# Publications, Presentations & Related Activities

Chapter 4

## Peer-Reviewed Publications

This section includes refereed publications and peer-reviewed conference proceedings that appeared in print in 1998. It also includes a limited number of publications that appeared late in 1997 and were not reported in the *1997 NHMFL Annual Report*.


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# Presentations & Posters

This section includes invited and contributed talks and papers at conferences; papers in conference proceedings that were not peer-reviewed; posters; abstracts; and presentations at universities and public forums during 1998. It also includes a limited number of entries from late 1997 that were not included in last year's annual report.

Two major conferences hosted by the NHMFL in Tallahassee in 1998 are referenced frequently in this section in abbreviated format: VIIIth International Conference on Megagauss Magnetic Field Generation and Related Topics, October 19-24, 1998 (Megagauss VIII); and Physical Phenomena at High Magnetic Fields-III, October 24-27, 1998 (PPHMF-III).

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Schrieffer, J.R., *Theories of High Temperature Superconductivity*, Megagauss VIII.

Segre, U.; Brunel, L.-C.; Brustolon, M. and Maniero, A.L., *HF-EPR of Irradiated Inclusion Compounds*, Recent Advances and Applications in EPR Spectroscopy, Paris, France, September 28-29, 1998.

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Shi, S.D.-H., Hendrickson, C.L.; Marshall, A.G.; Siegel, M.M.; Kong, F. and Carter, G.T., *Oligosaccharide Sequencing by High-Resolution FT-ICR MS and IRMPD MS/MS*, #1387, 46th Amer. Soc. for Mass Spectrom. Annual Conf. on Mass Spectrometry & Allied Topics, Orlando, FL, May, 1998.

Shi, S.D.-H.; Hendrickson, C.L. and Marshall, A.G., *First Experimental Observation of Protein Isotopic Fine Structure: Insulin, Ubiquitin, and p16 Tumor Suppressor Proteins*, #1330, 46th Amer. Soc. for Mass Spectrom. Annual Conf. on Mass Spectrometry & Allied Topics, Orlando, FL, May, 1998.

Shi, S.D.-H.; Hendrickson, C.L. and Marshall, A.G., *First Experimental Observation of Isotopic Fine Structure of Proteins and Its Application in Sulfur Determination*, #4, FACSS 98, Austin, TX, November, 1998.

Shi, S.D.-H.; Hendrickson, C.L.; Marshall, A.G.; Simonsick, W.J. and Aeserud, D.J., *Mechanism of Formation of Isobaric GMA/BMA Copolymers from Ultrahigh-Resolution FT-ICR Mass Spectrometry*, #1087, 46th Amer. Soc. for Mass Spectrom. Annual Conf. on Mass Spectrometry & Allied Topics, Orlando, FL, May, 1998.

Smith, M.R.; Hilton, D.K. and Van Sciver, S.W., *Observed Drag Crisis on a Sphere in Flowing He I and He II*, APS Meeting: Division of Fluid Dynamics, Philadelphia, PA, November, 1998.

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Spiegel, S.A., *Creating an Effective Teacher Enhancement Program*, Assn. for the Education of Teachers in Science (AETS) Annual Meeting, Minneapolis, MN, January 9, 1998.

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Stalcup, T.F.; Brooks, J.S. and Perenboom, J.A.A.P., *Diamagnetic Levitation at the NHMFL*, PPHMF-III.

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Vaghar, M.R.; Eyssa, Y.M.; Kratz, R.; Li, L. and Schneider-Muntau, H.J., *Design of a 90 T Pulse Magnet*, Megagauss VIII.

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Van Sciver, S.W.; Hascicek, Y.; Markiewicz, W.D.; Schwartz, J. and Schneider-Muntau, H.J., *High Field HTS Magnet Technology and Applications*, ICCR 98, Hangzhou, China, April 21-24 1998; Megagauss VIII.

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van Tol, H. and Brunel, L.-C., *Electron Spin Resonance Techniques at mm-Wave Frequencies*, 4th Int. Conf. on Millimeter and Submillimeter Waves and Applications, San Diego, CA, 1998.

van Tol, J. and Brunel, L.-C., *A New High-Field, Transient EPR Setup at the NHMFL*, ACS/FAME, Orlando, FL, 1998.

