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***Education***

- 1980-1985 Stanford University, Stanford, California  
Ph.D. and Masters Degrees in Materials Science and Engineering
- 1976-1980 Massachusetts Institute of Technology, Cambridge, Massachusetts  
S.B. Degree in Materials Science and Engineering

***Academic Experience***

- 2004-present Assoc. Dean for Academic Affairs, College of Engineering, Univ. of Fl.
- 2001-2004 Alumni Chair, Materials Science and Engineering, University of Florida
- 12/93-Present Professor of Materials Science and Engineering, University of Florida
- 1981-1985 Research Assistant, Dept. of Materials Science and Engineering, Stanford Univ.

***Industrial Experience***

- 1985-1993 Member of Technical Staff, AT&T Bell Laboratories, Murray Hill, New Jersey

***Awards***

- Fellow of the AVS, 2002  
AVS Distinguished Lecturer, 2001  
Alumni Chair of Materials Science and Engineering, 2001  
Fellow of the Electrochemical Society, 2000  
University of Florida MSE Faculty Excellence Award, 2003, 1998, 1997  
Stanford Engineering Graduate Fellowship, 1980

***Service to the Profession***

Advisory, Organizing and Executive Committee Memberships:

National Research Council:

Member of NRC evaluation panel for NYS CAT, 1998

National Science Foundation:

Review panel member for National Science Foundation, 1995-2003

Member of NSF evaluation panel for National Nanofabrication Users Network.

AVS:

Chair of the Electronic Materials and Processing Division of AVS, 1998

Program Chair of the Electronic Materials and Processing Division of AVS, 1997.

Board of Directors of AVS, 1999-2001

Workshop Chair for 17<sup>th</sup> International Union of Vacuum Science and Technology Associations (IUVSTA), Oahu, Hawaii, 1997.

Program chair for the 47<sup>th</sup> International AVS Symposium, Boston 2000.

Materials Research Society:

Councilor of Materials Research Society, 1995-1998

Electronic Services Chair, 1996-1998

Member of Materials Research Society Long Range Planning Committee, 1996-1997

Co-organizer of Materials Research Society Symposium titled, "Chemical Perspectives of Microelectronic Materials," Boston, MA, December 1992.

Co-organizer of the 1997 Spring MRS Symposium on GaN and Related Materials, San Francisco, April 1-4, 1997.

Co-organizer of Materials Research Society Symposium E, Boston, MA, December 2003.

Member, Bound Volumes Sub-committee, 2004-2007

Member, MRS Fellow Selection Committee, 2007-present

Electrochemical Society:

Co-organizer of Nitride Symposium for The Electrochemical Society International Meeting (Boston, 1998).

Co-organizer of SOTAPOCS XXX for The Electrochemical Society International Meeting (Seattle, 1999).

Chair of the Norman Hackerman Young Author Award Committee, 1999-2000

Other Conference Organization:

Program Committee for 4<sup>th</sup> Int. Conf. On Chemical Beam Epitaxy and Related Growth Techniques, Nara, Japan, July 1993.

Program Chair for 5<sup>th</sup> Int. Conf. On Chemical Beam Epitaxy and Related Growth Techniques, San Diego, CA, 1995.

Program Committee for the 1998 TMS Electronic Materials Conference.

Program Committee for the 6th Int. Conf. On Chemical Beam Epitaxy (1999).

Program committee for the 10th International Conference on Solid Films and Surfaces, July 2000.

Program committee for the Int. Conf. On Molecular Beam Epitaxy, Edinburgh, 2004.

Chair, Workshop on Room Temperature Spintronic Applications, Gainesville, 2005.

Editorial:

Associate Editor - Journal of Crystal Growth, 1998-2004

Associate Editor - Journal Of Vacuum Science and Technology, 1996-1998

Co-Editor In Chief - MRS Internet Journal of Nitride Semiconductor Research, 1996-1999

