CURRICULUM VITAE June 2015

KENNETH F. GALLOWAY

Vanderbilt University School of Engineering
VU Station B # 351824, 2301 Vanderbilt Place
Nashville, TN 37235-1824

Telephone: (615) 343-0312
FAX: (615) 322-7062
E-mail: ken.galloway@vanderbilt.edu

I. EMPLOYMENT HISTORY

1996-present Vanderbilt University, Nashville, TN

Distinguished Professor of Engineering	(07/12 -)
Dean, School of Engineering	(08/96 - 06/12)
Professor of Electrical Engineering	(08/96 -)

1986-1996 University of Arizona, Tucson, AZ

Head, Department of Electrical and Computer Engineering	(08/86 - 08/96)
Professor of Electrical and Computer Engineering	(08/86 - 08/96)
Professor of Optical Sciences	(08/86 - 08/96)

1980-1986 University of Maryland, College Park, MD

Professor of Electrical Engineering [Part-Time]	(08/80 - 08/86)

1974-1986 National Bureau of Standards (now NIST), Gaithersburg, MD

Chief, Semiconductor Electronics Division	(10/85 - 08/86)
Chief, Semiconductor Devices and Circuits Division	(06/81 - 10/85)
Assistant Division Chief, Electron Devices Division	(06/80 - 06/81)
ComSci Fellow [assigned to U. Maryland]	(09/79 - 06/80)
Section Chief, Electronic Materials Section, EDD	(11/77 - 09/79)
Member Technical Staff, Electron Devices Division	(09/74 - 11/77)

1972-1974 Naval Weapons Support Center (NAVSEA), Crane, IN

Research Physicist	(12/72 - 09/74)

1966-1972 Indiana University, Bloomington, IN

Associate Professor of Physics	(07/72 - 12/72)
Assistant Professor of Physics	(08/67 - 07/72)
Research Associate	(02/66 - 08/67)

1965-1966 University of South Carolina, Columbia, SC

Instructor	(08/65 - 01/66)

II. EDUCATION

January 1966 Ph.D., University of South Carolina
June 1962 B.A., Vanderbilt University

III. PROFESSIONAL MEMBERSHIPS

Institute of Electrical and Electronics Engineers (Fellow)
American Physical Society (Fellow)
American Association for the Advancement of Science (Fellow)
American Society for Engineering Education (Fellow)

IV. PROFESSIONAL ACTIVITIES

Member, U.S. Air Force Scientific Advisory Board, 2003- 2007

American Society for Engineering Education (ASEE)
- Director (1 of 10), Engineering Deans Council, 2003-2005
- Chair, Host Committee, 2003 ASEE Annual Conference in Nashville
- Member, Engineering Deans Council Public Policy Committee, 2003-2007
- Vice-Chair, Engineering Deans Council Public Policy Committee, 2004-2005
- Chair, Engineering Deans Council Public Policy Committee, 2005-2007
- Director (1 of 10), Engineering Deans Council, 2008-2010
- Vice-Chair, Engineering Deans Council, 2009
- Chair, Engineering Deans Council, 2009-2011
- Member, ASEE Board of Directors, 2009-2011, 2012-2015
- President-elect, ASEE, 2012-2013
- President, ASEE, 2013-2014
- Immediate Past-President, 2014-2015

IEEE Nuclear and Space Radiation Effects Conference (NSREC)
- Member, NSREC Awards Committee, 1975
- Chairman, NSREC Awards Committee, 1980
- Technical Program Chairman, NSREC, 1982
- General Chairman, NSREC, 1985
- Short Course Instructor, NSREC, 1996
- Session Chair, NSREC, 2004
- Short Course Instructor, NSREC, 2013

IEEE Nuclear and Plasma Sciences Society (NPSS)
- Member-at-large, NPSS Radiation Effects Committee, 1975-1977
- Member, NPSS Awards Committee, 1976
- Vice-Chairman/Standards, NPSS Radiation Effects Committee, 1978
- Secretary/Treasurer, NPSS Radiation Effects Committee, 1985-1988
- Executive Vice-Chairman, NPSS Radiation Effects Committee, 1988-1991
- Member, NPSS Administrative Committee (AdCom), 1987, 1991-1994, 2000-2003
- Vice-President, NPSS, 1989
- Chairman, NPSS Radiation Effects Committee, 1991-1994
- Past Chairman, Radiation Effects Committee, 1994-1997