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Viggiano, E.A. and Dixon, P. J., *Teachers Developing Curriculum Products: Bridging Vision and Practice*, Natl. Assn. for Research in Science Teaching (NARST) Annual Meeting, San Diego, CA, April, 1998.

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Vitkalov, S.A.; Bowers, C.R.; Simmons, J.A. and Reno, J.L., *Nuclear Hyperfine Coupling Constant Determination for 2D Conduction Electrons in GaAs/AlGaAs Multiple Quantum Wells Near n=1 Filling in the Quantum Hall Effect*, PPHMF-III.

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Wang, J.J.; Jung, K.B.; Childress, J.R.; Pearton, S.J.; Sharifi, F.; Dahmen, K.; Gillman, E.S.; Cadieu, F.; Rami, R. and Chen, L., *Plasma Chemistries for Etching of $LaCaMnO_3$/SmCo GMR Structures*, 1998 Spring MRS, San Francisco, 1998.

Wang, Y., *Carbon Isotope Evidence for Environmental Change in Nihewan Basin, China*, Ninth Int. Conf. on Geochronology, Cosmochronology and Isotope Geology, Beijing, China, August 20-26, 1998.

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Wang, Y.J.; Schmiedel, T.; Wei, X.; Jiang, Z.X., McCombe, B.D.; Eustis, T.J. and Schaff, W., *High-Field Magnetoluminescence Studies of Electron-Electron Interactions and Localization in Modulation-Doped GaAs/AlGaAs MQW Structures*, PPHMF-III.

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Welton, S.J.; Cantrell, K.; Markiewicz, W.D. and Van Sciver, S.W., *Design of the NHMFL 900 MHz NMR Magnet Cryostat*, Proc. ICEC 17, Bournmouth, UK, July 12-15, 1998.

Wigger, M.; Li, W.; Watson, C.H.; Eyler, J.R.; Marshall, A.G. and Benner, S. *Screening SH2 Domains with Combinatorial Peptide Libraries via Noncovalent Complexes with Electrospray Ionization-Fourier Transform Ion Cyclotron Resonance Mass Spectrometry*, #1142, 46th Amer. Soc. for Mass Spectrom. Annual Conf. on Mass Spectrometry & Allied Topics, Orlando, FL, May, 1998.

Wosnitza, J.; Wanka, S.; Qualls, J.S.; Brooks, J.S.; Mielke, C.H.; Harrison, N.; Schlueter, J.A. and Williams, J.M., *Fermiology of the Organic Superconductor* β"-$(ET)_2SF_5CH_2CF_2SO_3$, Int. Conf. on the Sci. and Tech. of Synthetic Metals (ICSM '98), Montpellier, France, July 12-18, 1998.

Zhu, Z.; Long, V.C.; Musfeldt, J.L.; Wang, Y.J.; Wei, X.; Sarrao, J.; Fisk, Z.; Negishi, H. and Inoue, M., *Spectroscopic Studies of* η-$Mo_4O_{11}$ *as a Function of Magnetic Field*, PPHMF-III.

Zhu, Z.; Musfeldt, J.L.; Uji, S.; Sarrao, J. and Fisk, Z., *Optical Studies of Charge Density Wave Transitions in* η-$Mo_4O_{11}$, American Physical Society March Meeting, Los Angeles, CA, March 16-20, 1998.

Zhu, Z.; Musfeldt, J.L.; Wang, Y.J.; Sarrao, J.; Fisk, Z.; Negishi, H. and Inoue, M., *Infrared Study of the Broken Symmetry Ground States in* η-$M_{O4}O_{11}$, Int. Conf. on the Sci. and Tech. of Synthetic Metals (ICSM '98), Montpellier, France, July 12-18, 1998.

Zindler, A., *Age and Isolation of Mantle Components and Reservoirs: A Question of Model Dependence*, Fall Meeting Amer. Geophysical Union, San Francisco, CA, 1998; AGU Abstract, 79, 45, F986 (1998).