*Service to the University*

Constitution Committee, 1997

Physics Faculty Search Committee, 1995 and 1999

Graduate Enrollment Task Force, 1997

Faculty Academic Advisory Committee, 1998-1999

Vice-President for Research Search Committee, 1998

Teacher and Advisor of the Year Selection Committee, 2001

University Faculty Senate, 1998-2000

Presidential Search Committee, 2003

Assoc. Vice-Pres. for Media Relations Search Committee, 2005

Chair, Provost's Task Force on Distance and eLearning, 2007

University Curriculum Committee, 2004-present

Graduate Curriculum Committee, 2006-present

Distance Learning Workgroup, 2008-present

Assoc. Provost for IT Search Committee, 2009

*Service to the College*

College of Engineering Professorial Excellence Program Selection Committee, 1996

College of Engineering Research Foundation Professor Selection Committee, 1997

College of Engineering Personnel Board, 1998-2000

College of Engineering Curriculum Committee, 2002-2004

*Service to the Dept.*

MSE Faculty Search Committee Chair, 1996-1997

MSE Computer Committee, 1994-1997 (Chair 1994-1996)

Electronic Materials Qualifying Exam Committee, 1996-2004

MSE Department Chair Search Committee, 2002

Graduate Coordinator, 2002-2004

Chair, MSE Curriculum Committee, 2002-2004

## ***Publications***

Over 500 journal publications, over 400 conference papers, 1 co-authored book, 7 edited books, 8 book chapters, 7 patents and over 30 invited presentations.

## ***Graduate Students***

M.S. Theses Supervised: 4  
Ph.D. Committees Chaired: 18 (17 graduated)  
Ph.D. Committees Co-Chaired: 1

## ***Courses Taught***

Undergraduate: EMA 3010 Introduction to Materials, EMA 4615 Compound Semiconductors

Graduate: EMA 6938 Chemistry of Semiconductor Manufacturing, EMA 6412 Synthesis and Characterization of Electronic Materials

## ***Courses Coordinated***

Undergraduate: EGN 1002 Introduction to Engineering

Graduate: EMA 6936 Florida Institute for Development of Engineering Faculty Seminar

## ***Invited Presentations***

1. "Carbon Doping of III-V Materials," Fifth Int. Conf. on MOVPE and Workshop on MOMBE and Related Techniques, Aachen, Germany, June 1990.
2. "Low Temperature Growth of GaAs and AlGaAs by MOMBE," Mat. Res. Soc. Symp., Boston, MA 1991.
3. "Carbon Doping for High Speed GaAs Electronic Devices," 19<sup>th</sup> Int. Symp. On GaAs and Rel. Compounds, Karuizawa, Japan, September 1992.
4. "Growth of III-V Heterostructures by MOMBE," Nat. Symp of the American Vac. Soc., Chicago, IL, November 1992.
5. "Carbon Doping for Advanced GaAs Devices," Eng. Found. Conf. On Advanced Heterostructure Transistors, Kona, December 1992.
6. "Carbon Doping in GaAs and Related Compounds," Gordon Conference, Oxnard, March 1993.
7. "Growth of Heterojunction Bipolar Transistors," Mat. Res. Soc. Symp., San Francisco, CA, April 1993.
8. "Heterojunction Bipolar Transistors Grown by MOMBE," 4<sup>th</sup> Int. Conf. On Chemical Beam Epitaxy and Rel. Growth Techniques, Nara, Japan, July 1993.
9. "Carbon-Doped HBTs Grown by MOMBE," Japanese Society of Applied Physics, July 1993.
10. "Metalorganic Molecular Beam Epitaxy," Tokyo Institute of Technology, July 1993.
11. "Effect of Base Dopant and Current Density on HBT Reliability," EXMATEC '94,

