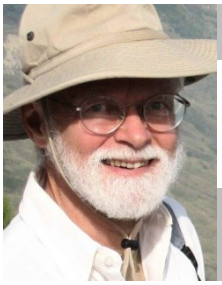


Curriculum Vitae

David Lawrence Griscom

1 October 2010

PERSONAL:

Born: 1 November 1938, Pittsburgh, PA, USA **Citizenship**: USA
Married: Catherine Anne-Marie Godeux, 12 September 1970
Children: Laurent S. Griscom (26 April 1972), Céline A. Griscom (19 July 1974)
Residence:
Lote 454, Sector Ranchitos, San Carlos, 85506 Nuevo Guaymas, Sonora, México
Preferred mailing address:
3938 E Grant Rd #131, Tucson, AZ 85712-2559, USA
Phone numbers: (dial México) +52 622 226 1495 and (VoIP: dial U.S.) 1 520 829 4601
E-mail address: david_griscom@yahoo.com
Blog: http://impactglassman.blogspot.com/
Websites: http://www.impactglassresearchinternational.com/
http://www.chesapeakebaycraterejecta.com/

POSITIONS/EXPERIENCE:

Current — **impactGLASS RESEARCH INTERNATIONAL**
Consulting: Radiation effects and defect centers in silica glass and silica-based optical fibers, heavy-metal fluoride glasses, and glasses for immobilization of nuclear wastes.
Fractal kinetics of radiation-induced defect creation and decay in optical fibers.
Ongoing Research: Innovative contributions to the geology, petrology, and materials science of major impacts on the Earth. Collaboration with scientists worldwide on various subjects.

2004-2005 — **ADJUNCT PROFESSOR OF MATERIALS SCIENCE AND ENGINEERING, UNIVERSITY OF ARIZONA**, MSE, 1235 E. North Campus Dr., Tucson, AZ 85721-0012.

2004 — **PROFESSEUR INVITÉ**, **UNIVERSITÉ JEAN MONNET, ST-ETIENNE,** Lab. T.S.I., UMR 5516 CNRS, 10 rue Barrouin, Bt. F, 24000 Saint-Etienne, FRANCE (6 weeks)

2003 — **PROFESSEUR INVITÉ**, **UNIVERSITÉ CLAUDE BERNARD LYON 1**, LPCML, UMR 5620 CNRS, 43, Boulevard, 11 Novembre 1918, 69622 Villeurbanne Cedex, FRANCE (1 mo)

2001-2002 — **INVITED PROFESSOR**, **TOKYO INSTITUTE OF TECHNOLOGY**, Materials and Structures Laboratory, Nagatsuta 4259, Midori-ku, Yokohama 226-8503, JAPAN (10 months)
Advisor, Transparent Electro-Active Materials Project, ERATO, Japan Science and Technology Corp., KSP, Sakado 3-2-1 Takatsu-ku, Kawasaki 213-0012, JAPAN

2000 & 2001 — **PROFESSEUR INVITÉ**, **UNIVERSITÉS DE PARIS 6 & 7**, Laboratoire de Minéralogie et Cristallographie de Paris, 4 place Jussieu, F-75252 Paris cedex 05, FRANCE (4 months)

1967-2001 — **NAVAL RESEARCH LABORATORY (NRL),** Washington, DC 20375, USA
Research Physicist, Solid State Division, renamed Optical Sciences Division
Duties: Initiate, plan, and execute basic research on the physics of optical materials with specialization in electron spin resonance (ESR) studies of amorphous insulators, interpret obtained experimental data in terms of modern physical theories or new theories of the incumbent's own devising, and publish such results and analyses in refereed journals, conference proceedings, and/or books.

1967-2001 **NAVAL RESEARCH LABORATORY (cont.)**
Major Accomplishments include discovery and/or extensive characterization of nearly all known intrinsic and extrinsic point defects in pure and B-, P-, and Ge-doped silica, alkali borate, alkali silicate, and heavy-metal fluoride glasses, experimental and theoretical advances in characterizing fine-grained ferromagnetic precipitates in glasses by ferromagnetic resonance (FMR), elucidation of the role of radiolytic atomic hydrogen in the post-irradiation buildup of interface states in MOS transistors, first ESR and optical characterizations of self-trapped holes in silica, derivation of a closed-form expression for the temperature dependence of the ESR (or FMR) intensity for any value of the electronic spin S of isolated ions (or the calculated effective spin J of ferro-/ferri-magnetic particles of any given diameter), and demonstration of the governing role of fractal kinetics in the formation and decay of point defects in pure- and doped-silica optical fibers subjected to ionizing irradiations.

1995-1999 **Principal Investigator**, U.S. Department-of-Energy-sponsored research-and-development programs for (1) radiation hardening of optical fibers for fusion-reactor diagnostics for the International Thermonuclear Experimental Reactor ($75,000) and (2) assessment of possible chemical decomposition of high-level nuclear waste storage/disposal glasses under irradiation ($487,000).

1981-1983 **Program Manager** (voluntary half-time assignment), **Defense Advanced Research Projects Agency (DARPA)**, Arlington, VA. Managed approximately $4,000,000 in basic research contracts with U.S. Department of Defense, industrial, and university laboratories.

1973-1979 **Head, Radiation Effects Section,** Optical Materials Branch, NRL
Managed three other research physicists.

1975-1976 **Sabbatical leave** at Département de Physique des Matériaux, Université Claude Bernard Lyon 1, FRANCE.

1971-1973 **Principal Investigator**, NASA Lunar Sample Program.

1967-1969 **National Research Council Postdoctoral Research Associate,** Solid State Division, NRL.

1966-1967 **BROWN UNIVERSITY,** Providence, RI
Research Associate, Physics Department.

DEGREES AWARDED:

1966 **Ph.D., Physics,** Brown University, Providence, RI.

1960 **B.S., Physics,** Carnegie-Mellon University, Pittsburgh, PA.

PROFESSIONAL AFFILIATIONS

2009 **Fellow, American Association for the Advancement of Science** (member since 1969)

Since 2005 **Member, Geological Society of America**

Since 2002 **Lifetime Member, Fulbright Association**

1996 **Fellow, American Physical Society** "For contributions to the analysis and interpretation of electron spin resonance spectra of transition-group ions, radiation-induced point defects, and ferromagnetic precipitates in glasses" (member since 1965)

1978 **Fellow, American Ceramic Society** (member since 1974)

PROFESSIONAL HONORS AND AWARDS:

2002 **Honoree**, **Fourth International Conference on Borate Glasses, Crystals, and Melts**, Coe College, Cedar Rapids, Iowa, July 14-18, 2002. "This conference is dedicated to Dr. David Griscom, in recognition of his outstanding contributions to the science of borate glasses and to his distinguished career in scientific research."

1997 **Sigma Xi Pure Science Award**, NRL Edison Chapter, The Scientific Research Society.

1997 **Fulbright-García Robles Fellow** at Universidad Nacional Autónoma de México (3 months)

1996 **Outstanding Graduate School Alumnus Award**, Brown University, Providence, RI.

1996 **Japan Society for the Promotion of Science "Fellowship for Priority-Area Research in Japan"** at Tokyo Institute of Technology.

1995 **Otto Schott Research Award 1995, Carl-Zeiss-Stiftung (Germany)** "for the application of concepts of lattice defects in crystals to the glassy state, where their production by irradiation and the understanding thereof has led to useful alterations of the magnetic and optical properties of vitreous materials".

1994 **N.F. Mott Award for 1993** sponsored by the Journal of Non-Crystalline Solids "for contributions over many years to the science of non-crystalline solids".

1979, 1986 **Alan Berman Research Publication Awards**, NRL.

1974 **Washington Academy of Sciences Scientific Achievement Award in Physical Sciences.**

PROFESSIONAL ACTIVITIES:

2004 **Member, Evaluation Committee**, Hosono Transparent Electro-Active Materials Project Ex-Post Evaluation (a $15 million, 5-year program sponsored by the Japan Science and Technology Agency). Held, Kanagawa Science Park, Kanagawa, Japan, 14 September 2004.

1989-2001 **Member, Editorial Advisory Board**, Journal of Non-Crystalline Solids.

1998-2000 **Member**, Organizing Committee, NATO Advanced Study Institute "Defects in SiO_2 and Related Dielectrics: Science and Technology" held Erice (Sicily), Italy, 8-20 April, 2000.
Co-Editor, eponymous book.

1998 **Pro-bono government consultant:** On invitational travel orders issued by NASA Goddard Space Center, attended problem-solving meeting at AlliedSignal plant in Teterboro, NJ, 20 November 1998, regarding unexplained ring-laser gyro failures in orbit, which had put on hold many satellite launches pending solution. Solved the problem based in large part on personal curiosity-driven research. Several letters of commendation sent to Research Director and/or Navy Captain of NRL (reportedly including one from the CEO of Lockheed Martin).

1997 **Co-Chair**, Program Subcommittee for Joint Symposium "Fundamentals" at Optical Society of America—American Ceramic Society-sponsored meeting on "Bragg Gratings, Photoeffects, and Poling", Williamsburg, VA, Oct., 1997.