Zindler, A.; Reid, M.; Albarede, F. and Blichert-Toft, J., *A Comparison of Modern Mass Spectrometric Methods for Th Isotope Ratio Measurement*, J. Mineral Sciences, Goldschmidt Conf. Abstracts, 62A, (3), 1703 (1998).

# Related Activities

## Awards, Honors, Service

*Timothy A. Cross*
- Invited to join the Editorial Board of the Biophysical Journal
- Member of National Institutes of Health BBCB Study Section
- Organizer for the Conference on "High Field NMR: A New Millennium Resource"

*Jack E. Crow*
- Elected American Association for the Advancement of Science Fellow

*Elbio Dagotto*
- Member Council of Research and Creativity, Florida State University

*Peter Fajer*
- University Teaching Award, 1998
- Spin Labelling Symposium organizer, Rocky Mountain Conference, Denver, 1998

*Lev P. Gor'kov*
- Member of the International Advisory Board of the "Applied Physics Review" (The Korean Physical Society)
- Member of the International Advisory Boards:
  - International Conference New 3SC - Baton Rouge, LA, 1998
  - International Conference on Stripes and High $T_c$ Superconductivity, Rome, Italy, 1998
  - International Conference of LT-22
- Member of the Organizing Committee for the International Conference Physical Phenomena at High Magnetic Fields-III, Tallahassee, FL, 1998

*Alex H. Lacerda*
- Member Panel on Education, First Workshop to Advance Pan-American Collaboration, Rio de Janeiro, Brazil, June 8-10, 1998.

*Alan G. Marshall*
- New York Society for Applied Spectroscopy Gold Medal
- Named to Advisory Board, Gill Center, Indiana University
- Re-named to Editorial Advisory Board, Journal American Society Mass Spectrometry

*Adriana Moreo*
- Member-at-Large of the Executive Committee of the Division of Computational Physics of the American Physical Society.
- Chair of NHMFL Committee of Theory Seminar
- Consultant at LANL

*Ryan P. Rodgers*
- Received Honorable Mention, American Chemical Society Analytical Division Fellowships

*Hans J. Schneider-Muntau*
- Elected American Association for the Advancement of Science Fellow
- Served as Chairman of the VIII$^{th}$ International Conference on Megagauss Magnetic Field Generation and Related Topics, Tallahassee, FL, October 18-23, 1998.
- Served as Session Chair of the Physical Phenomena in High Magnetic Fields - III Conference, Tallahassee, FL, October 23-25, 1998.

*Justin Schwartz*
- Won 1998 Roger W. Boom Award given by the Cryogenic Society of America
- Named editor for Magnets and Magnet Applications section of IEEE Transactions on Applied Superconductivity

*Stone D.-H. Shi*
- Received the Society for Applied Spectroscopy 1998 Graduate Student Award

## Book Chapters

Cross, T.A., *Solid State $^{15}$N NMR Spectroscopy of Biopolymers*, Solid State NMR of Polymers, eds. Ando, I. and Asakura, T., Elsevier Science, Amsterdam, 1998.

Gor'kov, L.P., *Foundations of superconductivity and extension to less-common systems*, Pair Correlations in Many-Fermion Systems, ed. Kresin, V., Plenum Press, NY, 1998.

Schneider-Muntau, H.J., *Methods In Materials Research*, First Chapter Draft, John Wiley & Sons, ed. E. Kaufman, New York, NY, 1998.

## Book Reviews

Briggs, R.W. and Bowers, C.R., *The Wallace Brey Symposium*, Journal of Magnetic Resonance, 134 197-198 (1998).

## Ion Cyclotron Resonance Group Activities

Freitas, M.A.; Shi, S.D.-H.; Hendrickson, C.L. and Marshall, A.G., *Gas Phase RNA and DNA Ions. 1. H/D Exchange of the [M - H]$^-$ Anions of Nucleoside 5'-Monophosphates (GMP, dGMP, AMP, dAMP, CMP, dCMP, UMP, dTMP), Ribose-5-monophosphate (R5P), and 2-deoxyribose-5-monophosphate (dR5P) with $D_2O$ and $D_2S$*, J. Am. Chem. Soc., 120, 10187-10193, (1998): Featured by Anal. Chem., 70, 767A (1998).