- Parma, Italy, April 1994.
12. "Status and Future of Large Area Growth by MOMBE," Spring Meeting of the Electrochemical Society, San Francisco, CA, May 1994.
  13. "Growth of III-V Nitrides by Metalorganic Molecular Beam Epitaxy," Fall ECS, Electrochem. Soc., Miami Beach, FL, October 1994.
  14. "Growth of Novel Materials by Metalorganic Molecular Beam Epitaxy," 31<sup>st</sup> Annual Symp. of the New Mexico Chapter of the American Vacuum Society, AVS, Albuquerque, NM, April 1995.
  15. "Growth of III-V Nitrides by MOMBE," Taipei International Symposium of Surfaces and Thin Films, Taiwan Academica Simica (Academy of Science), Taipei, Taiwan, March, 1996.
  16. "Growth of III-N Materials by MOMBE," Fall Meeting of the Electrochemical Society, Chicago, IL, October 1995.
  17. "Synthesis of InTIV Materials," Spring MRS, San Francisco, CA, April 1995.
  18. "III-Nitrides," International Materials Research Congress, Cancun, 1996.
  19. "Is There a Role for CBE in III-Nitrides?," 6<sup>th</sup> International Conference on Chemical Beam Epitaxy, Montreaux, August 1997.
  20. "Doping of III-Nitrides," North American Chemical Congress, Cancun, November 1997.
  21. "III-Nitrides for Red and IR Applications," University of Michigan, September 1997.
  22. "Er-Doping of III-Nitride Semiconductors," C.R. Abernathy and J.D. MacKenzie, Workshop of New Concepts on 3-D Optical Devices Using Rare Earths and Other Novel Approaches, Asilomar, CA, April 1998.
  23. "Growth of III-Nitrides in UHV," International Vacuum Congress, Birmingham, United Kingdom, September 1998.
  24. "III-Nitrides for IR Applications," EXMATEC, Cardiff, Wales, 1998.
  25. "Status of III-Nitride Growth in UHV," Sandia National Laboratories, Albuquerque, NM, 1998.
  26. "Effect of impurity concentration on 1.54 $\mu$ m emission from GaN:Er," Photonics West, San Jose, Jan. 2000.
  27. "Deposition of Dielectrics on GaN," American Chemical Society, San Francisco, March 2000.
  28. "Rare Earth Doping of GaN," European Materials Research Society, Strausbourg, May 2000.
  29. "Growth and Characterization of MgO and Sc<sub>2</sub>O<sub>3</sub> Gate Dielectrics on GaN" 9th Intl. Workshop on Oxide Electronic, St. Petersburg, FL, October 2002
  30. "Materials for Spin Injection into GaN-Based Devices," 50<sup>th</sup> AVS Int. Symp., Baltimore, MD, October 2003
  31. "Charge and Spin Functionality in Wide Bandgap Semiconducting Oxides and Nitrides," Photonics West, San Jose, CA, January 2003
  32. "Optical Investigations of GaMnN Ferromagnetic Semiconductor" 2003 March Meeting of the APS, Austin, TX, March 2003
  33. "Effects of Composition and Layer Thickness on the Magnetic and Structural Characteristics of GaMnN", 203rd Meeting of the ECS, Paris, France, May 2003
  34. "Progress in Novel Oxides for Gate Dielectrics and Surface Passivation of GaN/AlGaN

- HFETs” 20rd Meeting of The Electrochemical Society, Paris, France, May 2003
35. “Ferromagnetism in GaN and SiC Doped with Transition Metals”, International Conference on Metallurgical Coatings and Thin Films, San Diego, CA, May 2003
  36. “Widebandgap Materials for Semiconductor Spintronics,” Electrochemical Society Meeting, San Antonio, 2004.
  37. “Ferromagnetic Widebandgap Semiconductors,” ICMCTF, San Diego, California, 2004.
  38. “Prospects for GaN-based Spintronic Devices,” American Physical Society, March, 2005.