1996 **Member**, U.S. Department of Energy (DOE) Panel on "Radiation Effects in Glasses for the Immobilization and Disposal of High-Level Radioactive Wastes and Excess Weapons Plutonium".

1993 **Co-Editor**, Proc. 8th International Symposium on Halide Glasses (held Perros-Guirec, France, Sept., 1992) published as Volume 161 of J. Non-Crystalline Solids.

1992-1993	**Co-Organizer**, "R.A. Weeks International Symposium on Science and Technology of SiO_2 and Related Materials" at the 1993 PAC RIM Meeting of the American Ceramic Society (Honolulu, Nov., 1993). **Co-Editor,** eponymous book.
1991-1992	**Chairman,** Glass & Optical Materials Division, American Ceramic Society.
1988-1992	**Member**, NASA Universities Space Research Association, Glasses and Ceramics Discipline Working Group.
1985	**Co-Chairman,** Materials Research Society Symposium, "Defects in Glasses", Boston. **Co-Editor**, eponymous book.
1982	**Initiator and funding agent** (while at DARPA), DARPA Workshop on Diamond-Like Carbon Coatings, Albuquerque, NM, **Author**, proceedings Introduction.
1972-1982	**Member**, Editorial Committee, Glass Division, J. of the American Ceramic Society.
Last 40 Years	**Organizing Committee**, numerous international topical conferences. **Chairman, four major award committees** in field of glass & ceramics. **Referee manuscripts** typically 20-30 times per year (fewer recently) numerous journals, including Phys. Rev. Lett., Phys. Rev. B, J. Appl. Phys., Appl. Phys. Lett., J. Non-Crystalline Solids, J. Phys. Chem. Solids, Electronics Lett., Sol. State Comm., J. Am. Ceramic Soc., Earth Planet. Sci. Lett., J. Geophys. Res. **Referee research proposals**, mainly National Science Foundation, International Science Foundation, NASA, DOE.

SERVICE ON JURIES FOR Ph.D. THESES

2010	Sylvain Girard, « Propriétés des défauts ponctuels à l'origne de la degradation des fibres optiques et verres à base de silice en environnement radiatif, » (*Habilitation a Diriger des Recherches*), L'Université Jean Monnet de Saint-Étienne, 25 June 2010
2007	Gianpiero Buscarino, (reporter only) "Experimental investigation on the microscopic structure of intrinsic paramagnetic point defects in amorphous silicon dioxide", Università di Palermo, February 2007.
2005	Kader Médjahdi, (reporter only) "Relation entre Propriétés Optiques et les Modifications Micro-Structural Induits par Différents Traitements Physico-Chimiques dans les Fibres Optics Germanosilicates", L'Université Jean Monnet de Saint-Étienne, 22 November 2005
2003	Sylvain Girard, "Analyse de la réponse des fibres optiques soumises a divers environnements radiatifs", L'Université Jean Monnet de Saint-Étienne, 3 October 2003
2001	Paul Borgermans, "Spectral and kinetic analysis of radiation induced optical attenuation in silica: Towards fibre optic dosimetry?", Vrije Universiteit Brussel, 11 May 2001
2001	Jérôme Garapon, "Etude théorique des défauts déficients en oxygène dans la silice pure ou dopée", Université de Paris-Sud, Thèse N° 6507 – UFR Scientifique d'Orsay, 27 April 2001
1999	Marc Verhaegen, "Étude de la photosensibilité dans la silice implantée avec des ions de haute énergie," Université de Montréal, 20 December 1999.
1976	Jacques Pivot, "Influence des défauts liés au silicium sur les propriétés du monoxide de silicium en couches minces", Département de Physique des Matériaux, Université Claude Bernard Lyon 1, 10 January 1976.

CIVIC ACTIVITIES

2007 **Member Coordinating Committee**, Election Defense Alliance. electiondefensealliance.org

2005 **Presenter**, Public Lecture, Unitarian Universalist Church of Tucson, Tucson, AZ, October 17, 2005: "Ballot-box irregularities committed by election officials at a Tucson, Arizona, polling station on 2 November 2005."

2005 **Presenter**, Election Integrity Workshop at quarterly meeting of the Arizona Democratic Committee, Flagstaff, AZ, August 20, 2005. "Ballot-box irregularities committed by election officials at a Tucson, Arizona, polling station on 2 November 2005."

2005 **Invited presenter,** Election Assessment Hearing, The Garden Center, Houston, TX, June 29, 2005. Presentation entitled: "Ballot-box irregularities committed by election officials at a Tucson, Arizona, polling station on 2 November 2005."

2005 **Invited speaker,** National Election Reform Conference, Jefferson Street Missionary Baptist Church, Nashville, TN, April 9, 2005. Talk entitled "An audit of 2 November 2004 voting a Precinct 324 of Arizona Congressional District 7: A playbook for cheating in opt-scan ballot boxes."

2004 **Co-Founder,** Americans United for Democracy, Integrity, and Transparency in Elections (AUDIT), Tucson, Arizona. "To restore public ownership and oversight of elections and to ensure the fundamental right of every American citizen to vote and to have each vote counted as intended in a secure, transparent, impartial, and independently audited election process."

ORAL PRESENTATIONS:

Since 1965 **231 talks personally presented** at national and international scientific gatherings and university colloquia. Among these were **84 officially invited lectures**, including: 1974 Sherman Fairchild Lecture (Lehigh Univ., Bethlehem, PA), 1975 NATO Adv. Study Inst. "Defects in Nonmetallic Solids" (Exeter, UK), 1976 Conf. "Boron in Glass" (Alfred, NY), 1978 Intl. Conf. on Physics of SiO_2 (Yorktown Heights, NY), 1978 Conf. "Atomic Scale Structure Amorphous Solids" (Yorktown Heights, NY), 1980 University Conf. on Glass Science (Troy, NY), 1984 Mtg. MRS-Europe (Strasbourg, France), 1984 NATO Advanced Study Institute "Glass…Current Issues" (Tenerife, Spain), 1984 Semiconductor Interface Specialists Conf. (San Diego), 1988 Mtg. Electrochemical Society (Atlanta), 1988 New Glass Forum (Tokyo and 5 other Japanese locations), 1989 Rocky Mountain EPR Symp. (Denver, CO), 1989 US-Japan Seminar "Atomic Processes Induced by Electronic Excitation" (Nagoya), 1990 Gordon Conf. on Glass (Tilton, NH), 1990 Mtg. American Chemical Soc. (Washington, DC), 1990 Intl. Mtg. on New Glass Technology (Tokyo), 1990 Intl. Symp. on SiO_2 (Tokyo), 1991 Mtg. American Ceramic Soc. (Cincinnati, OH), 1991 Mtg. American Crystallographic Assn. (Toledo, OH), 1991 Intl. Seminar "Point Defects in Glasses" (Riga, Latvia), 1991 Workshop "Defects in Semiconductor-Insulator Systems" (Research Triangle Park, NC), 1991 ITER Workshop "Radiation Effects in Diagnostic Components" (St. Petersburg, USSR), 1992 Distinguished Lecturer - Corning Research Laboratory (Corning, NY), 1993 Semiconductor Interface Specialists Conf. (Ft. Lauderdale, FL), 1994 Galeener Symp. on Amorphous Insulators (Winter Park, CO), 1995 Sherman Fairchild Lecture (Lehigh Univ., Bethlehem, PA), 1995 Otto Schott Award Lecture at Mtg. European Soc. Glass Science and Technology (Würzburg), 1997 Coloquio Instituto de Ciencias Nucleares - Universidad Nacional Autónma de México, 1999 Symp. "Effects of Vacuum-UV Photons on the Optical Properties of Amorphous SiO_2" (Shin-Yokohama, Japan), 1999 Mtg. American Chemical Soc. (Anaheim, CA), 2000 NATO Advanced Study Inst. "Defects in SiO_2 and Related Dielectrics: Science and Technology" (Erice, Sicily), 2000 Symp. "Photonics in Radiation Environments" (Mol, Belgium), 2002 Intl. Conf. "Borate Glasses" (Cedar Rapids, IA), 2003 Intl. Conf. on Physics of Non-Crystalline Solids (Parma), 2003 University Conf. on Glass Science (Troy, NY), 2004 Annual Mtg. AAAS (Seattle), 2004 IEEE Nuclear & Space Radiation Effects Mtg. (Atlanta), 2007 Annual Mtg. AAAS (San Francisco), 2008 SiO_2 Symp. (St-Etienne, France), 2008 Otto-Schott-Award Mtg. (Mainz).