Marshall, A.G., Four seminars at government and industrial laboratories and eleven university seminars including the Mary Kapp Lecture at Virginia Commonwealth University, February, 1998; Lilly Lecture at Indiana University, April, 1998; and the Research Frontiers in Chemistry Lectures, University of Iowa, October 1998.

Rodgers, R.P.; White, F.M.; McIntosh, D.G. and Marshall, A.G., *5.6 Tesla Fourier Transform Ion Cyclotron Resonance Mass Spectrometer for Analysis of Volatile Complex Mixtures*, Rev. Sci. Instrum. 69, 2278-2284 (1998): Featured by *Anal. Chem.*, 70, 567A-568A (1998).

Shi, S.D.-H.; Hendrickson, C.L. and Marshall, A.G., *Counting Individual Sulfur Atoms in a Protein by Ultrahigh-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: Experimental Resolution of Isotopic Fine Structure in Proteins*, Proc. Natl. Acad. Sci. U.S.A., 95, 11532-11537 (1998): Featured by Chemical & Engineering News, 76 (12 October), 36 (1998).

Shi, S.D.-H.; Hendrickson, C.L. and Marshall, A.G., *Counting Individual Sulfur Atoms in a Protein by Ultrahigh-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: Experimental Resolution of Isotopic Fine Structure in Proteins*", Proc. Natl. Acad. Sci. U.S.A., 95, 11532-11537 (1998): Featured by Anal. Chem., 70, 702A (1998).

## Patents

Smith, M.E.; Benicewicz, B.C. and Douglas, E.P. *High Magnetic Field Processing of Liquid Crystalline Polymers*, U.S. Patent 5,840,376, November 24, 1998. Funder: Department of Energy, Advanced Industrial Materials Program. Partial funding for R.S.D. and S.M.S from NSF; and partial funding for E.P.D. from U.S. Army Research Office.

## New Grants

PI: C. Abernathy, F. Ren
Grant Title: Development of Gan Mosfets and Misfets
Agency: U.S. Navy
Project Dates: 1/01/98-9/30/98
Award Amount: $61,797

PI: C. Abernathy
Grant Title: Synthesis and Characterization of Rare Earth Doped Wide Bandgap Materials
Agency: U.S. Army
Project Dates: 4/1/98-3/31/01
Award Amount: $80,000

PI: E.D. Adams
Grant Title: Magnetic Ordering in Solid $^3$He
Agency: NSF
Project Dates: 8/15/98-7/31/01
Award Amount: $80,000

PI: R.J. Bartlett
Grant Title: Coupled Cluster Theory and Electron Correlation Workshop
Agency: Multiple Sources
Project Dates: 6/30/98-6/30/99
Award Amount: $8,494

PI: R.J. Bartlett
Grant Title: Workshop on Applied Molecular Orbital Theory Conference
Agency: Multiple Sources
Project Dates: 6/30/98-6/30/99
Award Amount: $2,020

PI: S.J. Blackband
Grant Title: Automatic Shape Recovery of Hippocampus from Brain MRI
Agency: NIH
Project Dates: 9/30/98-8/31/01
Award Amount: $70,067

PI: S.J. Blackband
Grant Title: NMR Microscopy of Single Neural Cells and Brain Slices
Agency: NIH
Project Dates: 5/15/98-2/28/01
Award Amount: $195,830

PI: T.A. Cross. A.S. Edison, S.J. Gibbs
Grant Title: Purchase of 830 and 900 MHz Consoles
Agency: NSF
Project Dates: 2/15/98-1/31/00
Award Amount: $557,750

PI: E. Dagotto, A. Moreo
Grant Title: Computational Studies of Electron Models for Ladders and Planes
Agency: NSF
Project Dates: 11/1/98-10/31/99
Award Amount: $92,000

PI: A.T. Dorsey, *et al*.
Grant Title: Graduate Assistance in Areas of National Need Fellowships at UF Dept. of Physics
Agency: U.S. Dept. of Education
Project Dates: 8/15/98-8/14/01
Award Amount: $378,330

PI: E.P. Douglas
Grant Title: Structure Property Relationships in Liquid Crystalline Thermosets
Agency: U.S. Army
Project Dates: 3/1/98-2/28/03
Award Amount: $100,000

