

TEXAS STATE VITA

Please note: For all entries, list most recent items first.

I. Academic/Professional Background

A. Name: David W. Donnelly

Title: Professor

B. Educational Background

<i>Degree</i>	<i>Year</i>	<i>University</i>	<i>Major</i>	<i>Thesis/Dissertation</i>
PhD	1990	University of California, Santa Barbara	Physics	Impurity Associated Magnetic Modes in Antiferromagnets
B.A.	1984	University of California, Berkeley	Physics	

C. University Experience

<i>Position</i>	<i>University</i>	<i>Dates</i>
Professor	Texas State University	Sept. 2013 - present
Professor and Chair	Texas State University	Feb. 2007 – Aug. 2013
Professor	Texas State University	Sept, 2002 – Jan. 2007
Associate Professor	Southwest Texas State University	Aug. 2000–Aug. 2002
Associate Professor	Sam Houston State University	Sept. 1998-July, 2000
Assistant Professor	Sam Houston State University	Jan. 1992-Sept. 1998
Staff Researcher	QUEST, U. C. Santa Barbara	Apr. '91-Nov. '91
Research Assistant	Dept. of Physics, U. C. Santa Barbara	Jan. '87-Dec. '90
Teaching Assistant	Dept. of Physics, U. C. Santa Barbara	Sept. '85-Dec. '86

D. Relevant Professional Experience

<i>Position</i>	<i>Entity</i>	<i>Dates</i>
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E. Other Professional Credentials (licensure, certification, etc.)

II. TEACHING

A. Teaching Honors and Awards:

Presidential Award for Excellence in Teaching, 2004

B. Courses Taught:

PHYS 1110, PHYS 1320, PHYS 1410, PHYS 1420, PHYS 1430, PHYS 2435, PHYS 3414, PHYS4310, PHYS 4311, PHYS 4312, PHYS4315, PHYS 5313, PHYS 5314, PHYS 5331

C. Graduate Theses/Dissertations or Exit Committees (if supervisor, please indicate):

Maelyn Compton, "The Electric, Magnetic, and Optical Characterization of Permalloy Oxide Grown By Dual Ion Beam Sputtering", Texas State University, 2014

Jonathan Anderson, "Metalorganic Chemical Vapor Deposition and Investigation of AlGaInN Microstructure", Texas State University, 2014

Theiss Cunningham, "Quantitative Mobility Spectrum Analysis", Texas State University, 2012

Dominic Chiroro, "FTIR Analysis of Laser Shocked Silicon", Texas State University, 2012, Supervisor

Amanda Gregory, "Effect of Plastic Deformation on a Series of Thin Magnetic Films", Texas State University, 2010

Peter Heinz, "First Principles Study of Thermoelectric Properties of Zinc Oxide Nanowires", Texas State University, 2010

Patrick Ferguson, "Attenuated Total Reflectance – Fourier Transform Infrared Spectroscopy Analysis of Pulsed Electron Deposited Silicon Dioxide Film on Silicon Substrate", Texas State University, 2010, Supervisor

Eric Osei-Yiadom, "Investigating the Pyro-Optic Properties of Antimony Sulfo-Iodide (SbSI)", Texas State University, November, 2006, Supervisor

Heather Cain, "Optical Properties of Thermally and Athermally Annealed Hafnium Oxide Thin Films on Silicon", Texas State University, May, 2004, Supervisor

Anita Acevedo, "Raman and Infrared Spectroscopy of Silicate Films", Southwest Texas State University, December, 2003, Supervisor

Yan Bai, "Effect of Thermal Annealing on Arsenic Ion-implanted Boron-doped Czochralski Silicon", Sam Houston State University, May, 1997, Supervisor

Jingwei Miao, "Thermal Annealing of Laser-shocked Silicon: Boron Doped by Ion Implantation with Arsenic", Sam Houston State University, December, 1996, Supervisor

Zhengchong Yang, "Infrared and Electronic Spectral Studies of Electronically Excited C_{60} and Ag_3C_{60} Films", Sam Houston State University, December, 1995, Supervisor

Andrew Gannon, "Investigation of the Effects of Secondary Illumination on the Optical Absorption in Heavily-Doped N-Type GaAs/ $Al_{0.3}Ga_{0.7}As$ Multiple Quantum Wells", Sam Houston State University, May, 1995, Supervisor