IEEE International Electron Devices Meeting (IEDM)
- Member, Solid State Devices Subcommittee, 1987, 1990, 1991
- Chairman, CMOS Devices and Reliability Subcommittee, 1992
- Short Course, Vice-Chairman, 1993
- Short Course, Chairman, 1994
- Technical Program Vice-Chairman, 1995
- Technical Program Chairman, 1996
- General Chairman, 1997

IEEE Electron Devices Society (EDS)
Member, EDS Administrative Committee (ADCOM), 1998-2004
Vice-President - Meetings, 2001-2005

IEEE/ABET Electrical Engineering Program Evaluator, 1991-1996

IEEE-USA Engineering R&D Committee
Member, 1991- 1996
Chairman, 1994

IEEE VLSI Workshop on Test Structures
Co-General Chairman, 1984
Local Arrangements Chairman and Treasurer, 1986

IEEE International Conference on Microelectronic Test Structures
Local Arrangements Chairman and Treasurer, 1988
Member, Program Committee, 1989, 1990, 1991

IEEE/ISHM University/Government/Industry Microelectronics Symposium
Member, Program Committee, 1977, 1979, 1981
Member, Executive Committee, 1985

IEEE SOS Workshop, Member Technical Committee, 1977, 1978, 1979

IEEE External Awards Committee, Member, 1985-1986

Guest Editor, Special Section on Space Radiation Effects, Proceedings of the IEEE (November 1988)

RADECS (Radiations: Effects on Components and Systems)
Member, International Committee, RADECS 91, La Grande Motte, France, September 1991
Member, Technical Committee, RADECS 93, Saint-Malo, France, September 1993
Member, Extended Technical Committee, RADECS 95, Arcachon, France, September 1995
Member, Honorary Committee, RADECS 2001, Grenoble, France, September 2001
Member, RADECS Advisory Committee to the RADECS Steering Committee, 2002 –
Member, Honorary Committee, RADECS 2005, Cap d'Agde, France, September 2005
Co-Chair, Scientific Committee, RADECS 2006, Athens, Greece, September 2006
Intl. Technical Committee and Session Co-Chair, RADECS 2008, Jyvaskyla, Finland, September 2008
Member, Conference Advisory Committee, 2013 RADECS, Oxford, U.K., September 2013
Member, Awards Committee, 2013 RADECS, Oxford, U.K., September 2013

DoD/DoE HEART Conference
General Chairman, 1985
Secretary/Treasurer, HEART Conference Steering Committee, 1985-1988

Associate Director, University Consortium for Research on Electronics in Space (UCRES), 1989-1996

Lecturer, MIGAS 1997 (International Summer School on Advanced Microelectronics – Grenoble), Autrans, France, June 1997

European Symp. Reliability of Electron Devices, Failure Physics and Analysis (ESREF)
Member, Review Committee, 8th Conf. ESREF 1997
Member, Review Committee, 12th Conf. ESREF 2001

Lecturer, CNRS (Centre National de la Recherche Scientifique) Short Course, "Compatibilite a L'Environment Radiatif," Montpellier, France, November 1995

Member, Third Intl. Conf. on Constitutive Laws for Engineering Materials Local Executive Committee and Session Chairman, Tucson, AZ, January 1991

Member, Intl. Advisory Committee, VI Intl. Workshop on Physics of Semiconductor Devices, New Delhi, India, December 1991

Member, Emerging Optoelectronic Technologies (SPIE) Subcommittee on Devices and Integrated Circuits, Bangalore, India, December 1991

Member, Radiation Hardened Linear Integrated Circuit Workshop Committee (sponsored by DNA, USASDC, and NWSC), Tucson, AZ, May 1990

Member, Intl. Program Committee, Intl. Symp. on Electronic Devices, Circuits, and Systems, Kharagpur, India, December 1987

Member, ONR External Review Panel for Radiation Interactions, 1992

Member, 1986 NSF Research Initiation Award Panel, Division of Electrical, Communications and Systems Engineering

Member, 1983 NSF Electrophysics Equipment Grant Panel

NBS-National Research Council Postdoctoral Advisor, 1976-1986

Associate Member (for NBS), DoD Advisory Group on Electron Devices, 1978-1986

Member, Board of Directors, Nashville Technology Council, 2001-2004

V. HONORS/AWARDS/ETC.

Fellow, Institute of Electrical and Electronics Engineers (elected 1986), cited for "Contributions to the study of radiation effects in microelectronics."