PUBLICATIONS:

Since 1965 **190 articles in print (109 principal authorships)** in refereed journals (e.g., Phys. Rev. Lett., Phys. Rev. B, J. Appl. Phys., Appl. Phys. Lett., J. Non-Crystalline Solids, J. Chem. Phys., Solid State Commun., J. Ceram. Soc. Japan., Nucl. Instruments & Methods, J. Magnetic Resonance, J. Materials Res., Geochim. Cosmochim. Acta, Earth & Planet. Sci. Lett., J. Geophys. Res.), in refereed conference proceedings (e.g., Proc. Lunar Sci Conf., 3rd, 4th, 5th, 6th; *Impact Markers in the Stratigraphic Record*, Springer, 2003), and in books (e.g., *Treatise on Materials Science and Technology, Vol 17*, Academic, 1979; *Glass Science and Technology, Vol 4B*, Academic, 1990; *Fluoride Glass Fiber Optics,* Academic, 1991; *Defects in SiO_2 and Related Dielectrics: Science and Technology*, Kluwer, 2000; *Encyclopedia of Materials: Science and Technology*, Elsevier, 2001). **Co-editor of 3 books**.

CITATION OF PUBLISHED WORK:

2010 *August, 2010, determination of* ***h index**** *(Source: ISI Web of Science):*

· ***h* = 43**

2006 *January, 2006, determination of* ***h index**** *(Source: ISI Web of Science):*

· ***h* = 39**

· This index may grow larger with time; it cannot decrease.

· The two most cited papers in 2006 had 332 and 297 cites.

· **For reference, the mean and median values of *h* for physicists who were awarded Nobel Prizes between 1984 and 2004 have been calculated* to be 41 and 35, respectively.**

* The definition of *h*, as well as the reference data, are given by J.E. Hirsch, Proc. Nat. Acad. Sci. 0507655102 (2005).

1974-1993 *June, 1993, search by first author only (Source: SciSearch):*

· 2416 cites (Nineteen-year average: 127 cites/year)

1973-1988 *January, 1992, search (inclusive of all authors) performed by the Institute for Scientific Information (ref: NRL Labstracts, 27 January 1992):*

·**Largest number of papers (5) by any author included on list of 100 most cited papers authored at the Naval Research Laboratory during the period 1973-1988** (≥93 cites each).

1990 *January, 1990, search by first author only (Source: SciSearch):*

1980-1989 · 1547 cites
1987-1989 · 508 cites
1989 only · 151 cites

PATENTS:

No. 4,371,838: "Optical fiber waveguide for measuring magnetic fields", 1 February 1983.

No. 5,574,820: "Radiation hardening of pure-silica-core optical fibers by ultra-high-dose gamma irradiation", 12 November 1996.

LANGUAGES:

· English (native)
· French (read, comprehend spoken, good technical and political conversational ability)
· Spanish (read, comprehend spoken, fair general conversational ability -- improving with practice)
· Russian (earlier scientific reading ability lapsing)
· Japanese (rudimentary comprehension of spoken, rudimentary speaking ability lapsing)

COUNTRIES VISITED:

Austria, Belgium, Belize, Canada, Czech Republic, Egypt, England, France, Germany, Guatemala, Honduras, Italy, Japan, Latvia, México, Spain, Soviet Union (Russia), Sweden, Switzerland.

OTHER INTERESTS:

· Travel

· Reading

Favorite authors: Loren Eiseley, Graham Greene, Freeman Dyson, Barbara Tuchman, Alistair Horne, Mark Crispin Miller.
Favorite journal: *Science*

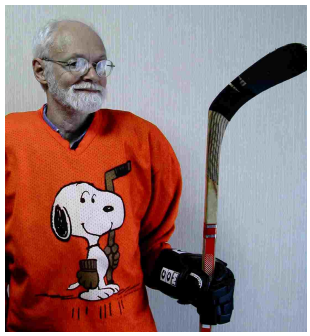
Favorite subjects in *Science*:
impact geology, paleoclimatology, planetology, cosmology, paleontology, anthropology.

· Listening to classical music

· Pre-Columbian history/art.

· Ice hockey player

1989-1999 Hockey North America, Intermediate Level B, Washington, DC
2000 Mt. Vernon Ice Rink, house league, Alexandria, VA
2001-2002 Mandai Memorials, Tokyo
2004-2005 Over-30 Recreational League, Polar Ice, Tucson, AZ.



· Researching evidence for election fraud committed by poll workers at a Tucson, AZ, polling station during the 2 November 2004 General Election:

Published chapter on this subject in book *Loser Take All – Election Fraud and the Subversion of Democracy 2004-2008*, Mark Crispin Miller, Ed. (Ig Publishing, Brooklyn, New York, 2008) p. 116-130.

· Searching for the truth of what happened on 9/11/2001, e.g.:

http://impactglassman.blogspot.com/2007/01/hand-waving-physics-of-911.html
http://www.drivehq.com/file/df.aspx/publish/dlgriscom/911Research

PUBLICATIONS IN BOOKS AND REFEREED JOURNALS:

N.B.: Papers marked by asterisk were invited. Principal authorships are indicated in bold typeface.

1. "Magnetic Peroxyborates, the Pseudo-Superoxides," R. Bruce, J.O. Edwards D.L. Griscom, R.A. Weeks, L.R. Darby, W. DeKleine, and M. McCarthy, J. Am. Chem. Soc. **87** (1965) 2057-2059.

2. "Paramagnetic resonance of Mn^{2+} in glasses and compounds of the lithium borate system," **D.L. Griscom** and R.E. Griscom, J. Chem. Phys. **47** (1967) 2711-2722.

3. "ESR studies of lithium borate glasses and compounds gamma irradiated at 77K: Evidence for a new interpretation of the trapped-hole centers associated with boron," **D.L. Griscom,** P.C. Taylor, D.A. Ware, and P.J. Bray, J. Chem. Phys. **48** (1968) 5158-5173.

4. "Paramagnetic resonance of room-temperature-stable V-type centers in γ-irradiated alkali halide-boron oxide glasses," **D.L. Griscom,** P.C. Taylor and P.J. Bray, J. Chem. Phys. **50** (1969) 977-983.

5. "Some chemical and physical properties of the effervescenct magnetic peroxyborates. The pseudo-superoxides," J.O. Edwards, D.L. Griscom, R.B. Jones, K.L. Waters, and R.A. Weeks, J. Am. Chem. Soc. **91** (1969) 1095-1103.

6. "Optical absorption of Cl_2^- hole-type centers in irradiated alkali halide-alkali borate glasses," **D.L. Griscom,** J. Chem. Phys. **51** (1969) 5186-5187.

7. "Raman spectra of Cl_2^- hole-type centers in irradiated alkali-halide borate glasses," M. Hass and D.L. Griscom, J. Chem. Phys. **51** (1969) 5184-5185.

8. "Reply to "Structure of trapped-hole centers in γ-irradiated borate glasses," **D.L. Griscom,** P.C. Taylor, and P.J. Bray, J. Chem. Phys. **53** (1970) 469-470.

9. "ESR studies of BO_3^{2-} ions in potassium borate ceramics," P.C. Taylor, D.L. Griscom, and P.J. Bray, J. Chem. Phys. **54** (1971) 748-760.

10. "ESR studies of an intrinsic trapped-electron center in X-irradiated alkali borate glasses," **D.L. Griscom,** J. Chem. Phys. **55** (1971) 1113-1122.

11. "Toward a unified interpretation of ESR trapped hole centers in irradiated borate compounds and glasses," P.C. Taylor and D.L. Griscom, J. Chem. Phys. **55** (1971) 3610-3611.

12. "ESR and optical studies of alkali-associated trapped-electron centers in alkali borate glasses irradiated at 77 K," **D.L. Griscom,** J. Non-Cryst. Solids **6** (1971) 275-282.

13. "Electron spin resonance studies of iron phases in lunar glasses," **D.L. Griscom** and C.L. Marquardt, *Lunar Science III,* C. Watkins, Ed. (Lunar Science Institute, Houston, 1972), pp. 341-343.

14. "Evidence of lunar surface oxidation processes: Electron spin resonance of lunar materials and simulated lunar materials," **D.L. Griscom** and C.L. Marquardt, *Proc. Lunar Sci. Conf., 3rd* (1972) 2397-2415.

15. "Electron spin resonance observations of chlorine and bromine atoms isolated at 22 K in x-irradiated alkali halide-alkali borate glasses," **D.L. Griscom,** Sol. State Commun. **11** (1972) 899-902.

16. "Ferromagnetic resonance of small, multidomain iron particles in an 0.5-cm fragment of lunar glass, 15434,62," **D.L. Griscom** and C.L. Marquardt, *The Apollo 15 Lunar Samples,* J.W. Chamberlain and C. Watkins, Ed. (Lunar Science institute, Houston, 1972).

17. "Electron spin resonance studies of ferrimagnetic phases precipitated in simulated lunar glasses heat treated in the presence of oxygen," **D.L. Griscom** and C.L. Marquardt, *Amorphous Magnetism,* H.O. Hooper and A.M. deGraff, Ed. (Plenum Press, New York, 1973), pp. 95-102.

18. "The origin and significance of the "characteristic" ferromagnetic resonance spectrum of lunar solids: Two views," **D.L. Griscom** and C.L. Marquardt, *Lunar Science-IV,* J.W. Chamberlain and C. Watkins, Ed. (Lunar Science Institute, Houston, 1973), pp. 320-322.