PI: A.S. Edison, *et al*.
Grant Title: Biophysical Studies of MARCKS
Agency: UF College of Medicine
Project Dates: 1998-99
Award Amount: $16,092

PI: A.S. Edison
Grant Title: NMR Studies of Neuropeptide Precursor Proteins
Agency: Howard Hughes Medical Institute
Project Dates: 6/1/98-5/31/99
Award Amount: $20,000

PI: A.S. Edison, *et al*.
Grant Title: Structure-Function Studies of IA3, a Potent Inhibitor of Yeast Proteinase A
Agency: UF College of Medicine
Project Dates: 1998-99
Award Amount: $10,897

PI: J.R. Eyler
Grant Title: Upgrade of 500 MHz High Resolution NMR Spectrometer
Agency: NSF
Project Dates: 8/15/98-1/31/00
Award Amount: $200,000

PI: Y. Eyssa, T. Painter
Grant Title: Design and Fabrication of Two 30 T, Split-Pair Coils
Agency: Univ. of California
Project Dates: 3/9/98-9/2/99
Award Amount: $150,000

PI: P. Fajer
Grant Title: Orientation and Dynamics of Myosin Head Regulatory Domain
Agency: NSF
Project Dates: 9/1/98-8/31/99
Award Amount: $80,000

PI: Z. Fisk
Grant Title: Physics Near the Kondo Insulator Fixed Point
Agency: NSF
Dates of Grants: 9/1/98-8/31/99
Award Amount: $50,000

PI: J.R. Fitzsimmons
Grant Title: Custom RF Coil Design and Development
Agency: Varian Associates, Inc.
Project Dates: 3/2/98-3/2/99
Award Amount: $1,800

PI: J.R. Fitzsimmons
Grant Title: Custom RF Coil Design and Development
Agency: Varian Associates, Inc.
Project Dates: 4/29/98-4/29/99
Award Amount: $5,750

PI: S.J. Gibbs, *et al*.
Grant Title: Low Field NMR/MRI Laboratory Development for Applications in Chemical Engineering
Agency: The Camile and Henry Dreyfus Foundation
Project Dates: 1998
Award Amount: $24,000

PI: A.F. Hebard
Grant Title: C60 Adsorption on Metal Surfaces; Physics and Chemistry of Interfacial Charge Transfer
Agency: American Chemical Society
Project Dates: 1/1/98-8/31/00
Award Amount: $60,000

PI: J.D. Hillman, A.S. Edison
Grant Title: Small Bioeffector Molecules of *Streptococus mutans*
Agency: NIH
Project Dates: 6/98-5/04
Award Amount: $1,163,577

PI: K. Hook, S.A. Spiegel
Grant Title: Integrated A.R.T.S. (Arts, Research, Technology, and Science)
Agency: Florida Dept. of Education
Project Dates: 5/31/98-10/30/98
Award Amount: $24,878

PI: T. Logan
Grant Title: Homogeneous Glycoproteins for Structural Biology
Agency: National Institute of General Medical Science
Project Dates: 8/1/98-7/31/99
Award Amount: $101,238

PI: J. Miller
Grant Title: Assembly and Test of SMES Systems
Agency: Naval Surface Warfare Center, Cardrock Division/ ONR
Project Dates: 7/27/98-1/29/99
Award Amount: $66,055

PI: J. Miller
Grant Title: EURUS Training Program
Agency: Enterprise Florida, Inc.
Project Dates: 2/5/98-8/4/99
Award Amount: $81,200

PI: T. Moerland
Grant Title: Effects of Temperature and Ultrastructure on Solute Diffusion in Striated Muscle
Agency: NSF
Project Dates: 9/1/98-8/31/99
Award Amount: $80,000

PI: A. Moreo
Grant Title: Computational Studies of Models for Manganites
Agency: FSU
Project Dates: 6/1/98-8/31/98
Award Amount: $6,815

PI: S.J. Pearton
Grant Title: Ion Implantation Doping Isolation of III-Nitrides
Agency: NSF
Project Dates: 4/15/98-3/31/01
Award Amount: $72,561