### *Conference Papers*

1. “Pb<sub>1-x</sub> d<sub>x</sub>S Films for Solar Cells,” J. Mooney, A. Sher, S.B. Radding and C.R. Abernathy, Proc. of the Seventeenth IEEE Photovoltaic Specialists Conference, 1984.
2. “Kinetic Effects in Film Formation of CuInSe<sub>2</sub> Prepared by Chemical Spray Pyrolysis,” C.R. Abernathy, C.W. Bates, Jr., A. Anani, B. Haba, Thin Solid Films, 115, L41 (1984).
3. “Pb<sub>1-x</sub> d<sub>x</sub>S Films for Solar Cells,” J. Mooney, A. Sher, S.B. Radding and C.R. Abernathy, Proc. of the Seventeenth IEEE Photovoltaic Specialists Conference, pp. 16-21 (1984).
4. “Novel GaAs/AlGaAs HBT Grown by MOMBE with Carbon Doped Base Layer,” F. Ren, C.R. Abernathy, S.J. Pearton, T.R. Fullowan, J. Lothian, Y.K. Chen and A.S. Jordan, Proc. of the Symp. of the Electrochem. Soc. 1990.
5. “Ultra-high Doping of GaAs by Carbon During MOMBE,” C.R. Abernathy, S.J. Pearton, R. Caruso, F. Ren and J. Kovalchick, Proc. Of the 2<sup>nd</sup> Int. Conf. on Solid State and Integrated Circuit Tech., International Academic Publishing, 1990, p. 743.
6. “The Confinement and Stability of Carbon Doping in GaAs-based HBTs,” C.R. Abernathy, Proc. of the 19<sup>th</sup> Int. Symp. on GaAs and Rel. Cmpds, Karuizawa, 1992.
7. “Correlation of Material Parameters with Improved Uniformity of Annealed or In-Alloyed GaAs Substrates,” C.R. Abernathy, R. Caruso, K.D. Cummings, P. Dobrilla, M.L. Gray, A.S. Jordan and S.J. Pearton, Electrochemical Society Fall Meeting, Boston, May 1986.
8. “Wafer Mapping of Material and Device Properties in Variously Prepared GaAs Substrates,” A.S. Jordan, C.R. Abernathy, R. Caruso, S.J. Pearton and H. Temkin, Intl. Symp. on Defect Recognition and Image Processing in III-V Compounds, Monterey, CA, April 1987, Mat. Sci. Monographs 44, 35 (1987).
9. “Direct Growth of GaAs-on-Si by MOCVD Limitations and Future Directions,” W.S. Hobson, S.J. Pearton, C.R. Abernathy, R. Caruso, K.T. Short, M. Stavola and S.M. Vernon, Electrochemical Society Fall Meeting, Hawaii, Oct. 1987, Proc. 10<sup>th</sup> Intl. Conf. on CVD 1987 87-8, 776 (1987).
10. “Effects of Crystalline Disorder in MOCVD GaAs-on-Si,” C.R. Abernathy, S.J. Pearton, R. Caruso, K.T. Stavola, J.M. Brown, D.L. Malm, S.M. Vernon and W.S. Hobson, 1987 Electronic Materials Conf., Boulder, CO, June 1987.
11. “Effects of Deposition Thickness on the Properties of GaAs-on-Si,” A.S. Jordan, S.J. Pearton, C.R. Abernathy, R. Caruso and S.M. Vernon, 13<sup>th</sup> Intl. Symp. on GaAs and Related Compounds, Capsis, Greece, Sept. 1987, IOP Conf. Ser. 91, 489 (1988).