19. "Mössbauer search for ferric oxide phases in lunar materials," D.W. Forester, C.L. Marquardt, and D.L. Griscom, *Lunar Science-IV,* J.W. Chamberlain and C. Watkins, Ed. (Lunar Science Institute, Houston, 1973), pp. 257-259.

20. "Evidence for a ubiquitous, sub-microscopic "magnetite-like" constituent in the lunar soils," **D.L. Griscom,** E.J. Friebele, and C.L. Marquardt, *Proc. Lunar Sci. Conf., 4th,* (1973) 2709-2727.

21. "E.S.R. studies of radiation damage and structure in oxide glasses not containing transition group ions: A contemporary overview with illustrations from the alkali borate system," **D.L. Griscom,** J. Non-Cryst. Solids **13** (1973) 251-285.

22. "Ferromagnetic resonance spectra of lunar fines: Some implications of line shape analysis," **D.L. Griscom,** Geochim. Cosmochim. Acta **38** (1974) 1509-1519.

*23. "Color centers in oxide glasses," **D.L. Griscom,** Radiation Damage Processes in Materials, C.H.S. Dupuy, Ed. (Noordhoff, Leyden, 1975), pp. 209-230.

24. "Ferromagnetic resonance of fine grained iron and magnetite precipitates in simulated lunar glasses: comparison with lunar soils," **D.L. Griscom,** C.L. Marquardt, and E.J. Friebele, *Lunar Science-V,* J.W. Chamberlain and C. Watkins, Ed. (Lunar Science Institute, Houston, 1974), pp. 293-295.

25. "On the nature and distribution of ferromagnetic phases in the Taurus-Littrow Valley," **D.L. Griscom,** *Lunar Science-V,* J.W. Chamberlain and C. Watkins, Ed. (Lunar Science Institute, Houston, 1974), pp. 296-297.

26. "Defect centers in a germanium-doped silica-core optical fiber," E.J. Friebele, D.L. Griscom and G.H. Sigel, Jr., J. Appl. Phys. **45** (1974) 3424-3428.

27. "Observation and analysis of the primary ^{29}Si hyperfine structure of the E′ center in non-crystalline SiO_2," **D.L. Griscom,** E.J. Friebele, and G.H. Sigel, Jr., Sol. State Commun. **15** (1974) 479-483.

28. "Magnetic hysteresis in the FMR spectra of fine-grained spherical iron: Possible evidence for a new carrier of hard remanence in lunar soils and rocks," **D.L. Griscom,** C.L. Marquardt, E.J. Friebele, and D.J. Dunlop, Earth Planet. Sci. Lett. **24** (1974) 78-86.

29. "Rock magnetites with positive anisotropy constants at 300 K," **D.L. Griscom,** M.P. O'Horo, and R.A. Weeks, *Proc. Takesi Nagata Conf.,* U. Pittsburgh., 1974, pp. 96-104.

30. "Radiation induced defect centers in fiber optic materials," E.J. Friebele, D.L. Griscom, R.J. Ginther, and G.H. Sigel, Jr., *Proc. X Intl. Cong. Glass,* Kyoto, Japan, 1974, pp. 6-16-22.

31. "Effects of stoichiometry on the radiation response of SiO_2," G.H. Sigel, Jr., E.J. Friebele, R.J. Ginther, and D.L. Griscom, IEEE Trans. Nuc. Sci. **NS-21** (1974) 56-61.

32. "Geochemical applications of electron magnetic resonance spectroscopy," R.A. Weeks, D.L. Griscom, and P.M. Bell, *Proc. 18th Ampere Cong.,* Nottingham, UK, 1974, pp. 167-168.

33. "Temperature dependence of the ferromagnetic resonance linewidth of lunar soils, iron and magnetite precipitates in simulated lunar glasses, and non-spherical metallic iron particles," E.J. Friebele, D.L. Griscom, C.L. Marquardt, R.A. Weeks, and D. Prestle, *Proc. Lunar Sci. Conf., 5th,* 1974, pp. 2729-2736.

34. "Microwave resonance thermomagnetic analysis: A new method of characterizing fine grained ferromagnetic constituents in lunar materials," **D.L. Griscom,** C.L. Marquardt, and E.J. Friebele, J. Geophys. Res. **80** (1975) 2935-2946.

35. "Characterization of ferromagnetic precipitates in glasses by variable temperature ferromagnetic resonance," E.J. Friebele, D.L. Griscom, and C.L. Marquardt, *A.I.P. Conf. Proc., No. 24,* C.D. Graham, G.H. Lander, and J.J. Rhyne, Ed. (American Institute of Physics, New York, 1975), pp. 386-387.

36. "Ferromagnetic resonance of two-domain spherical metallic iron," **D.L. Griscom,** E.J. Friebele, and C.L. Marquardt, *A.I.P. Conf. Proc., No. 24,* C.D. Graham, G.H. Lander, and J.J. Rhyne, Ed. (American Institute of Physics, New York, 1975), pp. 518-519.

37. "On the high-temperature stability of magnetite: Implications for lunar soil magnetism," **D.L. Griscom,** *Proc. Lunar Sci. Conf., 6th,* 1975, pp. 3081-3089.

*38. "Defects in non-crystalline oxides," **D.L. Griscom,** *Defects and Their Structure in Nonmetallic Solids,* B. Henderson and A.E. Hughes, Ed. (Plenum Press, New York, 1976), pp. 323-353.

39. "The Néel transition and magnetic properties of terrestrial, synthetic, and lunar ilmenites," F.E. Senftle, A.N. Thorpe, C. Briggs, C. Alexander, J. Minkin, and D.L. Griscom, Earth Planet. Sci. Lett., 1975.

40. "Defect centers in pure-silica-core borosilicate-clad optical fiber: ESR studies," **D.L. Griscom,** G.H. Sigel, Jr., and R.J. Ginther, J. Appl. Phys. **47** (1976) 960-967.

41. "On the spectral reflectance and maturation darkening of lunar soils," C.L. Marquardt and D.L. Griscom, The Moon **15** (1976) 15-30.

42. "Comment on: "FMR thermomagnetic studies" by Morris et al.," **D.L. Griscom,** Geophysical Res. Lett. **3** (1976) 232-234.

43. "Drawing-induced defect centers in a fused silica core fiber," E.J. Friebele, G.H. Sigel, Jr. and D.L. Griscom, Appl. Phys. Lett. **28** (1976) 516-518.

44. "Radiation-induced defects in non-crystalline SiO_2," E.J. Friebele, D.L. Griscom, and G.H. Sigel, Jr., Non-Crystalline Solids, G.H. Frischat, Ed. (Trans Tech, Aedermannsdorf, Switzerland, 1977), pp. 154-159.

45. "Radiation-induced paramagnetic defects as structural probes of pure silica and borosilicate glasses," **D.L. Griscom,** E.J. Friebele, G.H. Sigel, Jr., and R.J. Ginther, *Structure of Non-Crystalline Materials,* P.H. Gaskell, Ed. (Taylor & Francis, London, 1977), pp. 113-117.

46. "Drawing-induced defect centers in silica core fiber optics," E.J. Friebele, G.H. Sigel, Jr. and D.L. Griscom, Proc. Second European Conf. on Optical Fiber Transmission, 1976, pp. 63-68.

47. "Characterization of ferromagnetic precipitates in glasses by ferromagnetic resonance," E.J. Friebele, D.L. Griscom, and C.E. Patton, *Amorphous Magnetism II,* R.A. Levy and R. Hasagawa, Ed. (Plenum Press, New York, 1977), pp. 561-569.

48. "The electronic structure of SiO_2: A review of recent spectroscopic and theoretical advances," **D.L. Griscom,** J. Non-Cryst. Solids **24** (1977) 155-234.

49. "Defect Centers in Pure Fused Silica," **D.L. Griscom**, G.H. Sigel, Jr., and E.J. Friebele, *Proc. XI Int'l. Cong. Glass,* Prague 1 (1977) 6-14.

*50. "Defects and impurities in α-quartz and fused silica", **D.L. Griscom,** *The Physics of SiO_2 and Its Interfaces*, S.T. Pantelides, Ed. (Pergamon, New York, 1978), pp. 232-252.

51. "Oxygen-associated trapped-hole centers in high-purity fused silica," M. Stapelbroek and D.L. Griscom, *The Physics of SiO_2 and Its Interfaces,* S.T. Pantelides, Ed. (Pergamon, New York, 1978), pp. 263-267.

*52. "Borate Glass Structure," **D.L. Griscom,** *Borate Glasses: Structure, Properties, Applications,* L.D. Pye, V.D. Frechette, and N.J. Kreidl, Ed. (Plenum Publishing Corp., New York, 1978), pp. 11-149.

*53. "Epilogue," **D.L. Griscom,** *Borate Glasses: Structure, Properties, Applications,* L.D. Pye, V.D. Frechette, and N.J. Kreidl, Ed. (Plenum Press, New York, 1978), pp. 139-149.

