Curriculum Vitae

NAME Ralph V. Chamberlin
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BIRTH DATE April 22, 1956
CITIZENSHIP United States

EDUCATION
University of Utah, Salt Lake City, B.S. Physics, June 1978
University of California, Los Angeles, M.S. Physics, December 1979
Ph.D. Physics, August 1984

EMPLOYMENT
Department of Physics and Astronomy, Arizona State University,
Professor (2000-present)
Associate Professor (1992-2000)
Assistant Professor (1986-1992).
Institut für Festkörperphysik, Technische Hochschule Darmstadt, Germany,
Visiting Associate Professor (1993).
Department of Physics, University of Pennsylvania,
Research Investigator (1984-1986).
Department of Physics, University of California at Los Angeles
Research Associate/Assistant (1978-1984),
Teaching Assistant (1979-1980).
Department of Physics, University of Utah,
Undergraduate Research Assistant (1974-1978),
Undergraduate Teaching Assistant (1975-1977).

HONORS
Humboldt Research Award for Senior U.S. Scientist (2001)
Invited Speaker, ESF Workshop on Non-Exponential Relaxation (1997)
Invited Speaker, Biophysics at the Molecular and Macromolecular Scales (1995)
Invited Speaker, Gordon Research Conference on Dielectric Phenomena (1994)
IBM Post-Doctoral Fellowship (1985-1986)
Regents' Fellowship (1978-1984)
General Instruments Corporation Prize (1978)
Special Departmental Scholarship (1974-1978)
Two patents (1996-1997)
78 seminars and colloquia (1984-present)
43 conference presentations (1980-present)
69 refereed publications (1978-present)

MEMBERSHIP
American Association for the Advancement of Science
American Physical Society
Sigma Xi

CONTRIBUTED PRESENTATIONS

"Reversibility and Time Dependence of the Magnetization in Ag:Mn and Cu:Mn spin glasses"
26th Annual Conference on Magnetism and Magnetic Materials, Dallas, TX, November 1980

"The H-T Phase Diagram for the Spin-Glass Ag:Mn"
March Meeting of the American Physical Society, Dallas, TX, March 9, 1982

"Low Frequency Susceptibility of Ag:Mn"
March Meeting of the American Physical Society, Los Angeles, CA, March 24, 1983

"Time Decay of the Remanent Magnetization in Spin Glasses"
March Meeting of the American Physical Society, Detroit, MI, March 29, 1984

"High-Field Behavior of Tetramethyltetraselenafulvalenium Perchlorate $(TMTSF)_2ClO_4$"
March Meeting of the American Physical Society, Las Vegas, NV, April 2, 1986

"Hall Effect and Magnetoresistance Measurements on $(TMTSF)_2ClO_4$ and the High Field (30T) Transition"
March Meeting of the American Physical Society, New York, NY, March 20, 1987

"Extreme Quantum Limit in a Quasi 2-Dimensional Organic Conductor"
March Meeting of the American Physical Society, New Orleans, LA, March 23, 1988

"$(TMTSF)_2ClO_4$ in the Extreme Quantum Limit"
International Conference on Science and Technology of Synthetic Metal
Santa Fe, NM, July 28, 1988

"Dynamic Magnetization of a Dilute Magnetic Alloy Near the Percolation Transition"
March Meeting of the American Physical Society, St. Louis, MO, March 22, 1989

"NMR and Magnetization of the Heisenberg Ferromagnet $(CH_3NH_3)_2Cu_xCd_{1-x}Cl_4$ Excitations in Spin Clusters"
March Meeting of the American Physical Society, Anaheim, CA, March 13, 1990

"Magnetic Relaxation in Magnetic Materials"
March Meeting of the American Physical Society, Anaheim, CA, March 14, 1990

"Dielectric Susceptibility of $(C_nH_{2n+1}NH_3)_2CuCl_4$"
March Meeting of the American Physical Society, Anaheim, CA, March 16, 1990

"Percolation Model for Relaxation in Random Systems"
International Discussion Meeting on Relaxation in Complex Systems
Heraklion, Crete, June 19, 1990

"Relaxation in Condensed Matter"
March Meeting of the American Physical Society, Cincinnati, OH, March 22, 1991

"A Magnetic Force Microscope Utilizing a Novel Ultra-Small Spring Constant Cantilevered Tip"
(Presented by A. DiCarlo)
Arizona State University Winter Workshop on Microstructure of Magnetic Materials
Wickenburg, AZ, January 10, 1992

"Slow Relaxation in Magnetic Materials"
Arizona State University Winter Workshop on Microstructure of Magnetic Materials
Wickenburg, AZ, January 10, 1992