Fellow, American Association for the Advancement of Science (elected 1994)

Fellow, American Physical Society (elected 2002), cited for “extensive and substantive contributions in applied physics and engineering science that have yielded an improved understanding of radiation effects in solid-state devices.”

Fellow, American Society for Engineering Education (elected 2011).

Science and Technology Fellow, U.S. Department of Commerce (1979-1980).

The Radiation Effects Award of the IEEE Nuclear and Plasma Sciences Society (2002), cited for “technical contributions and leadership that have enhanced the understanding of radiation effects in semiconductor devices, for meritorious service to the radiation-effects community, and for promotion of radiation effects education.”

The Richard F. Shea Distinguished Member Award of the IEEE Nuclear and Plasma Sciences Society (2007). Citation: “For leadership, technical, and educational contributions to the field of radiation effects on microelectronics.”

Jack Kilby Lecturer, 2009 Government Microcircuit Applications & Critical Technology Conference.

Distinguished Service Award, Tennessee Society of Professional Engineers, (2013).

Distinguished Poster Paper Award, 1984 IEEE Nuclear and Space Radiation Effects Conference (paper co-authored with M. Gaitan and T.J. Russell).

Outstanding Paper Award, 1991 IEEE Nuclear and Space Radiation Effects Conference (paper co-authored with J.L. Titus, G.H. Johnson, and R.D. Schrimpf)

Outstanding Paper Award, 1998 IEEE Nuclear and Space Radiation Effects Conference (paper co-authored with S.C. Witczak, R.C. Lacoe, D. Mayer, D.M. Fleetwood, and R.D. Schrimpf).

Best Paper Award, 2007 Workshop on Frontiers in Electronics (WOFE-07) (paper co-authored with M.L. Alles, L.W. Massengill, R.D. Schrimpf, and R.A. Weller).

Best Oral Presentation, 2008 RADECS Workshop (paper co-authored with J.L. Davidson, W.P. Kang, K. Subramanian, A. Holmes-Siedle, and R.A. Reed).

Medal of Honor, the University of Montpellier II (France), cited "for his contribution to device development for space, for his support in the research exchange with the University of Montpellier II, and for his considerable contribution to RADECS," (1991).

Sigma Xi (elected 1967); Eta Kappa Nu (elected 1988); Tau Beta Pi (1997); Order of the Engineer (1991)

National Defense Education Act Fellow, 1962-1965

VI. PERSONAL INFORMATION

U.S. Citizen - DOB 4/11/41; Columbia, Tennessee
Married – two adult children, four grandchildren

VII. PUBLICATIONS

A. JOURNAL ARTICLES

A Brief Review of Heavy-Ion Radiation Degradation and Failure of Silicon UMOS Power Transistors, Kenneth F. Galloway, Electronics 2014, 3(4), pp. 582-593: doi:10.3390/electronics3040582 - published 30 September 2014.

From displacement damage to ELDRS: Fifty years of bipolar transistor radiation effects at the NSREC, K.F. Galloway, R.L. Pease, R.D. Schrimpf, and D.W. Emily, *IEEE Trans. Nuclear Science* 60, pp. 1731-1739, 2013.

IEEE Nuclear and Space Radiation Effects Conference: Notes on the Early Conferences, Jonathan A. Pellish and Kenneth F. Galloway, *IEEE Trans. Nuclear Science* 60, pp. 1681-1689, 2013.

Update on High-Impact Papers Presented at the IEEE Nuclear and Space Radiation Effects Conference: The View in 2013, K.F. Galloway and Tracy L. Primich, *IEEE Trans. Nuclear Science* 60, pp. 1674-1680, 2013.

Comparison of Charge Pumping and 1/f Noise in Irradiated Ge pMOSFETs, S. Ashley Francis, Cher Xuan Zhang, En Xia Zhang, Daniel. M. Fleetwood, Ronald D. Schrimpf, Kenneth F. Galloway, Eddy Simoen, Jerome Mitard, and Cor Claeys, *IEEE Trans. Nuclear Science* 59, pp. 735-741, 2012.

Interface and Border Traps in Ge pMOSFETs, D.M. Fleetwood, E. Simoen, S. A. Francis, C.X. Zhang, R. Arora, E. X. Zhang, R.D. Schrimpf, K.F. Galloway, J. Mitard, and C. Claeys, *ECS Transactions* 50 (5), pp. 189-203, 2012.