*54. "Defects in amorphous insulators," **D.L. Griscom,** J. Non-Cryst. Solids **31** (1978) 241-266.

*55. "Oxygen-associated trapped-hole centers in high-purity fused silicas," M. Stapelbroek, D.L. Griscom, E.J. Friebele, and G.H. Sigel, Jr., J. Non-Cryst. Solids **32** (1979) 313-326. (The invitation to contribute to this Festschrift for Sir Nevill Mott was extended to Griscom).

56. "Ferromagnetic resonance of spherical particles of α-iron precipitated in fused silica," **D.L. Griscom,** E.J. Friebele, and B.B. Shinn, J. Appl. Phys. **50** (1979) 2402-2404.

57. "Fundamental defect centers in glass: The peroxy radical in irradiated high-purity, fused silica," E.J. Friebele, D.L. Griscom, M. Stapelbroek, and R.A. Weeks, Phys. Rev. Lett. **42** (1979) 1346-1349.

*58. "Radiation effects in glass," E.J. Friebele and D.L. Griscom, *Treatise on Materials Science and Technology Vol. 17: Glass II,* M. Tomozowa and R.H. Doremus, Ed. (Academic Press, New York, 1979), pp. 257-351.

59. "E´ Center in Glassy SiO_2: Microwave Saturation Properties and Confirmation of the Primary ^{29}Si Hyperfine Structure," **D.L. Griscom,** Phys. Rev. B**20** (1979) 1823-1834.

*60. "Point Defects and Radiation Damage Processes in α-Quartz," **D.L. Griscom,** Proc. Thirty-Third Frequency Control Symposium (Electronics Industries Assn., Washington, DC, 1979), pp. 98-109.

*61. "Electron spin resonance in glasses," **D.L. Griscom,** J. Non-Cryst. Solids **40** (1980) 211-272.

62. "Electron spin resonance studies of iron-group impurities in beryllium fluoride glasses," **D.L. Griscom,** M. Stapelbroek and M.J. Weber, J. Non-Cryst. Solids **41** (1980) 329-345.

63. "E´ center in glassy SiO_2: ^{17}O, ^{1}H, and "very weak" ^{29}Si superhyperfine structure," **D.L. Griscom,** Phys. Rev. B**22** (1980) 4192-4202.

64. "Electron-transfer model for E´-center optical absorption in SiO_2," **D.L. Griscom** and W.B. Fowler, *The Physics of MOS Insulators,* G. Lukovsky, S.T. Pantelides, and F.L. Galeener, Ed. (Pergamon Press, New York, 1980), pp. 97-101.

65. "Ferromagnetic resonance of fine grained precipitates in glass: A thumbnail review," **D.L. Griscom,** J. Non-Cryst. Solids **42** (1980) 287-296.

*66. "ESR studies in amorphous insulators," **D.L. Griscom,** *Nuclear and Electron Resonance Spectroscopies Applied to Materials Science*, E.N. Kaufmann and G.K. Shenoy, Ed. (Elsevier North Holland, New York, 1981), pp. 103-116.

67. "Particle size effects in the FMR spectra of fine-grained precipitates in glass," **D.L. Griscom,** IEEE Trans. Magnetics **MAG-17** (1981) 2718-2720.

68. "Ferromagnetic resonance condition and powder pattern analysis for dilute, spherical, single-domain particles of cubic crystal structure," **D.L. Griscom,** J. Magn. Res. **45** (1981) 81-87.

69. "Fundamental defect centers in glass: ^{29}Si hyperfine structure of the nonbridging oxygen hole center and the peroxy radical in a-SiO_2," **D.L. Griscom** and E.J. Friebele, Phys. Rev. B **24** (1981) 4896-4898.

*70. "Effects of ionizing radiation on amorphous insulators," **D.L. Griscom** and E.J. Friebele, Rad. Effects **65** (1982) 63-72.

71. "Surface raman scattering from effervescent magnetic peroxyborates," G.E. Walrefen, P.N. Krishnan, M. Hokmabadi, D.L. Griscom, and R. Munro, J. Chem. Phys. **77** (1982) 3840-3846.

72. "ESR studies of damage processes in x-irradiated high purity a-SiO_2:OH and characterization of the formyl radical defect," **D.L. Griscom,** M. Stapelbroek, and E.J. Friebele, J. Chem. Phys. **78** (1983) 1638-1651.

73. "Fundamental defect centers in glass: Electron spin resonance and optical absorption studies of irradiated phosphorus-doped silica glass and optical fibers," **D.L. Griscom,** E.J. Friebele, K.J. Long and J.W. Fleming, J. Appl. Phys. **54** (1983) 3743-3762.

74. "Radiation-induced defects in glasses with high water content," A.A. Wolf, E.J. Friebele, D.L. Griscom, J. Acocella, and M. Tomozawa, J. Non-Cryst. Solids **56** (1983) 349-354.

75. "Observation of the methyl radical $CH_3\cdot$ in irradiated high-purity synthetic fused silica," E.J. Friebele, D.L. Griscom and K. Rau, J. Non-Cryst. Solids **57** (1983) 176-175.

76. "Electron spin resonance studies of trapped hole centers in irradiated alkali silicate glasses: A critical comment on current models for HC_1 and HC_2," **D.L. Griscom,** J. Non-Cryst. Solids **64** (1984) 229-247.

77. "Characterization of three E´-center variants in X- and γ-irradiated high-purity a-SiO_2," **D.L. Griscom,** Nuclear Inst. & Methods B**1** (1984) 481-488.

78. "On the structure of defect centers in γ-irradiated alkali silicate glasses," R. Cases and D.L. Griscom, Nuclear Inst. & Methods B**1** (1984) 503-510.

79. "Ferromagnetic resonance of precipitated phases in natural glasses," **D.L. Griscom,** J. Non-Cryst. Solids **67** (1984) 81-118.

80. "Thermal bleaching of X-ray-induced defect centers in high-purity fused silica by diffusion of radiolytic molecular hydrogen," **D.L. Griscom,** J. Non-Cryst. Solids **68** (1984) 301-325.

81. "Electron trapping in amorphous SiO_2 studied by charge build-up under electron bombardment," J.P. Vigouroux, J.P. Duraud, A. Le Moel, C. Le Gressus, and D.L. Griscom, J. Appl. Phys. **57** (1985) 5139-5144.

*82. "Defect Structure of glasses: Some outstanding questions in regard to vitreous silica," **D.L. Griscom,** J. Non-Cryst. Solids **73** (1985) 51-77.

*83. "Spectroscopy of optical glasses," **D.L. Griscom,** in *Glass... Current Issues,* A.F. Wright and J. Dupuy, Eds. (Martinus Nijhoff, Dordrecht, Nl, 1985), pp. 362-372.

84. "Radiation effects in ZrF_4 based glasses I. Electron spin resonance," R. Cases, D.L. Griscom, and D.C. Tran, J. Non-Cryst. Solids **72** (1985) 51-63.

85. "Chlorine-associated defect centers in irradiated ZrF_4 based glasses," **D.L. Griscom** and D.C. Tran, J. Non-Cryst. Solids **72** (1985) 159-163.

*86. "Defect structure of amorphous SiO_2 and the role of hydrogen," **D.L. Griscom,** Les Editions de Physique, 1985, pp. 25-28.

87. "Nitrogen-associated paramagnetic defect centers in SiO_2 films," E.J. Friebele, D.L. Griscom, and T. Hickmott, J. Non-Cryst. Solids **71** (1985) 351-359.

88. "The 2eV optical absorption and luminescence in irradiated synthetic silica," E.J. Friebele, D.L. Griscom, and M.J. Marrone, J. Non-Cryst. Solids **71** (1985) 133-144.

89. "Thermal bleaching of gamma-ray-induced defect centers in high purity fused silica by diffusion of radiolytic molecular water," **D.L. Griscom,** in *Structure and Bonding in Noncrystalline Solids,* G.E. Walrafen and A.G. Revesz, Eds. (Plenum, New York, 1986), pp. 369-384.

90. "Diffusion of radiolytic molecular hydrogen as a mechanism for the post-irradiation buildup of interface states in SiO_2-on-Si structures," **D.L. Griscom,** J. Appl. Phys. **58** (1985) 2524-2533.

*91. "Nature of defects and defect generation in optical glasses," **D.L. Griscom,** *SPIE Vol. 541 - Radiation Effects in Optical Materials,* P.W. Levy, Ed. (SPIE, Bellingham, WA, 1985), pp. 38-59.

92. "Overview of radiation effects in fiber optics," E.J. Friebele, C.G. Askins, M.E. Gingerich, M.J. Marrone, and D.L. Griscom, *SPIE Vol. 541 - Radiation effects in optical glasses,* P.W. Levy, Ed. (SPIE, Bellingham, WA, 1985), pp. 70-80.

93. "Point defects in amorphous SiO_2: What have we learned from 30 years of experimentation?," **D.L. Griscom,** in *Defects in Glasses* - MRS Vol. 61, F.L. Galeener, D.L. Griscom, and M.J. Weber, Eds. (Materials Research Society, Pittsburgh, PA, 1986), pp. 213-221.