“Dynamics of Nanoscopic Magnetic Systems”
March Meeting of the American Physical Society, Los Angeles, CA, March 18, 1998

“Nonresonant Spectral Hole Burning in a Spin Glass”
Centennial Meeting of the American Physical Society, Atlanta, GA, March 25, 1999

“A Mean-Field Cluster Model for Ferromagnets”
March Meeting of the American Physical Society, Minneapolis, MN, March 23, 2000

“Nanoscopic Heterogeneities in the Response of Magnetic Materials”

The 8th Joint MMM-Intermag Conference, San Antonio, TX, January 8, 2001

"Nanothermodynamic Response of Magnetic Materials"

March Meeting of the American Physical Society, Seattle, WA, March 13, 2001

INVITED PAPERS AT SCHOLARLY MEETINGS

"Time Decay of the Remanent Magnetization in Spin Glasses"

30th Annual Conference on Magnetism and Magnetic Materials
San Diego, CA, November 27, 1984

"Superconductivity, the Present State"

Association of Energy Engineers/Spring Energy Conference, Tempe, AZ, April 12, 1989

"Clusters and Percolation in Magnetic Transitions"

Office of Naval Research Contractors Meeting, Lake Arrowhead, CA, January 23, 1990

"Universal Model for Slow Relaxation"

March Meeting of the American Physical Society, Indianapolis, IN, March 18, 1992

"Magnetic Force Microscopy Utilizing an Ultra-Sensitive Vertical Cantilever"

(presented by A. DiCarlo) Scanning Probe Microscopies II at OE/LASE '93
Los Angeles, CA, January 18, 1993

"Mesoscopic Model for the Primary Response of Liquids, Glasses, and Crystals"

Second International Discussion Meeting on Relaxations in Complex Systems
Alicante, Spain, June 30, 1993

"Mesoscopic Model for the Primary Response of Magnetic Materials"

The 6th Joint MMM-Intermag Conference, Albuquerque NM, June 21, 1994

"Non-Debye Primary Response of Liquids, Glasses, Polymers and Crystals"

Gordon Conference on Dielectric Phenomenon, Holderness School NH, August 1, 1994

"Nonexponential Relaxation in Condensed Matter"

Raymond L. Orbach Symposium, University of California, Riverside, March 18, 1995

"Mesoscopic Model for the Universal Response of Condensed Matter"

Quantitative Biophysics at the Molecular and Macromolecular Scales
International Centre for Theoretical Physics, Trieste, Italy, July 5, 1995

"Time-Domain Spectral Hole Burning in the Slow Relaxation of Supercooled Liquids"

MRS 1996 Fall Meeting, Boston, MA, December 5, 1996

"Experiments and Theory of the Non-Exponential Relaxation in Liquids, Glasses and Crystals"

ESF Workshop Non-Exponential Relaxation and Rate Behaviour
Duisburg, Germany, March 3, 1997

"Nonresonant Spectral Hole Burning in the Slow Relaxation of Supercooled Liquids"

Third International Discussion on Relaxations in Complex Systems, Vigo Spain, July 2, 1997

"Mesoscopic Mean-Field Theory for the Thermal and Dynamic Properties of Condensed Matter"

Viscous Liquids and the Glass Transition
Søminenstationen, Holbaek, Denmark, June 17, 2000

"Nanoscopic Heterogeneities in the Thermal and Dynamic Behavior of Supercooled Liquids"

220th ACS National Meeting Washington, DC, August 21, 2000

"Mean-Field Cluster Model for the Response of Supercooled Liquids" June 19

"The Big World of Nanothermodynamics" June 22

4th International Discussion Meeting on Relaxation in Complex Systems
Hersonissis, Crete, June 17-23, 2001

"Mean-Field Cluster Model for the Thermal and Dynamic Properties of Condensed Matter"

Slow Dynamics and Glass Transition, Bangalore, India, January 7, 2002

“Stretched-Exponential Relaxation and Nanothermodynamics in Condensed Matter”
4-Corners Meeting of the American Physical Society, Salt Lake City, UT October 5, 2002
“Nanothermodynamics and the Williams-Landel-Ferry Equation”
76th Annual Meeting of The Society of Rheology, Lubbock, TX, February 14, 2005
“Free-Energy Landscape Picture for Dynamics in Disordered Materials”
Workshop on Correlated Electrons and Amorphous Materials, Augsburg, Germany, July 16, 2005
“Nanothermodynamics in Disordered Materials”
APS Four-Corners Section Meeting, Boulder, CO, October 15, 2005