Xiqi Tang, "Investigation of Intersubband Optical Absorption in Heavily-Doped N-Type GaAs/ $Al_{0.3}Ga_{0.7}As$ Multiple Quantum Wells", Sam Houston State University, May, 1994, Supervisor

Jun Wu, "Vibrational and Electronic Absorption Spectra of C_{60} and C_{60}^{-} ", Sam Houston State University, May, 1994, Supervisor

D. Courses Prepared and Curriculum Development:

Integrated computer modeling into PHYS3414 (2002-2010)

Developed inquiry-based curriculum for physics 1110 (2004)

Re-wrote PHYS1430 lab manual to utilize new data acquisition hardware (2005)

Integrated reformed instruction methods into PHYS4310 and PHYS4315 (2011-2013)
[Course taught fall 2011, spring 2012, fall 2012, spring 2013, first time course preparation]

Worked with other faculty to implement Learning Assistant program in introductory calculus based physics [spring 2010-fall 2013].

E. Funded External Teaching Grants and Contracts:

Communities and Pathways: Cultivating Science Educator Identity for Undergraduates through an Inclusive Physics Learning Assistant Program and Alignment of STEM Degrees with Teacher Certifications (NSF DUE - 1240036) \$350K. Jan 2013 - Dec 2014, H. Close PI, D. Donnelly Co-PI, E. Close Co-PI.

F. Submitted, but not Funded, External Teaching Grants and Contracts:

"Building Our Baccalaureates through Community, Academics, and Technology", National Science Foundation, September, 2008, Dana Garcia, PI, Debra Feakes, Bahram Asiabanpour, Moonis Ali, and David Donnelly Co-PI's

"An Advanced Optics Course for Juniors", National Science Foundation, May 2007, Wilhelmus Geerts, PI, David Donnelly and Karl Stephan Co-PI's

“An Advanced Optics Laboratory Course for Juniors”, National Science Foundation, May 2006, Wilhelmus Geerts, PI, David Donnelly, Co-PI

“An Applied Optics Laboratory Course”, National Science Foundation, December 2003, Wilhelmus Geerts, PI, James Crawford and David Donnelly, Co-PI’s

“An Applied Optics Laboratory Course”, National Science Foundation, December 2002, Wilhelmus Geerts, PI, James Crawford and David Donnelly, Co-PI’s

G. Funded Internal Teaching Grants and Contracts:

“Upgrading the Physics 1430 Laboratory”, Student Computing Resources Grant, \$10108.24, 2002

“Upgrade of the Physics 1430 Teaching Laboratory”, Student Computing Resources Grant, \$7872.00, 2010

H. Submitted, but not Funded, Internal Teaching Grants and Contracts:

I. Other:

Mentoring Fellowship, American Institute of Physics, Summer, 2006

Presidential Award for Excellence in Teaching, 2004

III. SCHOLARLY/CREATIVE

A. Works in Print

1. Books (if not refereed, please indicate)

a. Scholarly Monographs:

b. Textbooks:

c. Edited Books:

d. Chapters in Books:

e. Creative Books:

2. Articles

a. Refereed Journal Articles:

“Laser-Plasma Simulations of Astrophysical Phenomena and Novel Applications to Semiconductor Annealing”, J. Grun, M. Laming, C. Manka, D.W. Donnelly, B.C. Covington, R.P. Fischer, A. Velikovich, and A. Khokhlov, *Laser and Particle Beams* **21**, (2003).

“Athermal Annealing of Low-Energy Boron Implants in Silicon”, D. W. Donnelly, B. C. Covington, J. Grun, R. P. Fischer, M. Peckerar, and C. L. Felix, *Appl. Phys. Lett.*, **78**, 2000 (2001)

“Athermal Annealing of Phosphorus-Ion Implanted Silicon”, J. Grun, R. Fischer, M. Peckerar, C. Felix, B.C. Covington, M. Fatemi, B. Desisto, O. J. Glembocki, D. W. Donnelly, T. Ting, and C. K. Manka, *Appl. Phys. Lett.*, **77**, 1997 (2000)

"Far-Infrared Spectroscopic, Magneto-Transport, and X-ray Study of Athermal Annealing in Neutron Transmutation Doped Silicon", D. W. Donnelly, B. C. Covington, J. Grun, C. A. Hoffman, J. R. Meyer, C. K. Manka, O. Glembocki, S. B. Qadri, and E. F. Skelton, *Appl. Phys. Lett.*, **71**, 680(1997)