94. "Color centers in glass optical fiber waveguides," E.J. Friebele and D.L. Griscom, in *Defects in Glasses* - MRS Vol. 61, F.J. Galeener, D.L. Griscom, and M.J. Weber, Eds. (Materials Research Society, Pittsburgh, Pa, 1986), pp. 319-331.

95. "Effects of radiation-induced defects on laser-induced breakdown in SiO_2," M.J. Soileau, N. Mansour, E. Canto, and D.L. Griscom, in *Defects in Glasses* - MRS Vol. 61, F.J. Galeener, D.L. Griscom, and M.J. Weber, Eds. (Materials Research Society, Pittsburgh, PA, 1986), pp. 205-211.

96. "On the structures of hydrogen-associated defect centers in irradiated high-purity a-SiO_2:OH," T.E. Tsai and D.L. Griscom, J. Non-Cryst. Solids **91** (1987) 170-179.

97. "Fundamental radiation-induced defect centers in synthetic fused silicas: atomic chlorine, delocalized E′ centers, and a triplet state," **D.L. Griscom** and E.J. Friebele, Phys. Rev. B**34** (1986) 7524-7533.

98. "Studies of radiation-induced point defects in silica aerogel monoliths," **D.L. Griscom,** E.J. Friebele, and S.P. Mukherjee, Cryst. Latt. Def. and Amorph. Mat. **17** (1987) 157-163.

99. "ESR studies of irradiated ^{17}O-enriched sol-gel silicas: Organic impurity effects and the structure of the nonbridging oxygen hole center," **D.L. Griscom,** C.J. Brinker, and C.S. Ashley, J. Non-Cryst. Solids **92** (1987) 295-301.

100. "Radiation-induced defect centers in high purity GeO_2 glasses," T.E. Tsai, D.L. Griscom, E.J. Friebele, and J.W. Fleming, J. Appl. Phys. **62** (1987) 2264-2268.

101. "Radiation-effects on a low-thermal-expansion glass ceramic," T.E. Tsai, P.L. Higby, E.J. Friebele, and D.L. Griscom, J. Appl. Phys. **62** (1987) 3488-3490.

102. "The oxidation state of iron in tektite glass," R.F. Fudali, M.D. Dyar, D.L. Griscom, and H.D. Schreiber, Geochim. Cosmochim. Acta **51** (1987) 2749-2756.

103. "Precipitation phenomena in high dose implanted silica and annealing behavior," A. Perez, M. Treilleux, T. Capra, and D.L. Griscom, J. Mater. Res. **2** (1987) 910-917.

*104. "Silica Glasses," **D.L. Griscom,** Materials Research Society Bull. **7** (1987) 20-24.

*105. "Influence of processing parameters on defect structures of gel-derived silicas," **D.L. Griscom** and C.J. Brinker, *Effects of Modes of Formation on the Structure of Glasses,* R.A. Weeks and D.L. Kinser, Eds. (Trans Tech, Aedermannsdorf, Switz., 1987), pp. 213-216.

*106. "Intrinsic and extrinsic point defects in a-SiO_2," **D.L. Griscom,** *The Physics and Technology of Amorphous SiO_2,* R.A.B. Devine, Ed. (Plenum Press, New York, 1988), pp. 125-134.

107. "On the structure of Ge-associated defect centers in irradiated high purity GeO_2 and Ge-doped SiO_2 glasses," T.E. Tsai, D.L. Griscom, and E.J. Friebele, in *Effects of Modes of Formation on the Structure of Glasses,* R.A. Weeks & D.L. Kinser, Eds. (Trans Tech, Aedemannsdorf, Switz, 1987), pp. 469-476.

108. "Ferromagnetic resonance studies of iron-implanted silica," **D.L. Griscom,** J.J. Krebs, A. Perez, and M. Treilleux, Nucl. Inst. & Methods B**32** (1988) 272-278.

109. "Stability and distribution of defect centers induced by high energy particles in high purity fused silica," T.E. Tsai, D.L. Griscom, and M.E. Gingerich, Nucl. Instr. & Methods B**32** (1988) 377-382.

110. "Effects of ionizing radiation on laser-induced damage in SiO_2," M.J. Soileau, M. Mansour, E. Canto, and D.L. Griscom, Nucl. Instr. & Methods B**32** (1988) 311-314.

111. "Volcanic glasses of the KBS tuff: Transmission electron microscopy, magnetism, electron spin resonance, Mössbauer, and optical spectroscopy," C.M. Schlinger, D.L. Griscom, G. Papaefthymiou, D.R. Veblen, and R.M. Smith, J. Geophys. Res. **93** (1987) 9137-9156.

112. "Electron spin resonance: A potential diagnostic for oxide impurities in ZrF_4-based glasses," **D.L. Griscom,** P. Hart, J.M. Jewell, J.T. Kohli, and J.E. Shelby, J. Non-Cryst. Solids **103** (1988) 300-310.

113. "Characterization of a nitrogen center in high purity SiO_2:OH glass," T.E. Tsai, D.L. Griscom, and E.J. Friebele, Phys. Rev. B **38** (1988) 2140-2146.

114. "Mechanism of intrinsic Si E′ center photo-generation in high purity silica," T.E. Tsai, D.L. Griscom, and E.J. Friebele, Phys. Rev. Lett. **61** (1988) 444-446.

115. "Nature of radiation-induced point defects in amorphous SiO_2 and their role in SiO_2-on-Si structures," **D.L. Griscom,** D.B. Brown, and N.S. Saks, *The Physics and Chemistry of SiO_2 and the Si-SiO_2 Interface,* C.R. Helms and B.E. Deal, Eds. (Plenum, New York, 1988), pp. 287-297.

116. "Radiation-induced defect centers in glass-ceramics," T.E. Tsai, E.J. Friebele, D.L. Griscom and W. Pannhorst, J. Appl. Phys. **65** (1989) 507-514.

117. "Formation of interface traps in MOSFETs during annealing following low temperature irradiation," N.S. Saks, R.B. Klein, and D.L. Griscom, IEEE Trans. Nuc. Sci. **NS-35** (1988) 1234-1240.

118. "Dispersive diffusion transport of atomic hydrogen in high purity SiO_2:OH glass," T.E. Tsai and D.L. Griscom, J. Non-Cryst. Solids **106** (1988) 374-379.

119. "Defect centers induced by linear and nonlinear absorption of uv light in high purity silica," T.E. Tsai, D.L. Griscom and E.J. Friebele, *Properties and characteristics of optical glass (SPIE Vol. 970),* A.J. Marker III, Ed. (SPIE, Bellingham, WA, 1988), pp. 165-169.

120. "Self-trapped holes in amorphous silicon dioxide," **D.L. Griscom,** Phys. Rev. B **40** (1989) 4224-4227.

121. "Medium range structural order and fractal annealing kinetics of radiolytic atomic hydrogen in high purity silica," T.E. Tsai, D.L. Griscom and E.J. Friebele, Phys. Rev. B **40** (1989) 6374-6380.

122. "Bromine-associated defect centers in irradiated ZrF_4-based glasses," **D.L. Griscom** and R.J. Ginther, J. Non-Cryst. Solids **110** (1989) 273-278.

123. "Correlation of defect centers with second harmonic generation in Ge- and Ge-P-doped silica core single mode fibers," T.E. Tsai, M.A. Saifi, E.J. Friebele, D.L. Griscom, and U. Osterberg, Optics Lett. **14** (1989) 1023-1025.

124. "Electron spin resonance determination of the redox state of iron and its relationship to radiation-induced defect centers in oxidized and reduced ZrF_4-based glasses," **D.L. Griscom** and R.J. Ginther, J. Non-Cryst. Solids **113** (1989) 146-160.

*125. "Electron Spin Resonance," **D.L. Griscom,** *Glass Science and Technology, Vol. 4B, Advances in Structural Analysis,* D.R. Uhlmann and N.J. Kreidl, Eds. (Academic Press, New York, 1990), pp. 151-251.

126. "Growth and decay kinetics of defect centers in high-purity fused silicas irradiated at 77 K with x rays or 6.4-eV laser light," **D.L. Griscom,** Nucl. Inst. & Methods B**46** (1990) 12-17.

127. "Si E′ centers and UV-induced compaction in high purity silica," T.E. Tsai, D.L. Griscom, and E.J. Friebele, Nucl. Instruments & Methods B**46** (1990) 265-268.

*128. "Electron spin resonance investigations of defects and defect processes in amorphous silicon dioxide," **D.L. Griscom,** *Atomic Processes Induced by Electronic Excitation in Non-Metallic Solids,* W.B. Fowler and N. Itoh, Eds. (World Scientific, Singapore, 1990), pp. 565-595.

129. "Defect centers induced by the harmonic wavelength of 1.06 μm light in Ge-P-doped silica," T.E. Tsai, E.J. Friebele, D.L. Griscom, and M. Saifi, Ceram. Trans. **14** (1990) 127-136.