SEMINARS AND COLLOQUIA
"Time Decay of the Remanent Magnetization in Spin Glasses"
Université Paris-Sud, Orsay, France, March 15, 1984
"Experimental Aspects of the Spin-Glass Transition"
Dartmouth College, Hanover, NH, April 18, 1986
"Field-Induced Phase Transitions in the Organic Conductor $(TMTSF)_2ClO_4$"
University of Minnesota, Minneapolis, MN, July 7, 1986
"High T_c Superconductors: Facts and Fantasies"
Arizona State University, Tempe, AZ, April 9, 1987
Society for the Advancement of Material and Process Engineering
Phoenix, AZ, August 18, 1987
Motorola Government Electronics Group, Science Advisory Board Associates
Phoenix, AZ, October 15, 1987
IEEE Power Industry, Phoenix, AZ, January 14, 1988
"High T_c Superconductors: Properties and Applications"
IEEE Waves and Devices Group, Phoenix, AZ, April 20, 1988
Sun City Engineering Club, Phoenix, AZ, January 6, 1989
"Percolation Model for Relaxation in Random Systems"
Boston University, Boston, MA, June 4, 1990
Universität Mainz, West Germany, July 5, 1990
Arizona State University, Tempe, AZ, October 19, 1990
"Slow Relaxation in Condensed Matter"
MIT, Brown, Princeton, and Exxon Research, April 18-25, 1991
University of Utah, Salt Lake City, UT, May 9, 1991
University of California, Berkeley, CA, May 16, 1991
University of California, Los Angeles, CA, July 31, 1991
Department of Physics and Astronomy, ASU, Tempe, AZ, September 12, 1991
State University of New York, Buffalo, NY, October 10, 1991
Michigan State University, East Lansing, MI, March 2, 1992
"Mesoscopic Dynamical Correlations in Condensed Matter"
Technische Hochschule Darmstadt, Germany, June 23, 1993
"Non-Debye and Non-Arrhenius Primary Response of Liquids, Glasses, Polymers and Crystals"
Universität Marburg, Germany, June 24, 1993
Chalmers Technical University, Gothenburg, Sweden, October 20, 1993
Universität Freiburg, Germany, October 25, 1993
Hahn-Meitner Institut, Germany, November 4, 1993
Universität Mainz, November 8, 1993

"Slow Relaxation in Magnetic and Non-Magnetic Matter"
Universität Duisburg, Germany, October 13, 1993
"Mathematical Aspects of the Primary Response of Condensed Matter"
Department of Mathematics, ASU, Tempe AZ, September 22, 1994
"Universalities in the Primary Response of Condensed Matter"
Department of Physics and Astronomy, ASU, Tempe AZ, September 29, 1994
Department of Physics, University of Arizona, Tucson AZ, April 19, 1995
Universität Ulm, Ulm, Germany, June 13, 1995
Philips Research Laboratories, Eindhoven, Netherlands, June 30, 1995
Technische Hochschule Darmstadt, Darmstadt, Germany, June 27, 1996
Universität Bayreuth, Bayreuth, Germany, July 18, 1996
"Towards a Thermodynamic Theory for the Kohlrausch-Williams-Watts Law"
Max Planck Institute for Polymer Research, Mainz, Germany, June 26, 1995
"Nonexponential Relaxation in Condensed Matter"
University of Sussex, Brighton, UK, June 4, 1996
Roskilde University, Roskilde, Denmark, July 1, 1996
Universität Dortmund, Dortmund, Germany, June 23, 1997
"Dielectric Spectral Hole Burning"
University of Swansea, Swansea, UK, June 3, 1996
Universität Leipzig, Leipzig, Germany, June 25, 1996
"Slow Relaxation without Energy Barriers"
Roskilde University, Roskilde, Denmark, July 2, 1996
Universität Mainz, Mainz, Germany, July 9, 1996
"Nonresonant Spectral Hole Burning"
Arizona State University, SPS Seminar, Tempe, AZ, March 11, 1997
University of Utah, Salt Lake City, UT, May 8, 1997
“Mesoscopic Physics and its Application to the Dynamics of Condensed Matter”
Universität Duisburg, Duisburg, Germany, June 14, 2000
“Nanoscopic Heterogeneities in the Response of Ferromagnets”
Universität Augsburg, Augsburg, Germany, June 19, 2000
Universität Mainz, Mainz, Germany, June 26, 2000
“Dynamical Heterogeneities in Condensed Matter”
Arizona State University, Tempe, AZ, July 19, 2000
“The Big World of Nanothermodynamics”
Arizona State University, Tempe, AZ, February 9, 2001
“Nanoscopic Heterogeneities in Condensed Matter”
Arizona State University, Tempe, AZ, June 6, 2001
“Mean-Field Cluster Model for the Thermal and Dynamic Properties of Liquids, Glasses, Polymers, and Crystals”
Institut Laue-Langevin, Grenoble, France, June 15, 2001
Jožef Stefan Institute, Ljubljana, Solovenia, October 1, 2001
University of Mainz, Germany, November 12, 2001
University of Bayreuth, Germany, November 22, 2001
“Nanoscopic Heterogeneities in the Slow Response of Liquids, Glasses, Polymers and Crystals”
Technical University of Munich, Germany, November 15, 2001
“Nanocluster Response in Liquids, Glasses, and Magnetic Materials”
University of Augsburg, Germany, November 21, 2001

