrating Dosimeter*, \$30,000, plus State of Oklahoma Cost Share, \$30,000.

04/97-04/98 NIST, *SURF Program*, \$3,600

08/98-08/00 Oklahoma State Regents Economic Development Board, *Development of a UVB Dosimeter*, \$100,000

06/99-06/00 Center for Sensors and Sensor Technology, Oklahoma State University. *A Near-Real-Time Radiation Dosimeter for Radiation Therapy*, with K. Bartels, W. Drost and R. Bahr. \$6,000

09/99-09/02 Oklahoma Center for the Advancement of Science and Technology, *A Near-Real-Time Radiation Dosimeter for Radiation Therapy*, with K. Bartels, W. Drost and R. Bahr. \$133,801

09/00-09/02 National Science Foundation. *Arkansas-Oklahoma Center for Space and Planetary Sciences*, with D.W.G. Sears, \$750,000, with \$750,000 match from the States of Arkansas and Oklahoma.

04/01-04/04 National Aeronautics and Space Administration, *An integrated monolithic radiation dosimeter based on Optically Stimulated Luminescence from Al₂O₃*, with T.G. Stoebe, \$1,000,000

08/01-08.02 National Cancer Institute. *Luminescence Dosimetry of Bricks from the Semipalatinsk Region of Russia* with D. Banerjee. \$25,000.

09/01-09/04 Department of Energy. *Development and Demonstration of an In-Situ Subsurface Contamination Monitor* with J. Durham and M.S. Akselrod. \$584,000

09/02-12/04 Landauer Inc., *Development of Optical Fiber Dosimeters based on OSL from Aluminum Oxide for use in Radiotherapy*, \$260,166.

- 05/04-05/07 Jet Propulsion Laboratory, Director's Research & Development Fund. Miniature Age Dating/Material Characterization Instrument for Mars Exploration: \$300,000, with Dr. Sam Kim (PI), JPL
- 01/05 – 12/05 Landauer Inc., *Development of Optical Fiber Dosimeters based on OSL from Aluminum Oxide for use in Radiotherapy*, with E.G. Yukihiro (PI) \$108,000.
- 02/07 – 08/09 Oak Ridge National Laboratory., *Development of Teeth as OSL Radiation Dosimeters* \$139,000

(Total Research Income since at OSU: \$10,723,707 - \$3,814,263 as PI; \$6,909,444 as Co-PI)

LEGISLATIVE FUNDING

(A) *STATE*

1. \$70,000,000 for new Interdisciplinary Research Building; completion due in 2010
2. \$5,000,000 for University Multispectral Laboratory
3. \$19,000,000 for Sensor and Homeland Security Research

(B) *FEDERAL*

1. FY2006 and FY2007; \$2,50,000 for sensor testing and evaluation at the OSU University Multispectral Laboratory.

PRIVATE DONATIONS/DEVELOPMENT

1. Private donor. \$360,000 Undergraduate Research Scholarships
2. Ponca City Development Authority. \$2,000,000 over 4 years, for the University Multispectral Laboratory
3. ConocoPhillips Inc. Research Building gift; estimated value - \$5,700,000; for University Multispectral Laboratory.
4. ConocoPhillips. \$2,000,000 over 4 years, for the University Multispectral Laboratory

REFEREE FOR

Australian Research Grants Scheme, Ancient TL, Earth and Planetary Science Letters, Geochimica Cosmochimica Acta, Journal of Luminescence, Journal of Physics C: Condensed Matter, Journal of Physics D: Applied Physics, Journal of Polymer Science, NASA, National Science Foundation, Nature, Physical Review B, Radiation Measurements, Radiation Protection Dosimetry, Smithsonian Contributions to Earth Science.

PUBLICATIONS

(A) *BOOKS*

1. S. W. S. McKeever,
Thermoluminescence of Solids,
Cambridge University Press, Cambridge, 1985.
2. S.W.S. McKeever, M. Moscovitch and P.D. Townsend,
Thermoluminescence Dosimetry Materials: Properties and Uses,
Nuclear Technology Publishing, Ashford, 1995.
3. R.Chen and S.W.S. McKeever,
Theory of Thermoluminescence and Related Phenomena
World Scientific Publishers, Singapore, 1997.
4. L. Boettger-Jensen, S.W.S. McKeever and A.G. Wintle
Optically Stimulated Luminescence Dosimetry
Elsevier Science, Amsterdam, 2003
5. R.J. Vetter, E.S. Baker, D.T. Bartlett, T.B. Borak, S.M. Langhorst, S.W.S. McKeever, J. Miller, R.J. Preston and J.W. Wilson. Edited. M. Rosenstein.
Operational Radiation Safety Program for Astronauts in Low-Earth Orbit: A Basic Framework
National Council on Radiation Protection and Measurements, NCRP-Rep. 142, 2002