130. "Correlation of defect centers with a wavelength-dependent photosensitive response in germania-doped silica optical fibers," K.D. Simmons, S. LaRochelle, V. Mizrahi, G.I. Stegeman, and D.L. Griscom, Optics Lett. **16** (1991) 141-143.

131. "Computer-simulation analysis of the ESR spectra of V-type centers in irradiated heavy-metal fluoride glasses," **D.L. Griscom** and E.J. Friebele, Phys. Rev. B **43** (1991) 7427-7441.

132. "Correlation of single mode fiber radiation response and fabrication parameters," E.J. Friebele, C.G. Askins, C.M. Shaw, M.E. Gingerich, C.C. Harrington, D.L. Griscom, T.E. Tsai, U.C. Paek, and W.H. Schmidt, Appl. Optics **30** (1991) 1944-1957.

133. "Dispersive diffusive transport of free excitons in high purity silica," T.E. Tsai and D.L. Griscom, J. Non-Cryst. Solids **131** (1991) 1240-1244.

*134. "Effects of high energy radiation on halide glasses," **D.L. Griscom** and E.J. Friebele, *Fluoride Glass Fiber Optics,* I. Aggarwal and G. Lu, Eds. (Academic Press, Boston, 1991), pp. 307-350.

135. "An electron spin resonance study of x-irradiated calcium aluminosilicate glasses," D.A. Dutt, P.L. Higby, and D.L. Griscom, J. Non-Cryst. Solids **130** (1991) 41-51.

*136. "Optical properties and structure of defects in silica glass," **D.L. Griscom,** Centenial Memorial Issue, J. Ceram. Soc. Jpn. **99** (1991) 923-942.

137. "Experimental evidence for excitonic mechanism of defect generation in high purity silica," T.E. Tsai and D.L. Griscom, Phys. Rev. Lett. **67** (1991) 2517-2520.

138. "Compositional dependence of trapped hole centers in gamma-irradiated calcium aluminosilicate glasses," D.A. Dutt, P.L. Higby, C.I. Merzbacher, and D.L. Griscom, J. Non-Cryst. Solids **135**, 122-130 (1991).

139. "Formation of interface traps in MOS devices during isochronal annealing after irradiation at 78K," N.S. Saks, R.B. Klein, S. Yoon, and D.L. Griscom, J. Appl. Phys **70** (1991) 7434-7442.

*140. "Electron spin resonance studies of point defects and magnetic precipitates in silicate glasses," **D.L. Griscom**, Trans. Amer. Crystallographic Assn. **27** (1991) 141-162.

141. "Defect centers and photoinduced self-organization in Ge-doped silica core fibers," T.E. Tsai and D.L. Griscom, *Proc. Intnational Workshop on Photoinduced Self-Organization Effects in Optical Fiber,* SPIE Vol. **1516** (1992) pp. 14-28.

142. "A structural model for low silica content calcium aluminosilicate glasses," D.A. Dutt, P.L. Higby, and D.L. Griscom, Phys. Chem. Glasses **33** (1992) 51-55.

143. "ESR spectroscopic investigation of oxide-doped fluorozirco-hafnate glasses," J.S. Sanghera, P. Hart, D. Griscom, M.G. Sachon, and I.D. Aggarwal, *Ceramic Transactions*, Vol. 28, (The American Ceramic Society, Westerville, OH, 1992), pp. 423-431.

*144. "Electron spin resonance characterization of self-trapped holes in amorphous silicon dioxide," **D.L. Griscom,** in Proc. International Seminar Point Defects in Glasses, Riga, Latvia, July 29 – Aug 1, 1991, J. Non-Cryst. Solids **149** (1992) 137-160.

145. "Post-irradiation cracking of H_2 and formation of interface states in MOSFETs," R.E. Stahlbush, A.H. Edwards, D.L. Griscom, and B.J. Mrstik, J. Appl. Phys. **73** (1993) 658-667.

146. "Materials issues in diagnostic systems for BPX and ITER," F.W. Clinard, Jr., E.H. Farnum, D.L. Griscom, R.F. Mattas, S.S. Medley, F.W. Wiffin, S.S. Wojtowicz, K.M. Young, and S.J. Zinkle, J. Nucl. Materials **191-194** (1992) 1399-1403.

147. "An electron spin resonance study of γ-irradiated barium galliosilicate glasses," D.A. Dutt, D.L. Griscom, C.M. Shaw, and J.E. Shelby, J. Chem. Phys. **96** (1992) 4852-4859.

*148. "Hydrogen model for radiation-induced interface states in SiO_2-on-Si structures: A review of the evidence," **D.L. Griscom,** in Proc. Workshop "Defects in Semiconductor-Insulator Systems" Microelectronics Center of North Carolina, Research Triangle Park, NC, September 1991, J. Electron. Mat. **21** (1992) 763-767.

149. "Radiation-induced trapped hole centers in calcium aluminosilicate glasses, D.A. Dutt, P.L. Higby, C.I. Merzbacher, and D.L. Griscom, *Ceramic Transactions* Vol. 28, (The American Ceramic Society, Westerville, OH, 1992), pp. 111-122.

150. "Electron spin resonance characterization of nonbridging oxygen hole centers in alkali silicate glasses", R. Cases and D.L. Griscom, *Proceedings of XVI Int'l Congress on Glass, Vol. 3, Glass Structure* (1992), pp. 53-58.

151. "Survivability of optical fibers in space," E.J. Friebele, M.E. Gingerich, and D.L. Griscom, *Optical Materials Reliability and Testing: Benign and Adverse Environments*, SPIE Vol. **1791** (1992) pp. 177-188.

*152. "Electron spin resonance spectroscopy of radiation-induced defect centers in insulating glasses," **D.L. Griscom**, in *Experimental Techniques of Glass Science,* O. El-Bayoumi and C.J. Simmons, Eds. (The American Ceramic Society, Westerville, OH, 1993), pp. 161-184.

153. "Defect centers in heavy-metal fluoride glasses: A review," **D.L. Griscom**, J. Non-Cryst. Solids **161** (1993) 45-51.

154. "Thermal stability of photoinduced gratings and paramagnetic centers in Ge- and Ge-P-doped silica optical fibers," T.E. Tsai, E.J. Friebele, and D.L. Griscom, Optics Letters **18** (1993) 935-937.

155. "Thermal stability of self-organized gratings and defects in Ge- and Ge-P-doped silica core fibers," T.E. Tsai, E.J. Friebele, and D.L. Griscom, *Photosensitivity and Self-Organization in Optical Fibers and Waveguides*, SPIE Vol. **2044** (1993) 121-132.

156. "Photosensitivity of rare-earth-doped glasses," G.M. Williams, D.A. Dutt, J.A.Ruller, D.L.Griscom, K.K. Crahan, E.J. Friebele, *Photosensitivity and Self-Organization in Optical Fibers and Waveguides*, SPIE Vol. **2044** (1993) 322-329.

157. "Radiation-induced defects in glasses: Origin of power-law dependence of concentration on dose," **D.L. Griscom**, M.E. Gingerich, and E.J. Friebele, Phys. Rev. Letters. **71** (1993) 1019-1022.

158. "Fast-neutron radiation effects in a silica-core optical fiber studied by a CCD-camera spectrometer," **D.L. Griscom**, M.E. Gingerich, E.J. Friebele, M. Putnam, and W. Unruh, Appl. Optics **33** (1994) 1022-1028.

159. "From E´ centers to the "characteristic" resonance: A colleague's reminiscences on the scientific odyssey of Robert A. Weeks," **D.L. Griscom**, J. Non-Cryst. Solids **179** (1994) 22-38.

160. "Model for dose, dose-rate and temperature dependence of radiation-induced loss in optical fibers," **D.L. Griscom**, M.E. Gingerich, and E.J. Friebele, IEEE Trans. Nuc. Sci. **NS-41** (1994) 523-527.

161. "Effect of water on the generation of second harmonic in poled fused silica," L.J. Henry, A.D. Devilbiss, T.-E. Tsai, and D.L. Griscom, *Doped Fiber Devices and Systems*, M.J. Digonnet; Ed., Proc. SPIE Vol. **2289** (1994) p. 177-184.

162. "Proposed experiment to investigate use of heated optical fibers for tokamak diagnostics during D-T discharges", W. Tighe, H. Adler, D. Cylinder, D. Johnson, D. Pallidino, A. Ramsey, P. Morgon, and D. Griscom, Rev. Sci. Inst. **66** (1995) 907-909.

163. "^{29}Si superhyperfine interactions of the E´ center: A potential probe of range-II order in silica glass," **D.L. Griscom** and M. Cook, J. Non-Cryst. Solids **182** (1995) 119-134.

164. "Radiation hardening of pure-silica-core optical fibers by ultra-high-dose γ-ray pre-irradiation," **D.L. Griscom**, J. Appl. Phys. **77** (1995) 5008-5013.

165. "γ-ray-induced optical attenuation in Ge-doped-silica fiber image guides", **D.L. Griscom**, J. Appl. Phys. **78** (1995) 6696-6704.