"Nanoscopic Heterogeneities in the Thermal and Dynamic Properties of Liquids, Glasses, Polymers and Crystals"
Physikalish-Technische Bundesanstalt, Berlin, Germany, November 27, 2001
"Mean-Field Cluster Model for non-Debye Response, non-Arrhenius Activation, and non-Classical Critical Scaling"
Hahn Meitner Institute, Berlin, Germany, November 28, 2001
"Structure and Dynamics of Interacting Iron Nanoparticles"
Universität Duisburg, Duisburg, Germany, March 19, 2002
Max-Planck-Institut für Mikrostrukturphysik, Halle, Germany, May 2, 2002
"The Big World of Nanothermodynamics"
University of Bologna, Bologna, Italy, June 3, 2002
Universität Duisburg, Duisburg, Germany, June 11-13, 2002
"Nanothermodynamics and Bose-Ising Statistics"
Arizona State University, Tempe, September 12, 2002
Carnegie Mellon University, Pittsburgh, September 30, 2002
"Thermal and Dynamic Properties of Complex Systems: From Kohlrausch Relaxation to Nanothermodynamics"
Technical University of Dresden, Germany, June 5, 2003
"From Kohlrausch Relaxation to Nanothermodynamics"
University of Erlangen, Germany, June 12, 2003
Duisburg/Essen University, Germany, June 17, 2003
University of Augsburg, Germany, June 26, 2003
"Stretched Exponential Relaxation and Nanothermodynamics"
Texas Tech University, May 27, 2004
University of Giessen, Germany, July 14, 2004
"Nanothermodynamics: Experiment, Theory, and Simulation"
Roskilde University, Denmark, June 23, 2004
University of Dortmund, Germany, July 13, 2004
University of Duisburg, Germany, July 16, 2004
University of California, Berkeley, September 20, 2004
Arizona State University, November 10, 2004
"Nanothermodynamics: Measurement and Simulation of Heat Flow in Complex Systems"
IEEE Waves and Devices, Phoenix Chapter, Arizona State University, April 28, 2005
"Current Topics in Thermodynamics"
MURI AFOSR Workshop, Arizona State University, May 6, 2005
"Free-Energy Landscape Picture for WLF Behavior"
University of Dortmund, Germany, June 29, 2005
"Nanothermodynamics in Disordered Materials"
Seminars on Liquids and Glasses, Arizona State University, Tempe AZ, November 15, 2005
"Nanothermodynamics and the Response of Disordered Materials"
Colorado State University, February 13, 2006

PATENTS

Non-Contact Force Microscope Having a Coaxial Cantilever-Tip Configuration
United States Patent No. 5,509,300, April 23, 1996.
United States Patent No. 5,602,330, February 22, 1997

PUBLICATIONS IN REFEREED JOURNALS AND BOOKS

1 "SQUID Detection of EPR in Dilute CMN"
R.V. Chamberlin, L.A. Moberly, and O.G. Symko.
J. Phys. (Paris) **39**, C6-1217-1218 (1978).

2 "High-Sensitivity Magnetic Resonance by SQUID Detection"
R.V. Chamberlin, L.A. Moberly, and O.G. Symko.
J. Low Temp. Phy. **35**, 337-347 (1978).

3 "Reversibility and Time Dependence of the Magnetization in Ag:Mn and Cu:Mn Spin Glasses"
R.V. Chamberlin, M. Hardiman, and R. Orbach.
J. Appl. Phys. **52**, 1771-1772 (1981).

4 "H-T Phase Diagram for Spin-Glasses: an Experimental Study of Ag:Mn"
R.V. Chamberlin, M. Hardiman, L.A. Turkevich, and R. Orbach.
Phys. Rev. B **25**, 6720-6729 (1982).

5 "The H-T Phase Diagram for the Spin-Glass Ag:Mn"
R.V. Chamberlin, M. Hardiman, L.A. Turkevich, and R. Orbach.
J. Mag. Magn. Mat. **31-34**, 1423-1424 (1983).