“Athermal Annealing of Silicon”, J. Grun, C. K. Manka, C. A. Hoffman, J. R. Meyer, O. Glembocki, R. Kaplan, S. B. Qadri, E. F. Skelton, D. Donnelly, and B. Covington, *Phys. Rev. Lett.*, **78**, 1584(1997)

“Trapping Mechanism for Persistent Photo-effects in Heavily Doped GaAs/AlGaAs Quantum Wells”, A. Gannon, D. Donnelly, and B. Covington, *Journ. App. Phys.*, **79**, 7169(1996)

“Mode Assignment for Magnetic Excitations Associated With Co^{2+} Impurities in Antiferromagnetic FeF_2 ”, D. Donnelly, *Phys. Rev. B*, **52**, 1042(1995)

“Crystal Growth and Properties of a New Member of Pb-K-Niobate Series”, P. Jana, R. K. Pandey, and D. W. Donnelly, *Ferroelectrics*, 151, **299**(1994)

“Properties of InAs/(Ga,In)Sb Strained Layer Superlattices Grown on the {111} Orientations”, J. A. Dura, J. T. Zborowski, T. D. Golding, D. Donnelly, and B. C. Covington, *Journal of Electronic Materials*, **22**, 1087(1993)

“FIR Measurements of CsFeCl_3 in Magnetic Fields”, H. Ohta, D. Donnelly, and M. Motokawa, *Journ. of Magn. and Mag. Mat.*, **104-107**, 777(1992)

“Indirect Impurity and Host Mode Excitation via FIR Level Crossing Spectroscopy in Antiferromagnets”, D. Donnelly, D. Hone, and V. Jaccarino, *Phys. Rev. Lett.*, **65**, 2286(Oct., 1990)

“Graded Potential Wells With Quasi-Uniform Charge Distribution”, A. Wixforth, M. Sundaram, D. Donnelly, J. H. English, and A. C. Gossard, *Surface Science*, **228**, 489(Apr. 1990)

b. Non-refereed Articles:

3. Conference Proceedings

a. Refereed Conference Proceedings:

“Student use of a material anchor for quantum wave functions”, C. C. Schiber, H. G. Close, E. W. Close, and D. Donnelly, , 2013 PERC Proceedings [Portland, OR, July 17-18, 2013], edited by P. V. Engelhardt, A. D. Churukian, and D. L. Jones, 325 (2014)

“Students' dynamic geometric reasoning about quantum spin-1/2 states”, H. G. Close, C. C. Schiber, E. W. Close, and D. Donnelly, , 2013 PERC Proceedings [Portland, OR, July 17-18, 2013], edited by P. V. Engelhardt, A. D. Churukian, and D. L. Jones, 97 (2014)

“Nesting in Graphical Representations in Physics”, H. G. Close, E. Close, and D. Donnelly, *AIP Conf. Proc.*, **1513**, 110 (2013)

“Understanding the Learning Assistant Experience with Physics Identity”, E. Close, H. G. Close, and D. Donnelly, *AIP Conf. Proc.*, **1513**, 106 (2013)

“Infrared Spectroscopy of Epitaxial Antimony Sulfo Iodide Thin Films” S. Kotru, S. Surthi, R. K. Pandey, and D. Donnelly, *Proceedings of the Materials Research Society*, vol. 688, 2002 (*Materials Research Society*).

“Athermal Annealing of Ion Implanted Silicon”, D. W. Donnelly, B. C. Covington, J. Grun, R. P. Fischer, M. Peckerar, C. L. Felix, B. Boro Djordjevic, R. Mignona, J. R. Meyer, A. Ting, and C. K. Manka, *Proceedings of the IEEE 9th Conference on Rapid Thermal Processing (RTP Conference, 2001)*.