166. "γ-radiation resistance of aluminum-coated all-silica optical fibers fabricated using different types of silica in the core", **D.L. Griscom**, K.M. Golant, A.L. Tomashuk, D.V. Pavlov, and Yu.A. Tarabrin, Appl. Phys. Lett. **69** (1996) 322-324.

167. "γ and fission-reactor radiation effects on the visible-range transparency of aluminum-jacketed, all-silica optical fibers," **D.L. Griscom**, J. Appl. Phys. **80** (1996) 2142-2155.

168. "Visible/infra-red absorption study in fiber geometry of metastable defect states in high-purity fused silicas," **D.L. Griscom**, *Defects in Insulating Materials ICDIM 96*, G.E. Matthews and R.W. Williams, Eds., Materials Sci. Forum Vols. 239-241 (1997) 19-24.

169. "Influence of the cladding thickness on the evolution of the NBOHC band in optical fibers exposed to gamma radiations," O. Deparis, D.L. Griscom, P. Mégret, M. Decréton, and M. Blondel, J. Non-Cryst. Solids **216** (1997) 124-128.

170. "Radiation effects in glasses used for immobilization of high-level waste and plutonium disposition," W.J. Weber, R.C. Ewing, C.A. Angell, G.W. Arnold, A.N. Cormack, J.M. Delaye, D.L. Griscom, L.W. Hobbs, A. Navrotsky, D.L. Price, A.M. Stoneham, and M.C. Weinberg, J. Mater. Res. **12**, No. 8 (1997) 1946-1978.

171. "Radiation hardening of optical bands associated with self-trapped holes induced by γ rays in pure-silica-core optical fibers," **D.L. Griscom**, Appl. Phys. Lett. **71** (1997) 175-177.

172. "On the structure and radiation chemistry of iron phosphate glasses: New insights from electron spin resonance, Mössbauer, and evolved-gas mass spectroscopy," **D.L. Griscom,** C.I. Merzbacher, N.E. Bibler, H. Imagawa, S. Uchiyama, A. Namiki, G.K. Marasinghe, M. Mesko, and M. Karabulut, Nucl. Inst. & Methods B **141** (1998) 600-615.

173. "Determination of the visible-range optical absorption spectrum of peroxy radicals in gamma-irradiated fused silica," **D.L. Griscom** and M. Mizuguchi, J. Non-Cryst. Solids **239** (1998) 66-77.

*174. "Electron spin resonance of 65-million-year-old glasses and rocks from the Cretaceous-Tertiary boundary," **D.L. Griscom**, V. Beltrán-López, C.I. Merzbacher, and E. Bolden, in Selected papers from the 18th International Congress on Glass, San Francisco, CA, July 10-15, 1998, R.A. Weeks, Ed., J. Non-Cryst. Solids **253** (1999) 1-22.

175. "Electron spin resonance studies of defect centers induced in a high-level nuclear waste glass simulant by gamma-irradiation and ion-implantion," **D.L. Griscom,** C.I. Merzbacher, R.A. Weeks, R.A. Zuhr, J. Non-Cryst. Solids **258** (1999) 34-47.

*176. "The natures of point defects in amorphous silicon dioxide," **D.L. Griscom**, in *Defects in SiO_2 and Related Dielectrics: Science and Technology*, G. Pacchioni, L. Skuja, and D.L. Griscom, Eds., (Kluwer Academic, The Netherlands, 2000) pp 117-159.

177. "A new composite model for hydrous RuO_2;" K.E. Swider-Lyons, K.M. Bussmann, D.L. Griscom, C.T. Love, D.R. Rolison, W. Dmowski, and T. Egami, in "Solid State Ionic Devices II--Ceramic Sensors," E.D. Wachsman, W. Weppner (Eds.), PV2000-32, (Electrochemical Society, Pennington, NJ, 2000) 148-156.

178. "Fractal kinetics of radiation-induced point-defect formation and decay in amorphous insulators: Application to color centers in silica-based optical fibers," **D.L. Griscom**, Phys. Rev. B **64** (2001) 174201-1 to 174201-14.

*179. "Amorphous materials: Electron spin resonance", **D.L. Griscom**, in Encyclopedia of Materials: Science and Technology, (Elsevier Science Ltd., 2001) 179-186.

180. "ESR Spectra of Limestones from the Cretaceous-Tertiary Boundary: Traces of a Catastrophe," **D.L. Griscom** and V. Beltrán-López, Proc. International Symposium ESR Dosimetry and Dating, Osaka, Japan, October 2001. Advances in ESR Applications **8** (2002) 57-64.

181. "New geochemical insights from electron-spin-resonance studies of Mn^{2+} and SO_3^- in calcites: Quantitative analyses of Chicxulub crater ejecta from Belize and southern México with comparisons to limestones from distal Cretaceous-Tertiary-boundary sites," **D.L. Griscom**, V. Beltrán-López, K.O. Pope, and A.C. Ocampo, in *Impact Markers in the Stratigraphic Record*, Impact Studies, vol. 3, C. Koeberl and F. Martínez-Ruiz, Eds. (Springer Verlag, Heidelberg, 2003) pp. 229-270.

182. "Fossil natural glasses composed of ferric oxyhydroxides: Impactites of the 35.5 million year old Chesapeake Bay crater", **D.L. Griscom**, A. Akiyoshi, T. Homae, K. Kondo, C. Yamanaka, T. Ueno, M. Ikeya, M. Affatigato, A. Schue, Proc. of "Natural Glasses 4", Lyon, FRANCE, August 2002. J. Non-Cryst. Solids **323** (2003) 7-26.

*183. "One bad day 65 million years ago…", **D.L. Griscom**, Proc. Fourth International Conference on Borate Glasses, 14-18 July, 2002, Glass Technology **44** (2003) 39-41.

184. "γ-ray-induced visible/infrared optical absorption bands in pure and F-doped silica-core fibers: Are they due to self-trapped holes?", **D. L. Griscom**, Proc. 16th University Conference on Glass Science, Troy, NY, 13-15 August, 2003, J. Non-Cryst. Solids **349** (2004) 139-147.

185. "Self-trapped holes in pure-silica glass: A history of their discovery and characterization and an example of their critical significance to industry", **D.L. Griscom**, Proc. First Conf. Advances in Optical Materials, Tucson, AZ, 15 October 2005, J. Non-Cryst. Solids **352** (2006) 2601-2617.

186. "Transient optical absorption in pulsed-X-ray-irradiated pure-silica-core optical fibers: Influence of self-trapped holes," S. Girard, D.L. Griscom, J. Baggio, B.Brichard, F. Berghmans, Proc. First Conf. Advances in Optical Materials, Tucson, AZ, 15 October 2005, J. Non-Cryst. Solids **352** (2006) 2637-2642.

187. "Positronium as a Probe of Paramagnetic Centers in a-SiO_2," D. B. Cassidy, K. T. Yokoyama, S. H. M. Deng, D. L. Griscom, H. Miyadera, H. W. K. Tom, C. M. Varma and A.P. Mills, Jr. Phys. Rev. **B 75** (2007) 085415.

188. "Thermostimulated luminescence and electron spin resonance in X-ray- and photon-irradiated oxygen-deficient silica," A.N. Trukhin, J. Troks, and D.L. Griscom, J. Non-Cryst. Solids, **353** (2007) 1560-1566.

189. "Photosensitivity of SiO_2-Al and SiO_2-Na glasses under ArF (193 nm) laser," A.N. Trukhin*, J.Teteris, A.Fedotov, D.L.Griscom, G. Buscarino, Proc. Conf. SiO_2 2008, Saint-Etienne, France, 30 June – 2 July 2008, J. Non-Cryst. Solids 355 (2009) 1066-1074.

190. "Sub-band-gap-excited luminescence of localized states in SiO_2-Si and SiO_2-Al glasses," A.N. Trukhin, A. Sharalovski, J. Grube, D.L. Griscom, J. Non-Cryst Solids **356** (2010) 982-986.

"Electron spin resonance study of Fe^{3+} and iron-group ion clusters in 17-year-old nuclear-waste-glass simulants containing PuO_2 with different degrees of ^{238}Pu substitution," **D.L. Griscom**, W.J. Weber, J. Non-Cryst. Solids (submitted 8-21-09).

"Trapped-electron centers in pure and doped glassy silica: A review and synthesis," **D.L. Griscom**, J. Non-Cryst. Solids (Proc. Conf. SiO_2-2010, submitted 7-30-10)

"In plain sight: The Chesapeake Bay crater ejecta blanket," **D.L. Griscom**, submitted to the proceedings of the Geological Society of America Penrose Conference "The Late Eocene Earth: Hot House, Ice House, and Impacts," held Monte Cònero, Italy October 3-6, 2007. (This 34-page, 12 figure paper was rejected despite no substantive errors of fact or reasoning having been pointed out by either the official reviewers or any of several the world experts in impact geology (including Walter Alvarez and Jan Smit) who attentively listened to my presentation at this conferece. So for the time being, it has been web published at http://www.chesapeakebaycraterejecta.com/).