6 "Time Decay of the Remanent Magnetization in Spin Glasses"
R.V. Chamberlin, G. Mozurkewich, and R. Orbach.
Phys. Rev. Lett. **52**, 867-870 (1984).

7 "Time Decay of the Remanent Magnetization in Spin Glasses as a Function of the Time Spent in the Field-Cooled State"
R.V. Chamberlin.
Phys. Rev. B **30**, 5393-5395 (1984).

8 "Dynamic Scaling in the $Eu_{0.4}Sr_{0.6}S$ Spin Glass"
N. Bontemps, J. Rajchenbach, R.V. Chamberlin, and R. Orbach.
Phys. Rev. B **30**, 6514-6520 (1984).

9 "Time Decay of the Remanent Magnetization in Spin Glasses"
R.V. Chamberlin.
J. Appl. Phys. **57**, 3377-3381 (1985).

10 "Magnetization Study of the Field-Induced Transitions in Tetramethyltetraselenafulvalenium Perchlorate, $(TMTSF)_2ClO_4$"
M.J. Naughton, J.S. Brooks, L.Y. Chiang, R.V. Chamberlin, and P.M. Chaikin.
Phys. Rev. Lett. **55**, 969-972 (1985).

11 "Experimental Search for the Spin Glass Transition in $Eu_{0.4}Sr_{0.6}S$: a Dynamic Scaling Analysis"
N. Bontemps, J. Rajchenbach, R.V. Chamberlin, and R. Orbach.
J. Mag. Magn. Mat. **54-57**, 1-5 (1986).

12 "Time Decay of the Thermoremanent Magnetization in the Insulating Spin Glass $Eu_{0.4}Sr_{0.6}S$"
J. Ferré, M. Ayadi, R.V. Chamberlin, R. Orbach, and N. Bontemps.
J. Mag. Magn. Mat. **54-57**, 211-212 (1986).

13 "Magnetization Studies of the Field-Induced Transitions in $(TMTSF)_2ClO_4$"
J.S. Brooks, M.J. Naughton, R.V. Chamberlin, L.Y. Chiang, and P.M. Chaikin.
J. Mag. Magn. Mat. **54-57**, 637-640 (1986).

14 "Magnetic Field Induced Phases of $(TMTSF)_2ClO_4$"
P.M. Chaikin, J.S. Brooks, R.V. Chamberlin, L.Y. Chiang, D.P. Goshorn, D.C. Johnston, M.J. Naughton, and X. Yan.
Physica (Amsterdam) **143B**, 383-387 (1986).

15 "On the Kwak Transition: Field-Induced States in Two-Dimensional Organic Conductors"
P.M. Chaikin, E.J. Melé, L.Y. Chiang, R.V. Chamberlin, M.J. Naughton, and J.S. Brooks.
Synth. Met. **13**, 45-61 (1986).

16 "Small Sample Magnetometers for Simultaneous Magnetic and Resistive Measurements at Low Temperatures and High Magnetic Fields"
J.S. Brooks, M.J. Naughton, Y.P. Ma, P.M. Chaikin, and R.V. Chamberlin.
Rev. Sci. Instr. **58**, 117-121 (1987).

17 "Rapid Magnetic Oscillations in an Organic Conductor: Possibility of a New Type of Quantum Oscillation"
X. Yan, M.J. Naughton, R.V. Chamberlin, S.Y. Hsu, L.Y. Chiang, J.S. Brooks, and P.M. Chaikin.
Phys. Rev. B **36**, 1799-1802 (1987).

18 "Magnetic Field Induced Transitions in Organic Conductors: Experiments"
X. Yan, R.V. Chamberlin, L.Y. Chiang, M.J. Naughton, J.S. Brooks, and P.M. Chaikin.
Low-dimensional conductors and superconductors, NATO Advanced Studies Institute, Series B: Physics **155**, 211-220, eds. D. Jerome and L.G. Caron, Plenum Press (1987).

19 "High-Field Behavior of $(TMTSF)_2ClO_4$: Generalized Quantum Hall Effect and Wigner Crystallization"
R.V. Chamberlin, M.J. Naughton, X. Yan, P.M. Chaikin, S.Y. Hsu, L.Y. Chiang, and J.S. Brooks.
Japn. J. Appl. Phys. **26**, Suppl. 26-3, 575-576 (1987).

20 "Extreme Quantum Limit in a Quasi Two-Dimensional Organic Conductor"
R.V. Chamberlin, M.J. Naughton, X. Yan, L.Y. Chiang, S.Y. Hsu, and P.M. Chaikin.
Phys. Rev. Lett. **60**, 1189-1192 (1988).