“Athermal Annealing of Silicon Implanted with Phosphorus and Arsenic”, J. Grun, R. P. Fischer, M. Peckerar, C. L. Felix, B. C. Covington, D. W. Donnelly, B. Boro Djordjevic, R. Mignogna, J.R. Meyer, A. Ting, and C. K. Manka, *Rapid Thermal and Other Short Time Processing Technologies I*, Volume 2000-9, pg. 107, F. Roozeboom, J.C. Gelpey, M.C. Ozturk, K. Reid, and D.L. Kwong editors

"Athermal Annealing of Silicon", J. Grun, C. K. Manka, C. A. Hoffman, J. R. Meyer, O. J. Glembocki, S. B. Qadri, E. F. Skelton, D. Donnelly, B. Covington, *Proceedings of the Materials Research Society, Symposium D, Volume 510, p. 395*

b. Non-refereed:

4. Abstracts:

5. Reports:

6. Book Reviews:

7. Other:

B. Works not in Print

1. Papers Presented at Professional Meetings:

“Transformative Experience as a Construct for Understanding Attitudinal Changes in Introductory Physics Classes”, D. Donnelly, E. Close, and H. G. Close, *Contributed talk at Joint Meeting of Texas Sections of the American Association of Physics Teachers and American Physical Society, and Zone 13 of Society of Physics Students*, Baytown, TX, March 2015

“Impressions of a Faculty Member Teaching Undergraduate Mathematical Methods for the First Time”, D. Donnelly, *Contributed talk at Joint Meeting of Texas Sections of the American Association of Physics Teachers and American Physical Society, and Zone 13 of Society of Physics Students*, Abilene, TX, March 2014

“Winter Break Effect in General Education CLASS Results”, D. Donnelly, E. Close, and H. G. Close, *Contributed talk at Winter 2013 meeting of American Association of Physics Teachers*, New Orleans, LA, January 2013

“Factors Contributing to CLASS Shifts in a General Education Physics Course”, D. Donnelly, E. Close, and H. G. Close, *Contributed talk at Joint Meeting of Texas Sections of the American Association of Physics Teachers and American Physical Society, and Zone 13 of Society of Physics Students*, Lubbock, TX, October 2012

“Factors Contributing to CLASS Shifts in a General Education Physics Course”, D. Donnelly, E. Close, and H. G. Close, *Contributed talk at Summer 2012 meeting of American Association of Physics Teachers*, Philadelphia, PA, August 2012

“Student Understanding and Application of the Dirac Delta Function”, D. Donnelly and H. G. Close, *Contributed talk at Joint Meeting of Texas Sections of the American Association of Physics Teachers and American Physical Society, and Zone 13 of Society of Physics Students*, San Angelo, TX, March 2012

“Student Understanding and Application of the Dirac Delta Function”, D. Donnelly and H. G. Close, *Contributed talk at Winter 2012 meeting of American Association of Physics Teachers*, Ontario CA, Jan. 2012

“Growth and Characterization of Thin Films by Pulsed Electron Deposition”, Bianca Kuczynski, Veronica Rincon, Harshan Vasudevan and Sushma Kotru Department of Electrical and Computer Engineering, The University of Alabama, Tuscaloosa, AL, David Donnelly, Department of Physics, Texas State University, San Marcos, TX, *University of Alabama Undergraduate Research Conference, Fall, 2009*

“Overview of the ComPADRE Digital Library”, David Donnelly, *Contributed Talk at Joint Meeting of the Texas Sections of APS and AAPT, and Zone 13 of SPS, March 2006*

“Etching of SiC and SiCN with Tetrafluoroethane/Oxygen Reactive Plasma”, Heather C. Galloway, Kevin P. Radican, James McDonald, Casey Martinez, David Donnelly, Deborah C. Koeck, *AVS National Symposium, Anaheim, CA, October 2004*

“Reactive Ion Etching of SiC and SiCN using Tetrafluoroethane and Oxygen”, J. McDonald, C. Martinez, K. Radican, E. Botello, D. Koeck, D. Donnelly, W. Geerts, G. Spencer, and H. Galloway, *Joint Meeting of Texas Sections of APS and AAPT, Baylor University, October, 2004*

“Non Preferential Surfaces for Self-Assembly of Patterned Copolymers”, W. Gibson, J. Jarl, E. Botello, E. Covington, D. Donnelly, H. Galloway, P. Hartnett, D. Koeck, D. Moore, G. Beall, C. Booth, P. Cassidy, S. Murugesan, *Joint Meeting of Texas Sections of APS and AAPT, Baylor University, October, 2004*

“Microwave Characterization of Microstrip Transmission Lines”, Eric Botello, Kevin Radican, James McDonald, David Donnelly, Wilhelmus Geerts, Greg Spencer, and Heather C. Galloway, *Joint Meeting of Texas Sections of APS and AAPT, Texas Tech University, October, 2003*