12. "Growth and Characterization of Low Defect GaAs by Vertical Gradient Freese," C.R. Abernathy, A.P. Kinsella, A.S. Jordan, R. Caruso, S.J. Pearton, H. Temkin and H.H. Wade, 7<sup>th</sup> Intl. Conf. on Crystal Growth, Monterey, CA 1987, *J. Cryst. Growth* **88**, 106 (1987).
13. "High-Quality Films of GaAs on Si on Insulator grown by MOCVD," S.M. Vernon, V. Haven, S. Bunker, C.R. Abernathy, R. Caruso, K.T. Short, S.N.G. Chu, J.H. Brown and S.J. Pearton, 1987 Electronic Matls. Conf., Boulder, CO, June 1987.
14. "Growth and Characterization of GaAs Based Superlattices on Si by MOCVD," W.S. Hobson, S.J. Pearton, C.R. Abernathy, R. Caruso and K.T. Short, 1988 Spring MRS Meeting, *Mat. Res. Soc. Symp. Proc.*, **115**, 147 (1988).
15. "RTA of InAs, GaSb and GaP," S.J. Pearton, A.R. Von Neida, J.M. Brown, K.T. Short, C.R. Abernathy, L.J. Oster and U.K. Chakrabarti, Atlanta, GA Meeting of ECS, May 1988.
16. "Characterization of GaAs-AlGaAs Heterostructures Grown on Si by MOCVD," S.J. Pearton, K.S. Jones, C.R. Abernathy, R. Caruso, S.N.G. Chu and S.M. Vernon, 1988 May ECS Meeting, Atlanta, GA.
17. "Annealing of Heteroepitaxial Material," C.R. Abernathy, S.J. Pearton, M.B. Panish and S.N.G. Chu, 1988 May ECS Meeting, Atlanta, GA.
18. "Implant Isolation of InP and InGaAs Grown by MOMBE," C.R. Abernathy, S.J. Pearton, M.B. Panish, R.A. Hamm and L.M. Lunardi, *GaAs and Related Compounds*, Atlanta, GA, Sept. 1988, *IOP Conf. Ser.*, **96**, 359 (1989).
19. "Implant Isolation Mechanisms in GaAs, AlGaAs, InP and InGaAs," S.J. Pearton, C.R. Abernathy, W.S. Hobson and A.E. Von Neida, 1988 Fall MRS Meeting and *Mat. Res. Soc. Symp. Proc.*, **144**, 433 (1989).
20. "Formation of Buried Insulation Layers in GaAs-AlGaAs Heterostructures," W.S. Hobson, S.J. Pearton, C.R. Abernathy and A.E. Von Neida, 1989 Spring MRS Meeting and *Mat. Res. Soc. Symp. Proc.*, **148**, 397 (1989).
21. "Ion Implantation Processing of GaAs and Related Compounds," S.J. Pearton, W.S. Hobson and C.R. Abernathy, 1989 Spring MRS Meeting and *Mat. Res. Soc. Symp. Proc.*, **147**, 261 (1989).
22. "Carbon Implantation in GaAs, AlGaAs and InP," S.J. Pearton, C.R. Abernathy, U.K. Chakrabarti. and W.S. Hobson, 1989 Spring MRS Meeting and *Mat. Res. Soc. Symp. Proc.*, 110 (1990).
23. "Implant Isolation of III-V Semiconductors," C.R. Abernathy, S.J. Pearton and W.S. Hobson, 1989 Spring MRS Meeting and *Mat. Res. Soc. Symp. Proc.*, 35 (1990).
24. "Acceptor Delta-Doping in GaAs," W.S. Hobson, S.J. Pearton and C.R. Abernathy, 1989 Fall MRS Meeting and *Mat. Res. Soc. Symp. Proc.*, **163**, 855 (1990).
25. "Sn-H Complexes in GaAs," D.M. Kozuch, M. Stavola, S.J. Pearton, C.R. Abernathy and J. Lopata, 1989 Fall MRS Meeting and *Mat. Res. Soc. Symp. Proc.*, **163**, 477 (1990).
26. "Structure and Dynamics of H Acceptor Complexes in Si and GaAs," M. Stavola, S.J. Pearton, C.R. Abernathy and J. Lopata, 1989 APS Meeting, St. Louis; *Bull. Am. Phys. Soc.*, **34**, 415 (1989).
27. "Acceptor Delta-Doping for Schottky Barrier Enhancement on n-Type GaAs," S.J. Pearton, F. Ren, C.R. Abernathy, A. Katz, W.S. Hobson, S.N.G. Chu and J. Kovalchick,