21 "Angular-Dependence of the Field-Induced Transitions and Rapid Oscillations in$(TMTSF)_2ClO_4$"
X. Yan, M.J. Naughton, O.S. Cheena, R.V. Chamberlin, S.Y. Hsu, L.Y. Chiang, and P.M. Chaikin.
Sol. St. Comm. **66**, 905-908 (1988).

22 "Reentrant Field Induced Spin Density Wave Transitions"
M.J. Naughton, R.V. Chamberlin, X. Yan, S.Y. Hsu, L.Y. Chiang, M.Y. Azbel, and P.M. Chaikin.
Phys. Rev. Lett. **61**, 621-624 (1988).

23 "Orientational Anisotropy of the Upper Critical Field in Single Crystal $YBa_2Cu_3O_7$ and $Bi_2(CaSr)_3Cu_2O_x$"
M.J. Naughton, R.C. Yu, P.K. Davies, J.E. Fischer, R.V. Chamberlin, Z.Z. Wang, T.W. Jing, N.P. Ong, and P.M. Chaikin.
Phys. Rev. B **38**, 9280-9283 (1988).

24 "$(TMTSF)_2ClO_4$ in the Extreme Quantum Limit"
R.V. Chamberlin, M.J. Naughton, L.Y. Chiang, S. Hsu, X. Yan, and P.M. Chaikin.
Synth. Met. **27**, B41-B48 (1988).

25 "On the Shubnikov-De Haas Oscillations in $(TMTSF)_2ClO_4$"
X. Yan, M.J. Naughton, R.V. Chamberlin, L.Y. Chiang, X. Shu, and P.M. Chaikin.
Synth. Met. **27**, B145-B150 (1988).

26 "A Potpourri of Magnetic Effects in $(TMTSF)_2ClO_4$"
P.M.Chaikin, M.Y.Azbel, M.J.Naughton, R.V.Chamberlin, X.Yan, S.Hsu and L.YChiang
Synth. Met. **27**, B163-B173 (1988).

27 "Reentrance in the Field-Induced Spin Density Wave System"
M.J. Naughton, R.V. Chamberlin, L.Y. Chiang, S. Hsu, X. Yan, and P.M. Chaikin.
Synth. Met. **29**, F327-F333 (1989).

28 "Phase Boundary and Magnetization in Field-Induced Spin-Density-Wave Systems"
G. Montambaux, M.J. Naughton, R.V. Chamberlin, X. Yan, P.M. Chaikin, and M.Ya. Azbel.
Phys. Rev. B **39**, 885-888 (1989).

29 "Magnetoconductance in Lateral Surface Superlattices"
D.K. Ferry, G. Bernstein, R. Puechner, J. Ma, A.M. Kriman, R. Mezenner, W.-P. Liu, G.N. Maracas, and R. Chamberlin.
High Magnetic Fields in Semiconductor Physics II: Transport and Optics, 344-352, ed. by G. Landwehr, Springer Verlag, Heidelberg (1989).

30 "Magnetic Evidence for Reentrant Field-Induced Spin Density Waves"
M.J. Naughton, R.V. Chamberlin, X. Yan, P.M. Chaikin, and L.Y. Chiang
Mat. Res. Soc. Symp. Proc. **173**, 227-232 (1990).

31 "Percolation Model for Relaxation in Random Systems"
R.V. Chamberlin and D.N. Haines
Phys. Rev. Lett. **65**, 2197-2200 (1990).

32 Comment on "Scaling in the Relaxation of Supercooled Liquids"
R.V. Chamberlin
Phys. Rev. Lett. **66**, 959 (1991).

33 "Percolation Model for Relaxation in Random Systems"
R.V. Chamberlin, D.N. Haines, and D.W. Kingsbury
J. Non-Cryst. Sol. **131-133**, 192-195 (1991).

34 "Remanent Magnetization of a Simple Ferromagnet"
R.V. Chamberlin and F. Holtzberg
Phys. Rev. Lett. **67**, 1606-1609 (1991).

35 "Magnetic Force Microscopy Utilizing an Ultra-Small Spring Constant Vertically Cantilevered Tip"
A. DiCarlo, M.R. Scheinfein, and R.V. Chamberlin
Ultramicroscopy **47**, 383-392, (1992).

36 "Slow Relaxation in Magnetic Materials"
R.V. Chamberlin and M.R. Scheinfein
*Ultramicroscop*y **47**, 408-418 (1992).

37 "Signature of Ergodicity in the Dynamic Response of Amorphous Systems"
R.V. Chamberlin, R. Böhmer, E. Sanchez, and C.A. Angell
Phys. Rev. B, Rapid Comm. **46**, 5787-5790 (1992).