“Characterization of Planarized Low-k Dielectrics by Atomic Force Microscopy”, Elizabeth Covington, James McDonald, Daniel White, Christine Williams, Michael Arthur, Deborah C. Koeck, David Donnelly, and Heather C. Galloway, *Joint Meeting of Texas Sections of APS and AAPT, Texas Tech University, October, 2003*

“Diblock Copolymer Patterning on Silicon Substrates”, Francine Abrego, Ben Stotts, Deborah C. Koeck, David Donnelly, Heather C. Galloway, Gary Beall, and Chad Booth, *Joint Meeting of Texas Sections of APS and AAPT, Texas Tech University, October, 2003*

“FTIR and Raman Spectroscopy of Optical Fibers”, Jeff Mestayer and David Donnelly, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

“Raman Spectroscopy Measurement of Lattice Damage to B-Doped Silicon for Athermal Laser Annealing”, Anita Acevedo and David Donnelly, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

“Spectroscopic Measurement of the Dielectric Constant of Pre- and Post-Annealed Hafnium Silicate Films”, Roman Gomez, Heather Cain, and David Donnelly, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

“FTIR of Athermally Annealed Samples”, Heather Cain, Roman Gomez, and David Donnelly, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

“FTIR Analysis of Planarized Low-k Dielectric Films”, Chris Pileggi, Elizabeth Covington, Heather C. Galloway, and David Donnelly, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

“Preparation and Planarization of Low-k Dielectrics”, Elizabeth Covington, Christine Williams, Daniel White, James McDonald, Deborah Koeck, David Donnelly, and Heather C. Galloway, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

“Analysis of Planarized Low-k Dielectrics by Atomic Force Microscopy”, Christine Williams, Elizabeth Covington, Michael Arthur, Daniel White, James McDonald, Deborah Koeck, David Donnelly, and Heather C. Galloway, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

“Photolithography to Prepare Waveguides on Low-k Dielectrics in SiC Underlayers”, James McDonald, Kevin Radican, Wilhelmus Geerts, Greg Spencer, David Donnelly, Heather C. Galloway, *Joint Meeting of Texas Sections of APS and AAPT, Southwest Texas State University, March, 2003*

"Athermal Annealing of Silicon", J. Grun, C. K. Manka, C. A. Hoffman, J. R. Meyer, O. J. Glembocki, S. B. Qadri, E. F. Skelton, D. Donnelly, B. Covington, *Sematech Source-Drain Engineering Working Group Meeting, August 17-18, 1999, University of North Carolina*

“Dopant and Defect Metrology Using Infrared Absorption Spectroscopy”, *Sematech Source-Drain Engineering Working Group Meeting, August 17-18, 1999, University of North Carolina*

"Athermal Annealing of Silicon", J. Grun, C. K. Manka, C. A. Hoffman, J. R. Meyer, O. J. Glembocki, S. B. Qadri, E. F. Skelton, D. Donnelly, B. Covington, *Presented at the Spring Meeting of the Texas Section of the American Physical Society, 19-21 March 1998, San Antonio*

"Athermal Annealing of Semiconductor Wafers", J. Grun, C. Manka, C. Hoffman, J. Meyer, M. Kaplan, O. Glembocki, M. Bell, S. Qadri, E. Skelton, D. Donnelly, B. Covington, *Presented at the APS Shock 97 meeting, July 27-Aug. 1, 1997, Amherst, MA*

"Mechanical Energy Annealing of Semiconductor Wafers", J. Grun, C. Manka, C. Hoffman, J. Meyer, M. Kaplan, O. Glembocki, M. Bell, S. Qadri, D. Donnelly, B. Covington, *Presented at the Meeting of the APS Division of Plasma Physics, November, 1996*

"Shock Annealing of Semiconductor Wafers", J. Grun, C. Manka, C. Hoffman, J. Meyer, M. Kaplan, O. Glembocki, M. Bell, S. Qadri, D. Donnelly, B. Covington, *Presented at the 1996 Government Microcircuit Applications Conference. Kissimmee, FL*

"Shock Annealing of Semiconductor Wafers", J. Grun, C. Manka, C. Hoffman, J. Meyer, M. Kaplan, O. Glembocki, M. Bell, S. Qadri, D. Donnelly, B. Covington, *Presented at the Meeting of the APS Division of Plasma Physics, November, 1995*

"Infrared and Electronic Spectral Studies of Electronically Excited C₆₀ and Ag₃C₆₀ Films", Z. Yang, and D. Donnelly, *Presented at the Fall, 1995 Meeting of the Texas Section of the American Physical Society*