(B) *EDITOR*

1. Special issue of the journal *Radiation Protection Dosimetry*, **Vol. 8**, 1984, on *Thermoluminescence Materials*.
2. L. M. Coyne, S. W. S. McKeever and D. F. Blake (eds.)
Spectroscopic Characterization of Minerals and Their Surfaces, ACS Symposium Series, No. 415, 1989.
3. S.W.S. McKeever, E.P. Goldfinch and A.Scharmann (eds.)
Proceedings of the 10th International Solid State Dosimetry Conference, Washington DC, July 1992.
Radiation Protection Dosimetry **47** (1993)
4. I. Tale, A. Gurvich, G. Hütt, S.W.S. McKeever, A. Wintle, J. Pálfalvi and S.A. Durrani
Proceedings of the LUMDETR '91 Conference, Riga, Latvia, October, 1991
Nuclear Tracks and Radiation Measurements **21** (1993)
5. S.W.S. McKeever
Proceedings of the LUMDETR '94 Conference, Tallinn, Estonia, September, 1994
Radiation Measurements **24** (1995).
6. S.W.S. McKeever
Proceedings of the Luminescence and Electron Spin Resonance Dating Conference, Canberra, April, 1996
Radiation Measurements **28** (1997)
7. S.W.S. McKeever
Proceedings of the LUMDETR '97 Conference, Ustron, Poland, October, 1997
Radiation Measurements (in preparation) **29** (1998).
8. M. Moscovitch and S.W.S. McKeever
Advanced Topics in Solid State Dosimetry,
Solid State Dosimetry Summer School, Athens, Greece, July, 2001
Nucl. Instrum Meth, B, **184**, 1-294 (2001)

(C) *CHAPTERS IN BOOKS*

1. L. M. Coyne and S. W. S. McKeever,
Spectroscopic Characterization of Minerals and Their Surfaces: An Overview
in *Spectroscopic Characterization of Minerals and Their Surfaces*,
eds. L. M. Coyne, S. W. S. McKeever and D. F. Blake, p1,
ACS Symposium Series, No. 415 (1989).
2. S. W. S. McKeever,
Energy Storage Mechanisms and Thermoluminescence Processes in Minerals,
in *Spectroscopic Characterization of Minerals and Their Surfaces*, eds. L. M. Coyne, S. W. S. McKeever
and D. F. Blake, p166, ACS Symposium Series, No. 415 (1989).
3. S. W. S. McKeever,
Mechanisms and Parameters: Factors Governing Thermoluminescence,
in *Advanced Mineralogy*, vol. 2, ed. A. S. Marfunin, p147
Springer-Verlag, Helidelberg (1995).
4. S.W.S. McKeever, V.K. Vlasov, O.A. Kulikov and K.S.V. Nambi,
Thermoluminescence Applications
in *Advanced Mineralogy*, vol. 2, ed. A.S. Marfunin, p157
Springer-Verlag, Heidelberg (1995).
5. S.W.S. McKeever,
Thermoluminescence,
in *Encyclopedia of Applied Physics*, **21**, 355-372
American Institute of Physics and VCH Publishing (1997).

(D) *PEER REVIEWED JOURNAL PUBLICATIONS*

1. S. W. S. McKeever and D. M. Hughes
Thermally Stimulated Currents in Dielectrics
J. Phys. D: Appl. Phys. **8**, 1520-1529 (1975).
2. S. A. Durrani, P. J. Groom, K. A. R. Khazal and S. W. S. McKeever,
The Dependence of TL Sensitivity Upon Irradiation Temperature in Quartz
J. Phys. D: Appl. Phys. **10**, 1351 - 1361, (1977).
3. S. A. Durrani, K. A. R. Khazal, S. W. S. McKeever and R. J. Riley,
Studies of Changes in the TL Sensitivity in Quartz Induced by Proton and Gamma Irradiations