PI: S.J. Pearton, C. Abernathy
Grant Title: Materials, Process and Device Development for SIC and GAN MCTS
Agency: U.S. Dept. of Defense
Project Dates: 6/5/98-6/4/01
Award Amount: $712,399

PI: S.J. Pearton
Grant Title: Materials, Process and Device Development and GAN MCTS
Agency: Electric Power Research Institute
Project Dates: 7/1/98-6/30/03
Award Amount: $197, 213

PI: D.E. Richardson, J.R. Eyler
Grant Title: Gas-Phase Chemistry and Spectroscopy of Metal Complex Ions
Agency: NSF
Project Dates: 2/1/98-1/31/01
Award Amount: $120,800

PI: V. Salters
Grant Title: Determining the Minerology of the MORB-Source Through Nd-Isotopes in Abyssal Periodites
Agency: NSF
Project Dates: 9/1/98-8/31/99
Award Amount: $80,265

PI: J Schwartz, S.C. Peterson
Grant Title: Microstructure and Superconducting Properties of Bulk Hg-Ba-Ca-Cu-O on Metallic Surfaces
Agency: NSF
Project Dates: 6/9/98-1/31/99
Award Amount: $9,546

PI: M.P. Smith, S.A. Spiegel
Grant Title: Hitting Home
Agency: Florida Dept. of Health
Project Dates: 10/16/98-6/30/99
Award Amount: $500,000

PI: S.A. Spiegel, P.J. Dixon
Grant Title: Teacher Quest
Agency: Florida Dept. of Education
Project Dates: 5/30/98-8/15/98
Award Amount: $4,500

PI: S.A. Spiegel, M. Smith
Grant Title: Tobacco Prevention Science Resource Network
Agency: Florida Dept. of Health
Project Dates: 9/11/98-6/30/00
Award Amount: $1,606,836

PI: N.S. Sullivan
Grant Title: Exploration of Disordered Quadrupolar Molecular Systems
Agency: NSF
Project Dates: 9/1/98-8/31/00
Award Amount: $9,900

PI: D.B. Tanner
Grant Title: Effect Transport Current on the Infrared Properties of Superconductors
Agency: Teracom Research
Project Dates: 9/1/98-3/1/99
Award Amount: $9,497

PI: D.B. Tanner
Grant Title: Optical Characterization of Thin Films and Relevant Materials
Agency: Mehl/Biophile International
Project Dates: 4/3/98-4/3/99
Award Amount: $5,000

PI: D.B. Tanner
Grant Title: Thermo-Optical Response of High-Temperature Superconducting Films
Agency: NSF
Project Dates: 7/1/98-6/30/00
Award Amount: $42,461

PI: S. Van Sciver
Grant Title: Heat and Mass Transport in Horizontal Two Phase He II Vapor
Agency: NSF
Project Dates: 7/15/98 -6/30/99
Award Amount: $80,000

PI: S. Van Sciver
Grant Title: Preliminary Engineering Design of Solenoids for Muon Collider
Agency: Fermi National Accelerator Laboratory
Project Dates: 8/20/98-12/31/98
Award Amount: $25,000

PI: S. Van Sciver
Grant Title: REU Supplement for Heat Mass Transport in Horizontal Two Phase He II Vapor
Agency: NSF
Project Dates: 7/15/98-6/30/99
Award Amount: $5,000

PI: Z. Zhang, D.B. Tanner
Grant Title: Thermo-Optical Response of High-Temperature Superconducting Films
Agency: NSF
Project Dates: 7/1/98-6/30/00
Award Amount: $42,538

## Continuing Grants

PI: R. Abbaschian
Grant Title: *In-Situ* Monitoring Of Crystal Growth Using Mephisto
Agency: NASA
Project Dates: 5/22/96-5/21/99
Award Amount: $76,997

PI: C. Abernathy
Grant Title: Synthesis and Characterization of INT1P and INT1AS
Agency: U.S. Air Force
Project Dates: 2/15/96-2/14/99
Award Amount: $28,338

PI: C. Abernathy
Grant Title: Synthesis and Characterization of Rare Earth Doped Wide Bandgap Materials
Agency: U.S. Army
Project Dates: 4/1/96-3/31/01
Award Amount: $50,000