"Persistent Photo-Induced Changes in the Absorbance of GaAs/AlGaAs Multiple Quantum Well Structures", A. Gannon, D. Donnelly, *Presented at the Fall, 1994 Meeting of the Texas Section of the American Physical Society*

"Ilmenite-A Wide Bandgap Semiconductor for Novel Electronic Applications", S. Sunkara, S. Nigli, R. K. Pandey, A. A. Kumar, and D. W. Donnelly, *Presented at the Spring Meeting of the Materials Research Society, April, 1994, San Francisco, CA*

"Crystal Growth and Properties of a New Member of Pb-K-Niobate Series" P. Jana, R. K. Pandey, and D. W. Donnelly, *Presented at the Eighth International Meeting on Ferroelectricity, Aug. 1993, Gaithersburg, MD*

"Bleaching of the Intersubband Transition in GaAs/AlGaAs Multiple Quantum Well Structures" D. W. Donnelly, J. M. Schauer, B. C. Covington, and M. O. Manasreh, *Presented at the March, 1993 Meeting of the American Physical Society, Seattle, WA*

"InAs/(In,Ga)Sb Superlattices for Infrared Detector Applications" T. D. Golding, J. A. Dura, A. Chi, J. T. Zborowski, H. C. Chen, A. Vigliante, D. Donnelly, and B. C. Covington, *Invited Talk at the Conference on Growth and Characterization of Materials for Infrared Detectors, Feb., 1993, San Diego, CA*

"Molecular Beam Epitaxial Growth of Sb/InSb Multilayers", T. D. Golding, J. A. Dura, J. T. Zborowski, H. C. Chen, A. Vigliante, D. Donnelly, and B. C. Covington, *Presented at the 7th International MBE Conference, Aug., 1992, Swabisch Gmund, W. Germany*

"Investigation of InAs/InGaSb Superlattices Grown by Molecular Beam Epitaxy on the [100] and [111] Orientations", T. D. Golding, J. A. Dura, J. T. Zborowski, A. Vigliante,

D. Donnelly, B. C. Covington, and E. MacDonald, *Presented at the International Conference on Narrow Bandgap Semiconductors, July, 1992, Southampton, UK*

"FIR Magnetic Modes Associated With Co Impurities in FeF₂", D. Donnelly and V. Jaccarino, *Presented at March, 1990 Meeting of the American Physical Society, Anaheim, CA*

"FTIR Study of V²⁺ Impurity Modes in Antiferromagnetic FeF₂" D. Donnelly and V. Jaccarino, *Presented at March, 1989 Meeting of the American Physical Society, New Orleans, LA*

2. Invited Talks, Lectures, and Presentations:

"Overview of The Nucleus – The Student Collection of ComPADRE", David Donnelly, *Invited Talk and National Meeting of American Associate of Physics Teachers, Jacksonville, FL, January 2011*

"The Nucleus: The Student Collection of the ComPADRE Digital Library", David Donnelly, *Invited Talk at Joint Meeting of the Texas Sections of APS and AAPT, and Zone 13 of SPS, March 2006*

"Athermal Annealing of Ion Implanted Silicon", D. W. Donnelly, B. C. Covington, J. Grun, R. P. Fischer, M. Peckerar, C. L. Felix, B. Boro Djordjevic, R. Mignona, J. R. Meyer, A. Ting, and C. K. Manka, *Invited Talk at IEEE Conference on Rapid Thermal Processing, Anchorage, Alaska, September, 2001*

"Athermal Annealing of Silicon Implanted with Phosphorus and Arsenic", J. Grun, R. P. Fischer, M. Peckerar, C. L. Felix, B. C. Covington, D. W. Donnelly, B. Boro Djordjevic, R. Mignogna, J.R. Meyer, A. Ting, and C. K. Manka, *Invited talk at Meeting of Electrochemical Society, Toronto, Canada, May, 2000*

"Athermal Annealing of Silicon", J. Grun, C. K. Manka, C. A. Hoffman, J. R. Meyer, O. J. Glembocki, S. B. Qadri, E. F. Skelton, D. Donnelly, B. Covington, *Invited Talk at Materials Research Society Spring Meeting, 13-17 April, 1998, San Francisco*