Laser-and Heavy Ion Induced Charge Collection in Bulk FinFETs, F. El-Mamouni1, E.X. Zhang1, N.C. Hooten, R.D. Schrimpf, R.A. Reed, K.F. Galloway, D. McMorrow, J. Warner, E. Simoen, C. Claeys, A. Griffoni, D. Linten, and G. Vizkelethy, *IEEE Trans. Nuclear Science* 58, pp. 2563-2569, 2011.

A Review of Recent Results on Diamond Vacuum Lateral Field Emission Device Operation in Radiation Environments, K. Subramanian, W.P. Kang, J.L. Davidson, N. Ghosh, and K.F. Galloway, *Microelectronic Engineering* 88, pp. 2924 – 2929, 2011.

Effect of ionizing radiation on defects and 1/f noise in Ge pMOSFETs, C.X. Zhang, S.A. Francis, E.X. Zhang, D.M. Fleetwood, R.D. Schrimpf, K.F. Galloway, E. Simoen, J. Mitard, and C. Claeys, *IEEE Trans. Nuclear Science* 58, pp. 764 - 769, 2011.

Radiation Hardness of SiGe and Ge-Based CMOS Technologies, C. Claeys, S. Iacvo, J. Mitard, R. Arora, C.X. Zhang, K.F. Galloway, D.M.Fleetwood, R.D. Schrimpf, M. Poizat and E. Simoen, *ECS Transactions* 39 (1), pp. 17-30, 2011.

Effects of Processing and Radiation Bias on Leakage Currents in Ge pMOSFETs, Cher Xuan Zhang En Xia Zhang D.M. Fleetwood, R.D. Schrimpf, K.F. Galloway, E. Simoen, J. Mitard, and C. Claeys, *IEEE Trans. Nuclear Science* 57, pp. 3066 - 3070, 2010.

Effects of Halo Doping and Si Capping Layer Thickness on Total-dose Effects in Ge p-MOSFETs, Rajan Arora, Eddy Simoen, E.X. Zhang, D.M. Fleetwood, R.D. Schrimpf, K.F. Galloway, Bo K. Choi, Jerome Mitard, Marc Meuris, Cor Claeys, Anuj Madan, and J.D. Cressler, *IEEE Trans. Nuclear Science* 57, pp. 1933 - 1939, 2010.

Digital Control for Radiation-Hardened Switching Converters in Space, P.C. Adell, A.F. Witulski, R.D. Schrimpf, F. Baronti, W.T. Homan, and K.F. Galloway, *IEEE Trans. Aerospace and Electronic Systems* 46, pp. 762-770, 2010.

Characterization and CMRR Modeling of a Carbon-Nanotube Field-Emission Differential Amplifier, Y.M. Wong, W.P. Kang, J.L. Davidson, D.V. Kerns, Jr., J.H. Huang, and K.F. Galloway, *IEEE Trans. Electron Devices* 56, pp. 738-743, 2009.

Temperature Stress Response of Germanium MOS Capacitors with HfO_2/HfSiON Gate Dielectrics, Rajan Arora, B. W. Schmidt, Daniel M. Fleetwood, Ronald Schrimpf, Kenneth Galloway, Bridget Rogers, K. B. Chung, and Gerald Lucovsky, *ECS Transactions* 19, pp. 803-814, 2009.

Charge Trapping Properties of 3C- and 4H-SiC MOS Capacitors with Nitrided Gate Oxides, Rajan Arora, John Rozen, D.M. Fleetwood, K.F. Galloway, C.X. Zhang, Jisheng Han, Sima Dimitrijev, Fred Kong, L.C. Feldman, S.T. Pantelides, and R.D. Schrimpf, *IEEE Trans. Nuclear Science* 56, pp. 3185-3191, 2009.

Diamond Electronic Device Behavior After High Neutron Fluence Exposure, J.L. Davidson, W.P. Kang, K. Subramanian, Andrew G. Holmes-Siedle, R.A. Reed, and K.F. Galloway, *IEEE Trans. Nuclear Science* 56, pp. 2225-2229, 2009.

Total Ionizing Dose Effects on Ge pMOSFETs with High-k Gate Stack: On/Off Current Ratio. S.R. Kulkarni, R.D. Schrimpf, K.F. Galloway, R. Arora, C. Claeys and E. Simoen, *IEEE Trans. Nuclear Science* 56, pp.1926-1929, 2009.