PI: N.E. Bonesteel
Grant Title: Correlated Electrons in Reduced Dimensions
Agency: U.S. Dept. of Energy
Project Dates: 6/1/97-5/31/99
Total Award Amount: $85,465
Current Year Award Amount: $42,750

PI: C.R. Bowers
Grant Title: Characterization of Solid Acids by NMR and Calorimetry
Agency: Exxon Education Foundation
Project Dates: 12/12/97-10/30/98
Award Amount: $10,000

PI: C.R. Bowers
Grant Title: Enhanced Sensitivity NMR Studies of Nanostructured Electronic Materials
Agency: NSF
Project Dates: 5/1/96-4/30/00
Award Amount: $75,000

PI: J.S. Brooks
Grant Title: Electronic and Magnetic Mechanisms in Low-Dimensional Novel Materials
Agency: NSF
Project Dates: 7/15/95-2/28/99
Award Amount: $90,000

PI: N. Chandra
Grant Title: Effect of Processing in the Evolution of Interfaces in Metal Matrix Composites
Agency: U.S. Air Force
Project Dates: 6/1/96-8/31/98
Year Award Amount: $28,869

PI: H.P. Cheng
Grant Title: Nano-Machining Via Coulomb Explosion
Agency: U.S. Dept. of Energy
Project Dates: 8/1/97-7/31/00
Award Amount: $40,000

PI: T.A. Cross
Grant Title: Correlations: Structure-Dynamics-Function in Gramicidin
Agency: National Institute of Allergy and Infectious Diseases
Project Dates: 1/1/95-2/28/99
Award Amount: $213,568

PI: T.A. Cross, J.R. Quine
Grant Title: Solid-State NMR Derived Structure: Membrane Bound Polypeptides to Proteins
Agency: NSF
Dates of Grants: 2/1/97-1/31/00
Award Amount: $120,000

PI: E.R. Dagotto
Grant Title: Photomission Spectra, d-Wave Superconductivity and Other Properties of High-$T_c$ Electronic Models
Agency: NSF
Project Dates: 1/1/98-10/31/99
Award Amount: $51,000

PI: A.T. Dorsey
Grant Title: Theoretical Studies of Vortex Dynamics in Superconductors
Agency: NSF
Project Dates: 6/1/98-5/31/99
Award Amount: $72,000

PI: A.S. Edison
Grant Title: NMR Studies of the Cardioactive Neuropeptide FMRFamide Bound to the FMRFamide-Gated Sodium
Agency: American Heart Association of Florida
Project Dates: 7/1/97-6/30/00
Award Amount: $75,000

PI: A.S. Edison
Grant Title: Research Resources Program for Medical Schools
Agency: Howard Hughes Medical Institute
Project Dates: 4/1/97-3/31/00
Award Amount: $2,000

PI: W.R. Ellington
Grant Title: Evolution of Cellular ATP Buffering and Energy Transport System
Agency: NSF
Project Dates: 9/1/96-8/31/99
Award Amount: $86,839

PI: P.G. Fajer
Grant Title: Research Training Grant in Macromolecular Assemblies
Agency: NSF
Project Dates: 1996-2001
Award Amount: $1,500,000

PI: S.J Gibbs, *et al*.
Grant Title: Acquisition of High Field NMR Spectrometer for Transport Studies
Agency: NSF
Project Dates: 9/1/96-8/31/98
Award Amount: $550,002

PI: S.P. Hershfield
Grant Title: National Young Investigator Award
Agency: NSF
Project Dates: 7/1/93-6/30/99
Award Amount: $41,500

PI: T.M. Logan
Grant Title: Nonrandom Unfolded States and Protein Stability
Agency: National Institute of General Medical Science
Project Dates: 6/1/96-5/31/99
Award Amount: $98,291

PI: T.M. Logan
Grant Title: Nonrandom Unfolded States and Protein Stability
Agency: National Institute of General Medical Science
Project Dates: 6/1/97-5/31/99
Award Amount: $9,580

PI: T.H. Mareci
Grant Title: MR Evaluation of Spinal Cord Injury and Repair
Agency: NIH
Project Dates: 6/1/97-5/31/99
Award Amount: $234,124