"InAs/(In,Ga)Sb Superlattices for Infrared Detector Applications" T. D. Golding, J. A. Dura, A. Chi, J. T. Zborowski, H. C. Chen, A. Vigliante, D. Donnelly, and B. C. Covington, *Invited Talk at the Conference on Growth and Characterization of Materials for Infrared Detectors, Feb., 1993, San Diego, CA*

3. Consultancies:

4. Workshops:

5. Other:

C. Grants and Contracts

1. Funded External Grants and Contracts:

“Effects of Athermal Annealing on High-k Gate stacked MOSCAPs and MOSFETs”, 100,000.00 from Texas Higher Education Coordinating Board, January, 2005

“Acquisition of FTIR and AFM for Materials Characterization”, \$190,705.00 from National Science Foundation, June, 2004 (Co-PI with Dr. Heather Galloway)

“Effects of Chemical Mechanical Planarization on Electrical Properties of Low-k Materials”, \$130,000.00 from Texas Higher Education Coordinating Board, January, 2002 (Co-PI with Dr. Heather Galloway)

“Athermal Annealing of Ion-Implanted Silicon”, \$143,770.00 from National Science Foundation, September, 2001

"Dissemination of Proven Reforms", \$100,000.00 with Texas A&M University, Sept, 1998, Department of Education

"A Non-Thermal Annealing Technique applied to Neutron Transmutation Doped Silicon", \$125,603 From National Science Foundation, July, 1998

"3d Transition Metal Impurities in Antiferromagnetic Ferrous Fluoride", \$107,508.00, Texas Higher Education Coordinating Board, 1998

“Shock Annealing: A New Non-thermal Annealing Process Using Laser Generated Shocks”, \$636,200.00 between Naval Research Labs and Sam Houston State University from Advanced Research Projects Administration, 1995

"Investigation of Multi-Platform Local Area and Wide Area Networks", Contract from LORAL, \$50,000.00, 1994

“Impurity Associated Magnetic Modes in Antiferromagnets”, \$25,500.00, Research Corporation, 1993

2. Submitted, but not Funded, External Grants and Contracts:

“EXP: Enhancing Physical Science Instruction and Concepts with Ubiquitous Presenter, PCs, POGIL, PBI, and Probes (EPIC- UP5)”, \$549,972, National Science Foundation (Co-PI), Ozcan Gulacar, PI, Gail Dickinson, Co-PI

“Effects of Athermal Annealing on High-k Gate stacked MOSCAPs and MOSFETs”, National Science Foundation, October 2006, David Donnelly, PI, Wilhelmus Geerts, Jack Lee (UT), and Jacob Grun (NRL) Co-PI's

“MRI/RUI: Acquisition of FTIR and AFM for Materials Characterization”, National Science Foundation, January 2003, Heather Galloway, PI, David Donnelly Co-PI

“Acquisition of a Novel Biased Target Ion Beam Deposition System for Multi-component Materials Research and Education Activities at SWT”, National Science Foundation, January, 2003, Carlos Gutierrez, PI, David Donnelly, Wilhelmus Geerts, and Greg Spencer, Co-PI’s

“Athermal Annealing of Ion Implanted Silicon”, THECB-ARP, May, 2001, David Donnelly, PI, Bill Covington, Co-PI

“Terahertz Lasers and Detectors Engineered from InAs/GaSb/AlSb Heterostructures”, THECB-ARP, May, 2001, Donna Stokes (UH) PI, David Donnelly, Co-PI

“3d Transition Metal Impurities in Antiferromagnetic Ferrous Fluoride”, National Science Foundation, October, 2000, David Donnelly, PI

3. Funded Internal Grants and Contracts:

“Spectroscopic Investigation of Boron Interstitial Clusters in Silicon”, \$8000.00 from Southwest Texas State University Research Enhancement Program, January, 2001

"Experimental Determination of the Lifetime of Magnetic Excitations Associated With a Single Vanadium Impurity in the Insulating antiferromagnet Ferrous Fluoride", \$5000.00 From Sam Houston State University Faculty Research Council, 1998

"Mechanical Energy Annealing of Silicon", \$5,000.00 from Sam Houston State University Faculty Research Council, 1997

"Optical Study of Ilmenite, FeTiO_3 , to Determine its Potential as a New Semiconductor", \$7,500.00 From Sam Houston State University Faculty Research Council, 1994

"Characterization and Optimization of InAs/InGaSb Strained Layer Superlattices", \$7,500.00 From Sam Houston State University Faculty Research Council, 1993