38 "Magnetic Force Microscopy Utilizing an Ultra-Sensitive Vertical Cantilever Geometry"
A. DiCarlo, M.R. Scheinfein, and R.V. Chamberlin
Appl. Phys. Lett. **61**, 2108-2110 (1992).

39 "Clustering and Relaxation in Condensed Matter"
R.V. Chamberlin
On clusters and clustering: from atoms to fractals, pg. 393-401, ed. by P.J. Reynolds, Elsevier, Amsterdam (1993).

40 "Slow Magnetic Relaxation in Iron: A Ferromagnetic Liquid"
R.V. Chamberlin and M.R. Scheinfein
Science **260**, 1098-1101 (1993).

41 "Non-Arrhenius Response of Glass-Forming Liquids"
R.V. Chamberlin
Phys. Rev. B. **48**, 15638-15645 (1993).

42 "Magnetic Force Microscopy Utilizing an Ultra-Sensitive Vertical Cantilever"
A. DiCarlo, M.R. Scheinfein, and R.V. Chamberlin
Proceedings of SPIE-International Society of Optical Engineers **1855**, 187-194 (1993).

43 "Non-Debye and Non-Arrhenius Primary Response of Liquids, Glasses, Polymers and Crystals"
R.V. Chamberlin and D.W. Kingsbury
J. Non-Cryst. Solids **172-174**, 318-326 (1994).

44 "Scanning Transmission Electron Microscopy of Thin Magnetic Films"
M. Mankos, J.M. Cowley, R.V. Chamberlin, M.R. Scheinfein and M.B. Stearns
IEEE Trans. Magn. **30**, 720-722 (1994).

45 "Mesoscopic Model for the Primary Response of Magnetic Materials"
R.V. Chamberlin
J. Appl. Phys. **76**, 6401-6406 (1994).

46 "Pulsed Dielectric Spectroscopy of Supercooled Liquids"
R. Böhmer, B. Schiener, J. Hemberger and R.V. Chamberlin
Z. Phys. B **99**, 91-99 (1995).

47 "Universalities in the Primary Response of Condensed Matter"
R.V. Chamberlin
Europhysics Letters **33**, 545-550 (1996).

48 "Dielectric Study of Supercooled Triphenylphosphite and Butyronitrile: Comparison with a Mesoscopic Model"
B. Schiener, A. Loidl, R.V. Chamberlin and R. Böhmer
J. Mol. Liq. **69**, 243-251 (1996).

49 "Nonexponential Relaxation of Condensed Matter"
R.V. Chamberlin
35 Years of Condensed Matter and Related Physics, pgs. 66-79
ed. by D.W. Hone, World Scientific (1996).

50 "Nonresonant Spectral Hole Burning in the Slow Dielectric Response of Supercooled Liquids"
B. Schiener, R. Böhmer, A. Loidl and R.V. Chamberlin
Science, **274**, 752-754 (1996).

51 "Relaxational Dynamics of Polar Nanodomains in SrCaTiO, x=0.002"
W. Kleemann, A. Albertini, R.V. Chamberlin and J.G. Bednorz
Europhys. Lett. **37**, 145-150 (1997).

52 "$SrTiO_3$-$SrGeO_3$ Perovskites Obtained at High Pressure and High Temperature"
A. Grzechnik, P.F. McMillan, R. Chamberlin, H. Hubert and A.V.G. Chizmeshya
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R. V. Chamberlin
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60 "Mean-Field Cluster Model for the Critical Behaviour of Ferromagnets"
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61 "Comment on 'A comment on dielectric hole burning'"
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R. V. Chamberlin, K. D. Humfeld, D. Farrell, S. Yamamuro, Y. Ijiri and S. A. Majetich
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R. V. Chamberlin
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69 “Monte Carlo simulation of supercooled liquids using a self-consistent local temperature”
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70 “A free-energy landscape picture and Landau theory for the dynamics of disordered materials”
M. R. H. Javaheri and R. V. Chamberlin
J. Chem. Phys. **125**, 154503-1-6 (2006).
71 “Large hysteretic magneto-resistance of silicide nanostructures”
T. Kim, B. Naser, R. V. Chamberlin, M. V. Schilfgaarde, P. A. Bennett, and J. P. Bird,
Submitted to Nature Materials (November 2006).
72 “Saturation and intrinsic dynamics of fluxons in NbTi and MgB_2"
R. V. Chamberlin, N. Newman, R. Gandikota, R. K. Singh, and B. H. Moeckly
Submitted to *Appl. Phys. Lett.* (January 2007)