PI: T.H. Mareci
Grant Title: MRI Core B: Cellular Repair of the Injured Spinal Cord
Agency: NIH
Projet Dates: 9/1/96-8/31/01
Award Amount: $103,257

PI: A.G. Marshall
Grant Title: FT/ICR/MS: Technique Development and Non-Biological Applications
Agency: NSF
Project Dates: 5/1/94-4/30/99
Award Amount: $175,000

PI: A.G. Marshall, C.L. Hendrickson
Grant Title: National High Field Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Facility
Agency: NSF
Project Dates: 9/1/94-6/30/99
Award Amount: $800,000

PI: A.G. Marshall, C.L. Hendrickson
Grant Title: FT Mass Spectrometry for Biomolecule Analysis
Agency: National Institute of General Medical Science
Project Dates: 7/1/94-7/31/99
Award Amount: $134,674

PI: M.W. Meisel
Grant Title: Development of a Variable Temperature, High Frequency NMR System for Materials Research
Agency: NSF
Project Dates: 7/1/97-6/30/99
Award Amount: $36,250

PI: T.S. Moerland, B.R. Locke
Grant Title: Analysis of Electrophoretic Transport of Macromolecules
Agency: NASA
Project Dates: 8/30/95-8/29/99
Award Amount: $49,491.14

PI: D. Popovic, S. Washburn
Grant Title: Experimental Studies of Correlation Effects in Quantum Insulators
Agency: NSF
Project Dates: 9/1/97-2/28/99
Award Amount: $109,500

PI: V.J.M. Salters
Grant Title: Collaborative Research: Experimental Determinations of Trace Element Distributions Between Melts and Mantle Phases at P, T and X Relevant MORB Genesis
Agency: NSF
Project Dates: 11/1/96-11/30/98
Award Amount: $57,353

PI: V.J.M. Salters, *et al.*
Title: The Speciation and Sources of Dissolved Phosphorus in the Everglades
Agency: South Florida Water Management District
Project Dates: 11/6/97-3/15/99
Award Amount: $185,000

PI: J.R. Schrieffer
Grant Title: Theory of Strongly Correlated Electron Systems
Agency: NSF
Project Dates: 7/1/96-6/30/99
Award Amount: $135,000

PI: J. Schwartz
Grant Title: Studies on HTS Conductors
Agency: Maglev 2000 of Florida Corporation
Project Dates: 4/15/96-12/31/98
Award Amount: $48,750

PI: F. Sharifi
Grant Title: Demonstration of GMR Nonvolatile Memory with Potential for Radiation Hardened 4G Bits/Chip
Agency: Honeywell, Inc.
Project Dates: 2/1/97-8/31/98
Award Amount: $22,452

PI: F. Sharifi
Grant Title: Magnetic Materials and Devices—Field Biasing and Thermal Stabilization of La-Manganite …
Agency: FSU
Project Dates: 7/1/96-6/30/99
Award Amount: $77,450

PI: P. Sikivie
Grant Title: Task C: Research in Theoretical and Experimental Elementary Particle Physics
Agency: U.S. Dept. of Energy
Project Dates: 3/1/97-2/28/01
Award Amount: $10,000

PI: N.S. Sullivan
Grant Title: Dynamical Properties of Frustrated Molecular Solids at Low Temperatures
Agency: NSF
Project Dates: 9/1/96-8/31/99
Award Amount: $100,000

PI: D.B. Tanner
Grant Title: Infrared Studies of Cuprates, Superconductors and Correlated Metals
Agency: NSF
Project Dates: 6/1/97-7/31/00
Award Amount: $90,000

PI: S. Von Molnar
Grant Title: Materials and Processing at the Nanometer Scale
Agency: UF
Project Dates: 12/15/95-11/14/98
Award Amount: $31,178

PI: Y. Wang
Grant Title: Coastal Wetland Formation and Its Significance to Carbon Sequestration
Agency: Florida A&M University
Project Dates: 11/18/97-8/31/2000
Award Amount: $16,579

PI: M.C. Zerner
Grant Title: Media Effect in Molecular Structure and Spectroscopy
Agency: U.S. Navy
Project Dates: 1/1/96-12/31/98
Award Amount: $69,220