- 1990 Spring MRS Meeting and Mat. Res. Soc. Symp. Proc., 181, 491 (1990.)
28. "GaAs-AlGaAs HBTs with C-Doped Base Layer Grown by MOMBE," F. Ren, C.R. Abernathy, S.J. Pearton, T.R. Fullowan, J. Lothian and A.S. Jordan, SOTAPOCS XII, 1990 Spring ECS Meeting, Montreal, May 9, 1990, VR. 90-15, 185 (1990)
  29. "Trimethylamine Alane: A New Robust Precursor for the MOMBE Growth of AlGaAs," C.R. Abernathy, A.S. Jordan, S.J. Pearton, D.A. Bohling and G.T. Muhr., Proc. 17<sup>th</sup> GaAs and Rel. Comp. Symp. IOP Cont. Ser 42, 149 (1990).
  30. "The Feasibility of Using TMAI Alane as an Al Precursor for MOMBE," C.R. Abernathy, A.S. Jordan, S.J. Pearton, F. Ren, F. Baiocchi, D.A. Bohling and G.T. Muhr, Intl. Cryst. Growth Meeting, Denver, July 1990, J. Cryst. Growth, 109, 31 (1991).
  31. "Carbon Doping of III-V Compounds Grown by MOMBE," C.R. Abernathy, S.J. Pearton, F. Ren and W.S. Hobson, Houston, Dec. 1989: J. Cryst. Growth, 105, 375 (1990).
  32. "Novel C-Doped p-Channel GaAs MESFET Grown by MOMBE," F. Ren, C.R. Abernathy and S.J. Pearton, 1991 Spring ECS Meeting, Toronto, Canada, May 1991.
  33. "Incorporation and Behavior of O in AlGaAs Grown by MOMBE Using TMAA1," C.R. Abernathy, J. Song, W.S., Hobson, S.J. Pearton, F. Ren, D.A. Bohling and G.T. Muhr, 1990 Fall MRS Meeting and Mat. Res. Soc. Symp. Proc., 204, 183 (1991).
  34. "AlGaAs Growth by OMVPE using TMAA1," W.S. Hobson, C.R. Abernathy, S.J. Pearton and T.D. Harris, 1990 Fall MRS Meeting and Mat. Res. Soc. Symp. Proc., 204, 189 (1991).
  35. "Passivation of Carbon Acceptors in GaAs by Hydrogen," D.M. Kozuch, M. Stavola, S.J. Pearton, C.R. Abernathy, J. Lopata and W.S. Hobson, 1991 APS Meeting; Bull. Am. Phys. Soc., 36, 994 (1991).
  36. "The Search for All-Hydride MOMBE: Examination of TMAAl, TMAGa and Arsine," D.A. Bohling, G.J. Muhr, C.R. Abernathy, A.S. Jordan, S.J. Pearton and W.S. Hobson, J. Cryst. Growth, 107, 1068 (1991).
  37. "Passivation of Shallow Acceptors in Si and GaAs by Annealing in H<sub>2</sub>," I. Velloarisoa, D. Kozuch, M. Stavola, R. Peale, G. Watkins, S.J. Pearton, C.R. Abernathy and W.S. Hobson, J. Cryst. Growth, 107, 111 (1991).
  38. "Unintentional Hydrogenation of III-V Semiconductors Device Processing," S.J. Pearton, C.R. Abernathy, W.S. Hobson, J. Lopata, D. Kozuch and M. Stavola, J. Cryst. Growth, 107, 617 (1991).
  39. "Effects of Low Temperature Growth on Impurity and Defect Incorporation in AlGaAs Grown by MOMBE," C.R. Abernathy, S.J. Pearton and D. Bohling, J. Cryst. Growth, 107, 1057 (1991).
  40. "Characterization of GaAs/AlGaAs Heterostructures Grown by OMVPE Using TMAAl as a New Al Source," W.S. Hobson, S. McAfee, K. Jones, N. Paroskevopoulous, C.R. Abernathy, S. Sputz, T. Harris, M. Lamont-Schnoes and S.J. Pearton, J. Cryst. Growth, 107, 1062 (1991).
  41. "Anomalous Damage Depths in Low Energy Ion Beam Processed III-V Semiconductors," S.J. Pearton, F. Ren, T. Fullowan, R. Kopf, W. Hobson, C.R. Abernathy, A. Katz, U. Chakrabarti. and V. Swaminathan, J. Cryst. Growth, 107, 1439 (1991).