- Radiat. Effect **33**, 247 - 254 (1977).
4. S. W. S. McKeever and D. M. Hughes,
Low Temperature Space-Charge Polarization in Alkali Halide Crystals
J. Phys. Chem. Solids **39**, 211 - 219 (1978).
 5. S. A. Durrani, R. K. Bull and S. W. S. McKeever,
Radiation and Thermal Histories of Luna-24 Drill-Core Samples
in *Mare Crisium: The View from Luna-24*, ed. R. B. Merrill and J. J. Papike,
Pergamon Press, N. Y., 179-104 (1978).
 6. S. W. S. McKeever and D. W. Sears,
Thermoluminescence and the Terrestrial Age of the Estacado Meteorite,
Nature **275**, 629 - 630 (1978).
 7. S. W. S. McKeever and D. W. Sears,
Meteorites and Thermoluminescence,
Meteoritics **14**, 249-41 (1979).
 8. S. W. S. McKeever,
A Note on the Plateau Test as used in TL-Dating,
Ancient TL **6**, 13 - 16 (1979).
 9. S. A. Durrani, R. K. Bull and S. W. S. McKeever,
Solar-Flare Exposure and Thermoluminescence of Luna-24 Core Material,
Phil. Trans. Roy. Soc. **297**, 41 - 50 (1980).
 10. S. W. S. McKeever and S. A. Durrani,
On the Anomalous Fading of TL in Meteorites,
Mod. Geol. **7**, 75 - 79 (1980).
 11. S. W. S. McKeever,
The Analysis of Thermoluminescence Glow-Curves From Meteorites,
Mod. Geol. **7**, 105-114 (1980).
 12. S. W. S. McKeever and D. W. Sears,
The Natural TL of meteorites: A Pointer to Meteorite Orbits?,
Mod. Geol. **7**, 137 - 145 (1980).
 13. D. W. Sears and S. W. S. McKeever,
Measurement of the TL Sensitivity of Meteorites,
Mod. Geol. **7**, 201 - 207 (1980).
 14. S. W. S. McKeever,
On the Analysis of Complex Thermoluminescence Glow-Curves: Resolution into Individual Peaks,
Phys. Stat. Sol. (a) **62**, 331 - 340 (1980).
 15. R. Chen, S. W. S. McKeever and S. A. Durrani,
Solution to the Kinetic Equations Governing Trap Filling. Consequences Governing Dose-Dependence and Dose-Rate Effects,
Phys. Rev. B, **24**, 4931 - 4944 (1981).
 16. S. W. S. McKeever and E. Lilley,
Thermally Stimulated Polarization and Depolarization Currents (TSPC and TSDC) in LiF:Mg²⁺ (TLD-100),
J. Phys. C: Sol. St. Phys. **14**, 3547 - 3555 (1982).
 17. S. W. S. McKeever,
Dating Meteorite Falls Using Thermoluminescence: Application to Antarctic Meteorites,
Earth and Planet. Sci. Letts. **58**, 419 - 429 (1982).
 18. S. W. S. McKeever and E. Lilley,
Evidence for Trimer Formation During Dipole Clustering in Mg-Doped LiF,
J. Phys. Chem. Solids **43**, 885 - 893 (1982).
 19. S. W. S. McKeever and P. D Townsend,
Comment on "Thermoluminescence of Meteorites and their Terrestrial Ages,
Geochim. Cosmochim. Acta **46**, 1997 - 1998 (1982).
 20. P. D. Townsend, K. Ahmed, P. J. Chandler, S. W. S. McKeever and H. J. Whitlow,
Measurements of the Emission Spectra of LiF During Thermoluminescence,
Radiat. Effects **72**, 245 - 257 (1983).
 21. S. W. S. McKeever and E. Lilley,
On the Kinetics for Thermoluminescence in LiF(TLD-100),