Test Circuit for Measuring Pulse Widths of Single-Event Transients Causing Soft Errors, B. Narasimham, M.J. Gadlage, B.L. Bhuva, R.D. Schrimpf, L.W. Massengill, W.T. Holman, A.F. Witulski and K.F. Galloway, *IEEE Trans. Semiconductor Manufacturing* 22, pp. 119-125, 2009.

Single Event Effects in the Nano-Era, M.L. Alles, L.W. Massengill, R.D. Schrimpf, R.A. Weller, and K.F. Galloway, *Intl. J. High Speed Electronics and Systems* 18, pp. 805-814, 2008 (selected for WOFE-07 Best Paper Award).

Total Dose and Bias Temperature Stress Effects for HfSiON on Si MOS Capacitors, D.K. Chen, F.E. Mamouni, X.J. Zhou, R.D. Schrimpf, D.M. Fleetwood, K.F. Galloway, S. Lee, H. Seo, G. Lucovsky, B. Jun, and J.D. Cressler, *IEEE Trans. Nuclear Science* 54, pp. 1931-1937, 2007.

Nanodiamond Lateral VFEM Technology for Harsh Environments, W.P. Kang, J.L. Davidson, K. Subramanian, B. K. Choi, and K.F. Galloway, *IEEE Trans. Nuclear Science* 54, pp. 1061-1065, 2007.

Total Dose Response of Ge MOS Capacitors with HfO_2/Dy_2O_3 Gate Stacks, D.K. Chen, R.D. Schrimpf, D.M. Fleetwood, K.F. Galloway, S.T. Pantelides, A. Dimoulas, G. Mavrou, A. Sotiropoulos, and Y. Panayiotatos, *IEEE Trans. Nuclear Science* 54, pp. 971 – 974, 2007

Single-Event Burnout in Power Diodes: Mechanisms and Models, A.M. Albadri, R.D. Schrimpf, K.F. Galloway, and D.G. Walker, *Microelectronics Reliability* 46, pp. 317-325, 2006.

Carbon Nanotubes Vacuum Field Emission Differential Amplifier Integrated Circuit, W.P. Kang, Y.M. Wong, J.L. Davidson, D.V. Kerns, B.K. Choi, and K.F. Galloway, *Electronics Letters* 42, pp. 210-211, 2006.

The Impact of Mechanical Stress on the Total-Dose Response of Linear Bipolar Transistors with Various Passivation Layers, R.R. Cizmarik, R.D. Schrimpf, D.M. Fleetwood, K.F. Galloway, D.G. Platteter, M.R. Shaneyfelt, R.L. Pease, J. Boch, D.R. Ball, J.D. Rowe, and M.C. Maher, *IEEE Trans. Nuclear Science* 52, pp. 1513-1517, 2005.

Total Dose Effects in a Linear Voltage Regulator, P.C. Adell, R.D. Schrimpf, W.T. Holman, J.L. Todd, S. Caveriviere, R.R. Cizmarik, and K.F. Galloway, *IEEE Trans. Nuclear Science* 51, pp. 3816-3821, 2004.

The Effects of Space Radiation Exposure on VDMOS Power Transistors: A Review, K. Shenai, K.F. Galloway, and R. D. Schrimpf, *Int. J. High Speed Electronics and Systems* 14, pp. 445-463, 2004.

Total Dose and Single Event Effects in DC/DC Converter Control Circuitry, P.C. Adell, R.D. Schrimpf, J. Boch, W. T. Holman, J. Stacey, A. Sternberg, K.F. Galloway, and P. Ribero, *IEEE Trans. Nuclear Science* 50, pp. 1867-1872, 2003.

High-Impact Papers Presented at the IEEE Nuclear and Space Radiation Effects Conference: The View in 2003, K.F. Galloway, *IEEE Trans. Nuclear Science* 50, pp. 457-465, 2003.

Test Structures for Analyzing Proton Radiation Effects in Bipolar Technologies, H. J. Barnaby, R.D. Schrimpf, K.F. Galloway, D.R. Ball, R.L. Pease, and P. Fouillat, *IEEE Trans. Semiconductor Manufacturing* 16, pp. 253-258, 2003.

A Model of Radiation Effects in Nitride-Oxide Films for Power MOSFET Applications, V.A.K. Raparla, S.C. Lee, R.D. Schrimpf, D.M. Fleetwood, and K.F. Galloway, *Solid-State Electronics* 47, pp. 775-783, 2003.