42. "Role of the Diffusivity of Be and C in the Performance of GaAs/AlGaAs HBTs," F. Ren, T. Fullowan, J. Lothian, P. Wisk, C. Abernathy, R. Kopf, A. Amerson, S. Downey and S.J. Pearton, *J. Cryst. Growth*, 107, 1557 (1991).
43. "Passivation of C Acceptors in GaAs by Hydrogen," D. Kozuch, M. Stavola, S.J. Pearton, C.R. Abernathy, J. Lopata and W.S. Hobson, APS March Meeting, Detroit, March 1991; *Bull. Am. Phys. Soc.*, 36, 994 (1991).
44. "Novel C-Doped, p-Channel GaAs MESFET Grown by MOMBE," F. Ren, C.R. Abernathy and S.J. Pearton, 18<sup>th</sup> Intl. Symp. GaAs and Related Comp., Seattle, Sept. 1991; *IOP Conf. Ser.*, 121, 137 (1991).
45. "Characteristics of Dry Etch GaAs p-n Junctions Grown by MOMBE," C.R. Abernathy, S.J. Pearton, F. Ren, T. Fullowan and J. Lothain, 18th Intl. Symp. GaAs and Related Comp., Seattle, Sept. 1991; *IOP Conf. Ser.*, 121, 191 (1991).
46. "Incorporation of H into III-V Semiconductors During Growth and Processing," S.J. Pearton, C. Abernathy, W. Hobson, F. Ren, T. Fullowan, J. Lopata. and U. Chakrabarti, 18<sup>th</sup> Intl. Symp. GaAs and Related Comp., Seattle, Sept. 1991; *IOP Conf. Ser.*, 120, 195 (1991).
47. "UV-Ozone Removal of Interfacial C from GaAs Prior to MOMBE," S.J. Pearton, F. Ren, C. Abernathy, W. Hobson and H. Luftman, *Electrochem. Soc.*, Phoenix, Oct. 1991, *Proc. 2<sup>nd</sup>. Intl. Symp. on Cleaning Technology in Semiconductor Device Manufacturing*, 92-12, 477 (1992).
48. "Growth of GaAs/AlGaAs HBTs by MOMBE," C.R. Abernathy, F. Ren, S.J. Pearton, T. Fullowan, K. Montgomery, P. Wisk, J. Lothian, P. Smith and R. Nottenburg, *Intl. CBE Conf.*, Oxford, Sept. 1991; *J. Cryst. Growth*, 120, 234 (1992).
49. "III-V Semiconductor Dry Etching Using ECR Discharges," S.J. Pearton, F. Ren, T. Fullowan, J. Lothian, C. Abernathy, A. Katz and R. Kopf, *SOTAPOCS XV, Electrochemical Society Meeting*, Phoenix, Oct. 1991; vol. 92-19, 54 (1992).
50. "Hydrogen Passivation of C-Acceptors in GaAs and Grown from Metalorganic Sources," M. Stavola, D. Kozuch, S.J. Pearton, C. Abernathy and W. Hobson, *Workshop on Hydrogen Migration in Semiconductors*, Hobsen, Germany, Nov. 1991.
51. "Growth of GaAs and AlGaAs by MOMBE Using Phenylarsine," C. Abernathy, P. Wisk, S.J. Pearton, F. Ren, D. Bohling and G. Muhr, 1991 Fall MRS and Mat. Res. Soc. Symp. *Proc.*, 240, 57 (1992).
52. "Comparison of Disilane and Tetraethyltin as Gaseous Dopants for Growth of n-GaAs and n-AlGaAs by MOMBE," P. Wisk, C.R. Abernathy, S.J. Pearton, F. Ren, T. Fullowan and J. Lothian, 1991 Fall MRS and Mat. Res. Soc. Symp. *Proc.*, 240, 63 (1992).
53. "Dry Etch Damage in GaAs p-n Junctions," S.J. Pearton, F. Ren, C. Abernathy, T. Fullowan and J. Lothian, 1991 Fall MRS and Mat. Res. Soc. Symp. *Proc.*, 240, 301 (1992).
54. "Radiation Testing of AlInAs/InGaAs and GaAs/AlGaAs HBTs," S. Witmer, S. Mittleman, D. Lehy, F. Ren, T. Fullowan, R. Kopf, C. Abernathy, S.J. Pearton, D.A., Humphrey, K. Montgomery, P. Smith, J. Kreskovsky and H. Grubin, 1991 Fall MRS and Mat. Res. Soc. Symp. *Proc.*, 240, 523 (1992).
55. "Properties of Pt/Ti Contacts to III-V Materials," A. Katz, S. Nakahara, S. Chu, B. Weir, C. Abernathy, W., Hobson, S.J. Pearton and W. Savin, *Mat. Res. Soc. Symp. Proc.*, 216,

- 305 (1991).
56. "Ion Implantation Technology for III-V Heterojunction Devices," F. Ren, S.J. Pearton, C.R. Abernathy, S. Chu, T. Fullowan, et. al., 14<sup>th</sup> Ion Implantation Technology Conf., Gainesville, FL, Sept. 1992, pp. 421-425.
  57. "Applications of Ion Implantation in III-V Device Technology," S.J. Pearton, F. Ren., S. Chu, W. Hobson, C. Abernathy, T. Fullowan, J. Lothian, R. Elliman, D. Jacobson and J.M. Poate, 12<sup>th</sup> Intl. Conf. Applications of Accelerators in Research and Industry, Denton, TX, Nov. 1992, Nucl. Instr. Meth. B79, 648 (1992).
  58. "GaAs(C)/InAs Superlattices Grown by MOMBE," C. Abernathy, P. Wisk, S.J. Pearton, W. Hobson, P. Fuoss, F. Laucias, S. Chu and F. Ren, Proc. 4<sup>th</sup> Intl. Conf. InP and Related Materials, April 1992, Rhode Island, pp. 281-285.
  59. "Use of Selective Area Defect Creation for Isolation of III-V Multilayer Structures," S.J. Pearton, F. Ren, T. Fullowan, A. Katz, W. Hobson, C. Abernathy, J. Lothian, R. Elliman and J.S. Williams, 1992 Spring MRS Meeting and Mat. Res. Soc. Symp. Proc., 262, 763 (1991).
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