- J. Phys. D.: Appl. Phys. **16**, L39 - 44 (1983).
22. S. W. S. McKeever,
Thermoluminescence in the Alkali Halides (Review),
Radiat. Protect. Dosim. **8**, 3-23 (1984).
 23. S. W. S. McKeever,
Thermoluminescence in Quartz and Silica (Review),
Radiat. Protect. Dosim. **8**, 81-98 (1984).
 24. S. W. S. McKeever,
Optical Absorption and Luminescence in Lithium Fluoride (TLD-100),
J. Appl. Phys. **56**, 2883 - 2889 (1984).
 25. R. Chen, V. K. Mathur, J. F. Rhodes, M. D. Brown, S. W. S. McKeever and R. K. Bull,
Thermoluminescence Governed by Simultaneous Thermal Stimulation of Electrons and Holes,
Phys. Stat. Sol. (b) **126**, 361 - 369 (1984).
 26. J. L. Landreth and S. W. S. McKeever,
Some Observations on the Optical Absorption Bands in LiF:Mg,Ti,
J. Phys. D: Appl. Phys. **18**, 1919 - 1933 (1985).
 27. S. W. S. McKeever, J. F. Rhodes, V. K. Mathur, R. Chen, M. D. Brown and R. K. Bull,
Numerical Solution to the Rate Equations Governing the Simultaneous Release of Electrons and Holes During Thermoluminescence and Isothermal Decay,
Phys. Rev. B **32**, 3835 - 3843 (1985).
 28. J. A. Strain, P. D. Townsend, B. Jassemnejad and S. W. S. McKeever,
Emission Spectra of Meteorites During Thermoluminescence,
Earth Planet. Sci. Letts. **77**, 14 - 19 (1986).
 29. S. W. S. McKeever, M. D. Brown, R. J. Abbundi, H. Chan and V. K. Mathur,
Characterization of Optically Active Sites in CaF₂:Ce,Mn from Optical Spectra,
J. Appl. Phys. **60**, 2505 - 2510 (1986).
 30. R. K. Bull, S. W. S. McKeever, R. Chen, V. K. Mathur, Joanne Rhodes and M. D. Brown,
Thermoluminescence Kinetics for Multi-Peak Glow Curves Produced by the Release of Electrons and Holes,
J. Phys. D: Appl. Phys. **19**, 1321 - 1334 (1986).
 31. S. W. S. McKeever, B. Jassemnejad, J. F. Landreth and M. D. Brown,
Manganese Absorption in CaF₂:I,
J. Appl. Phys. **60**, 1124- 1130 (1986).
 32. B. Jassemnejad and S. W. S. McKeever,
Photoreversible Charge Transfer Processes and Thermoluminescence in CaF₂:Ce,
J. Phys. D.: Appl. Phys. **20**, 323-328 (1987).
 33. D. W. McMasters, B. Jassemnejad, and S. W. S. McKeever,
Some Observations Regarding the Effects of Background Rare Earth Impurities on the Thermoluminescence and Optical Absorption of CaF₂:Mn,
J. Phys. D.: Appl. Phys. **20**, 1182-1190 (1987).
 34. B. Jassemnejad and S. W. S. McKeever,
Dipole Relaxation Parameters for Ce³⁺F_{int} Complexes in CaF₂:Ce and CaF₂:Ce,Mn,
Phys. Rev. B, **36**, 9769-9775 (1987).
 35. X. L. Yuan and S. W. S. McKeever,
Impurity Clustering Effects in Mg-doped LiF,
Phys. Stat. Sol. (a) **108**, 545-551 (1988).
 36. B. Jassemnejad, R. J. Abbundi, M. D. Brown, and S. W. S. McKeever,
Thermoluminescence Processes in CaF₂:Ce,Mn,
Phys. Stat. Sol. (a) **108**, 753-764 (1988).
 37. R. Chen, X. Yang and S. W. S. McKeever,
Strongly Superlinear Dose Dependence of Thermoluminescence in Synthetic Quartz,
J. Phys. D. Appl. Phys. **21**, 1452-1457 (1988).
 38. S. W. S. McKeever and Y. S. Horowitz,
Charge Trapping Mechanisms and Microdosimetric Processes in LiF,
Invited paper for Radiat. Phys. Chem. **36**, 35-46 (1989).
 39. E. F. Mische and S. W. S. McKeever,
Mechanisms of Supralinearity in LiF Thermoluminescence Dosimeters,
Radiat. Prot. Dosim. **29**, 159-75 (1990).

40. X. H. Yang and S. W. S. McKeever,
The Pre-Dose Effect in Crystalline Quartz,
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TEACHING EXPERIENCE

United Kingdom: Final year undergraduate level course to Materials Science Honors students. Tutorials.
(University of Sussex; 1982).

Graduate level course to Applied Radiation Physics students. Tutorials.

Extramural Course on Solar System Studies (University of Birmingham; 1979 - 1980).

United States: Undergraduate and Graduate level courses on a range of topics in Physics

Undergraduate Teaching Labs. Director (1990-1994)

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THESIS SUPERVISION

Masters: 9 completed; 0 current

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OTHER ACTIVITIES

Service on many Departmental, College and University Committees.

Society of Physics Students (OSU Chapter) Advisor; 1984 to 1988.

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Membership Award (1); Allied Research Award (2; plus 1 honorable mention); Marsh White Award (2);

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