Total-Dose and Single-Event Effects in Switching DC/DC Power Converters, P.C. Adell, R.D. Schrimpf, B.K. Choi, W.T. Holman, J.P. Atwood, C.R. Cirba, and K.F. Galloway, *IEEE Trans. Nuclear Science* 49, pp. 3217-3221, 2002.

Proton-Induced Degradation in AlGaAs/GaAs Heterojunction Bipolar Transistors, X. Hu, B.K. Choi, H.J. Barnaby, D.M. Fleetwood, R.D. Schrimpf, K.F. Galloway, R.A. Weller, K. McDonald, U.K. Mishra, and R.W. Dettmer, *IEEE Trans. Nuclear Science* 49, pp. 3213-3216, 2002.

Long-Term Reliability Degradation of Ultrathin Dielectric Films Due to Heavy-Ion Irradiation, B.K. Choi, D.M. Fleetwood, R.D. Schrimpf, L.W. Massengill, K.F. Galloway, M.R. Shaneyfelt, T.L. Meisenheimer, P.E. Dodd, J.R. Schwank, Y.M. Lee, R.S. Johnson, and G. Lucovsky, *IEEE Trans. Nuclear Science* 49, pp. 3045-3050, 2002.

Model for High-Temperature Radiation Effects in n-p-n Bipolar-Junction Transistors, J. Boch, F. Saigne, V. Mannoni, F. Giustino, R.D. Schrimpf, L. Dusseau, K.F. Galloway, J. Fesquet, J. Gasiot, and R. Eccofet, *IEEE Trans. Nuclear Science* 49, pp. 2990-2997, 2002.

Dose and Dose-Rate Effects in n-p-n Bipolar-Junction Transistors Irradiated at High Temperature, J. Boch, F. Saigne, T. Maurel, F. Giustino, L. Dusseau, R.D. Schrimpf, K.F. Galloway, J.P. David, R. Eccofet, J. Fesquet, and J. Gasiot, *IEEE Trans. Nuclear Science* 49, pp. 1474-1479, 2002.

Reliability Degradation of Ultra-thin Oxynitride and Al_2O_3 Gate Dielectric Films Owing to Heavy-Ion Irradiation, B.K. Choi, D.M. Fleetwood, L.W. Massengill, R.D. Schrimpf, K.F. Galloway, M.R. Shaneyfelt, T.L. Meisenheimer, P.E. Dodd, J.R. Schwank, Y.M. Lee, R.S. Johnson, and G. Lucovsky, *Electronics Lett.* 38, pp. 157-158, 2002.

A Two-Dimensional Engineering Model for Radiation-Induced Interface Trap Formation, H.J. Barnaby, C. Cirba, R.D. Schrimpf, K.F. Galloway, M. Pagey, and R. Milanowski, *J. Radiation Effects Research and Engineering* 19, pp. 127- 133, 2002.

Evaluation of MOS Devices' Total Dose Response Using the Isochronal Annealing Method, F. Saigne, L. Dusseau, J. Fesquet, J. Gasiot, R. Eccofet, R.D. Schrimpf, and K.F. Galloway, *IEEE Trans. Nuclear Science* 48, pp. 2170-2173, 2001.

Heavy-Ion Induced Breakdown in Ultra-Thin Gate Oxides and High-k Dielectrics, L.W. Massengill, B.K. Choi, D.M. Fleetwood, R.D. Schrimpf, K.F. Galloway, M.R. Shaneyfelt, T.L. Meisenheimer, P.E. Dodd, J.R. Schwank, Y.M. Lee, R.S. Johnson, and G. Lucovsky, *IEEE Trans. Nuclear Science* 48, pp. 1904-1912, 2001.

A Hydrogen-Transport-Based Interface-Trap-Generation Model for Hot-Carrier Reliability Prediction, M.P. Pagey, R.D. Schrimpf, K.F. Galloway, C.J. Nicklaw, S. Ikeda, and S. Kamohara, *IEEE Electron Device Lett.* 22, pp. 290-292, 2001.

A Generalized Model for the Lifetime of Microelectronic Components, Applied to Storage Conditions, L.J. Wise, R.D. Schrimpf, H.G. Parks, and K.F. Galloway, *Microelectronics Reliability* 41, pp. 317-322, 2001.