RESEARCH PROPOSALS

Funded

"Development of an Atomic Scale Force Magnetometer"
R.V. Chamberlin (2/87-1/88)
Faculty Grant in Aid, Arizona State University: $3,000
University Research Fund, Arizona State University: $11,551
Department and College Matching Funds: $5,000

"Fracton Dynamics on Fractal Networks"
R.V. Chamberlin (11/87-10/91)
Office of Naval Research: $313,499

"Electrons and Atoms: Contemporary Experiments for Advanced Undergraduates"
S.M. Lindsay, J.C.H. Spence, I.S.T. Tsong, and R.V. Chamberlin (5/88-4/89)
National Science Foundation: $32,650
University Matching Funds: $32,650

"Acquisition of an NMR Spectrometer for Studies of Polymer Electrolytes"
R.F. Marzke (PI), G.H. Wolf, P.F. McMillan, C.A. Angell and R.V. Chamberlin (1994)
National Science Foundation: $97,440
University Matching Funds: $72,860

"Mesoscopic Structures in Magnetic Materials"
R.V. Chamberlin and M.R. Scheinfein (9/95-8/96)
Department of Physics and Astronomy: $2,500
Vice President for Research: $2,500

"Materials Research Science and Engineering Center at Arizona State University"
P.F. McMillan et al. (1996-2001)
National Science Foundation: $4,180,000
"Dynamics of Mesoscopic Structures in Magnetic Materials"
R.V. Chamberlin and M.R. Scheinfein (8/97-6/02)
National Science Foundation: $270,000

“Structural Recovery and Physical Aging in Plasticizing Environments”
G.B. McKenna (PI) R.V. Chamberlin (Consultant) (6/03-5/07)
National Science Foundation: $460,000

“Two-Gap Superconductivity and its Implications for Applications of MgB_2”
D. C. Larbalestier (PI), N. Newman, R. V. Chamberlin et al. (9/05-8/07)
National Science Foundation: $46,000

Graduate Student Supervision

Ph.D. Students

Anthony DiCarlo	Ph.D. 1992	A novel vertically cantilevered magnetic force microscope
Dallas W. Kingsbury	Ph.D. 1994	The glass transition in strong and fragile glass forming liquids
Wolfgang Sedlmeier	Supervised, 1994-95	
Aaron Marmorstein	Supervised, 1994-95	Masters in passing, 1995.
Dirk Jordan	Supervised, 1995-96	
Joel Andersen	Supervised, 1997-98	
Vidya Krishnamurthy	Employed, 1998, 2001	Masters in passing, 2001
Wei Liang	Employed, 1998	
Mohammad Javaheri	Supervised, 2004-2006	
Kurt Stangel	Supervised, 2002- Employed, 2007-	

M.S. Students

John K. O’Farrell	M.S. 1989	The rotating sample susceptometer
Vineet Pancholi	M.S. 1992	Complex magnetic susceptibility at high frequency

Undergraduate Student Supervision

Cliff Jordan &	EE 490	
Keith Stapley	Senior Design Lab 1989	Superconducting magnetic energy storage
Michael Smith	REU 1994	Magnetic force microscopy of magnetic recording media
Volney Douglas	Employed, 1997-98	
Kevin Dixon	Employed 1999-2002	
Parker Lund	REU 2000	
Alan Cook	NASA summer grant 2000	
Lucinda VanNatta	REU 2001	
Jason Rugolo	Senior Honors project 2005-2006	Rotary Valve for Engines

Notable Service

Department

Years	Service
1987-89	Budget and Policy Committee
1987-89	Committee on Committees
1988-92	Undergraduate Advisor
1990-92	Personnel Committee
1992	Chair, Graduate Exam Committee
1993-95	Budget and Policy Committee
1995-96	Department Bylaws Committee
1995-99	Committee on Committees
1996-98	Personnel Committee
1995-2000	Undergraduate Advisor
2000-01	Head Undergraduate Advisor
2002-04	Personnel Committee
2004-	Honors Disciplinary Advisor, Physics
2002-05	Undergraduate Advisor
2003-05	Chair, Graduate Exam Committee
2004-05	Department Space Committee
2005-	Head Undergraduate Advisor
2005-	Articulation Task Force Representative, Physics
2005-	Arizona Course Equivalency Transfer, Physics
2006-	Committee on Committees
2006-	University Physics (PHY121/131) Task Force Committee

College

2003-2006	CLAS Academic Standards Committee (Chair from 2004-)

University

2005-	Barrett Honors College Faculty Council

Professional

2005	Co-organizer of Workshop on Correlated Electrons and Glassy Matter, Augsburg, Germany, July 16-17.