"Study of Decay Mechanisms of Impurity Associated Magnetic Modes in Antiferromagnets", \$6,000.00, From Sam Houston State University Faculty Research Council, 1992

4. Submitted, but not Funded, Internal Grants and Contracts:

D. Fellowships, Awards, Honors:

Research Fellowship, Naval Research Laboratory, Summer, 2006

IV. SERVICE

A. Institutional:

1. University

Member, Suspension Appeals Committee, 2014-present

Member, Registrar's Academic Calendar Coordinating Committee, 2009-2013

Member, Selection Committee, Presidential Award for Excellence in Teaching, 2005, 2006

2. College

College of Science and Engineering Council representative to University Council, 2012-2013

Chair, Search Committee for Director of Materials Science Program, 2007-2008

Chair, Search Committee for Materials Science Faculty, 2007-2008

Member, STEM task force, 2007

Chair, College of Science Review Committee, Research Enhancement Program, 2004, 2005

College of Science representative, University Research Council, 2004 – 2006

Faculty Advisor, MAES, 2012 – present

3. Department

Associate Chair, 2013 – present

Chair, Personnel Committee, 2013 – present

Chair, Scholarship Committee, 2013 – present

Department Library Liaison, 2006 – present

Department outcomes and assessments coordinator, 2006 - present

Department space committee chair, 2006

Physics Department Undergraduate Advisor, 2012 - present

Physics Department Graduate Advisor, 2006 – 2013

Physics Department Liaison to Faculty Senate, 2004 – 2006

Physics Department representative, College of Science Materials Science and Engineering development committee, 2006

Physics department representative, College of Science Tenure and Promotion Review Committee, 2005 – 2006, 2013 - present

Faculty Advisor, Texas State chapter, Society of Physics Students, 2000 – present

Faculty Advisor, Texas State chapter, Sigma Pi Sigma (Physics Honor Society), 2000 – present

B. Professional

Member, Planning Committee, 2016 Sigma Pi Sigma Quadrennial Congress, 2013 – present

Chair, National Nominating Committee, Society of Physics Students, 2013

President, Society of Physics Students, July 2012 – July 2013

Member, Scholarship Committee, Society of Physics Students, April 2012

Secretary-Treasurer, Texas Section of the American Association of Physics Teachers, 2006-present

Associate editor, electronic publications, American Association of Physics Teachers, 2004 – present

Editor, The Nucleus (Digital Library/Community for undergraduates majoring in physics and astronomy), 2004 - present

Texas Section Representative, American Association of Physics Teachers, 2001 - 2006

Councilor, Zone 13 (Texas), Society of Physics Students, 1999 – 2005

Past President, Texas Section, American Association of Physics Teacher, 2002

President, Texas Section, American Association of Physics Teacher, 2001

President-Elect, Texas Section, American Association of Physics Teacher, 2000

Vice-President, Texas Section, American Association of Physics Teacher, 1999

Reviewer, American Journal of Physics

Reviewer, Journal of Applied Physics

Reviewer, Applied Physics Letters

Reviewer, Materials Science in Semiconductor Processing

Reviewer, Electronics, Photonics, and Device Technology program, Engineering Directorate, National Science Foundation

C. Community:

Volunteer, Prevent-a-Litter Spay and Neuter, 2012 – present

Board Member, Prevent-a-Litter Spay and Neuter, 2013

Elder, First Presbyterian Church, 2008 - 2011

Youth Sunday school teacher, First Presbyterian Church, 2005 – 2011

Choir Member, First Presbyterian Church, San Marcos, 2003 – 2011

Computer Maintenance, First Presbyterian Church, San Marcos, 2004 – 2008

Coach, San Marcos Area Youth Soccer Organization, 2002 – 2005

Cubmaster, Cub Scout Pack 116, San Marcos, 2004 – 2005

Den Leader, Cub Scout Pack 116, San Marcos, 2003 - 2006

D. Service Honors and Awards

Robert N. Little Award, Texas Section, American Association of Physics Teachers, 2014

Outstanding Citizen Medal, Veterans of Foreign Wars, 2006

Outstanding Chapter Advisor, Society of Physics Students, 1995

E. Organizations

1. Honorary:

Sigma Pi Sigma (Physics honor society)

2. Professional:

American Physical Society

American Association of Physics Teachers

Society of Physics Students