Total Dose Effects in Composite Nitride-Oxide Films, S. C. Lee, A. Raparla, Y. F. Li, G. Gasiot, R.D. Schrimpf, D. M. Fleetwood, K.F. Galloway, M. Featherby, and D. Johnson, *IEEE Trans. Nuclear Science* 47, pp. 2297-2304, 2000.

Defects and Nanocrystals Generated by Si Implantation into a – SiO_2, C.J. Nicklaw, M.P. Pagey, S.T. Pantelides, D. M. Fleetwood, R.D. Schrimpf, K.F. Galloway, J.E. Wittig, B. M. Howard, E. Taw, W.H. McNeil, and J.F. Conley, Jr., *IEEE Trans. Nuclear Science* 47, pp. 2269-2275, 2000.

Experimental Procedure to Predict the Competition Between the Degradation Induced by Irradiation and Thermal Annealing of Oxide Trapped Charge in MOSFETs, F. Saigne, L. Dusseau, J. Fesquet, J. Gasiot, R. Ecoffet, R.D. Schrimpf, and K.F. Galloway, *IEEE Trans. Nuclear Science* 47, pp. 2329-2333, 2000.

Prediction of the One-Year Thermal Annealing of Irradiated Commercial Devices Based on Experimental Isochronal Curves, F. Saigne, L. Dusseau, J. Fesquet, J. Gasiot, R. Ecoffet, R.D. Schrimpf, and K.F. Galloway, *IEEE Trans. Nuclear Science* 47, pp. 2244-2248, 2000.

Transient Simulation of Radiation-Induced Charge Trapping and Interface Trap Formation Using a Three-Carrier Transport Model for Silicon Dioxide, R.J. Milanowski, M.P. Pagey, J.F. Conley, L.W. Massengill, R.D. Schrimpf, and K.F. Galloway, *J. Radiation Effects Research and Engineering* 18 , no. 1, pp. 115-125, 2000.

TCAD-Based Simulation of Hot-Carrier Degradation in p-Channel MOSFETs Using Silicon Energy-Balance and Oxide Carrier-Transport Equations, S.K. Mukundan, M.P. Pagey, C.R. Cirba, R.D. Schrimpf, K.F. Galloway, *IEEE J. Technology Computer-Aided Design* (an online journal), www.ieee.org/products/online/journal/tcad, 2000.

Annealing Behavior of a Proton Irradiated $Al_xGa_{1-x}N$/GaN High Electron Mobility Transistor Grown by MBE, S.J. Cai, Y.S. Tang, R. Li, Y.Y. Wei, L. Wong, Y.L. Chen, K.L. Wang, M. Chen, Y.F. Zhao, R.D. Schrimpf, J.C. Keay, and K.F. Galloway, *IEEE Trans. Electron Devices* 47, pp. 304-307, 2000.

Radiation Hardened Semiconductor Technology Computer Aided Design, R. Milanowski, L. Massengill, R. Schrimpf, R. Graves, H. Barnaby, K. Galloway, M. Pagey, C. Nicklaw, E. Kelley, M. Wood, B. Offord, and J. Johann, *J. Radiation Effects Research and Engineering* 17, pp. 50-57, 1999.

Comparison of Lifetime and Threeshold Current Damage Factors for Multi-Quantum-Well (MQW) GaAs/GaA1As Laser Diodes Irradiated at Different Proton Energies, S.C. Lee, Y.F. Zhao, R.D. Schrimpf, M.S. Neifield, and K.F. Galloway, *IEEE Trans. Nuclear Science* 46, pp. 1797-1803, 1999.

Radiation-Enhanced Short Channel Effects Due to Multi-Dimensional Influence from Charges at Trench Isolation Oxides, G.U. Youk, P.S. Khare, R.D. Schrimpf, L.W. Massengill, and K.F. Galloway, *IEEE Trans. Nuclear Science* 46, pp. 1830-1835, 1999.

Ab Initio Calculations of H^+ Energetics in SiO_2: Implications for Transport, P.E. Bunson, M. Di Ventra, S.T. Pantelides, R.D. Schrimpf, and K.F. Galloway, *IEEE Trans. Nuclear Science* 46, pp. 1568-1573, 1999.

Dose-Rate and Irradiation Temperature Dependence of BJT SPICE Model Rad-Parameters, X. Montagner, R. Briand, P. Fouillat, R.D. Schrimpf, A. Touboul, K.F. Galloway, M.C. Calvet, and P. Calvel, *IEEE Trans. Nuclear Science* 45, pp. 1431-1437, 1998.

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