

**Dr. Billy C. Covington**  
**Associate Vice President for Research**  
**Professor of Physics**  
**Southwest Texas State University, San Marcos, TX 78666**  
**(512) 245-2314**

**Professional Preparation:**

<b>University</b>	<b>Major</b>	<b>Degree</b>	<b>Year</b>
Sam Houston State	Physics	B.S.	1972
Texas Tech	Physics	M.S.	1975
Texas Tech	Physics	Ph.D.	1978
Air Force Materials Lab	Materials Physics	NRC Postdoc	1978-1979

**Appointments:**

Southwest Texas State	Associate VP for Research/Prof. of Physics	10/01/99 – present
International SEMATECH	Manager, Doping Development Program	07/01/98 - 9/30/99
Sam Houston State	Assoc. VP for Research/Prof. of Physics	09/01/90 – 06/30/98
Sam Houston State	Chair/Professor of Physics	09/01/89 – 08/31/90
Sam Houston State	Associate Professor	09/01/85 – 08/31/89
Sam Houston State	Assistant Professor	09/01/79 – 08/31/84
AFOSR Summer Res.	Fellow/Visiting Scientist	Sum. (1985,1983, 1980)

**Publications:**

- (i) Five Most Relevant Publications
- “Athermal Annealing of Phosphorous Ion Implanted Silicon”, J. Grun, R. P. Fischer, M. Peckerar, C. L. Felix, B. C. Covington, W. J. DeSisto, D. W. Donnelly, A. Ting, C. K. Manka, Appl. Phys. Lett., 77(13), 1997(2000).
  - “Athermal Annealing of Neutron-Transmutation Doped and Ion implanted Silicon”, J. Grun, R. P. Fischer, M. Peckerar, C. Felix, B. C. Covington, W. J. DeSisto, D. W. Donnelly, C. Hoffman, J. Meyer, A. Ting, and C. K. Manka, Invited paper, 197th Meeting of the Electrochemical Society.
  - “Front End of Line Considerations for Progression Beyond the 100 nm Node Ultra-Shallow Junction Requirements”, C. Rinn Cleavelin, Billy C. Covington, and Lawrence A. Larson, J.Vac. Sci. Technol., B 18(1), Jan/Feb 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, Proceedings of 1998 MRS Spring Meeting, April, 1998.
  - “Far-Infrared Spectroscopic, Magnetotransport, 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, and S. B. Qadri, Appl. Phys. Lett., 71(5), 680(1997).
- (ii) Five Other Significant Publications
- “Athermal Annealing of Silicon,” J. Grun, C. K. Manka, C.A. Hoffman, J. R. Meyer, O. J. Glembocki, R. Kaplan, S. B. Qadri, E. F. Skelton, D. Donnelly, and B. Covington, Phys. Rev. Lett., 78(8), 1584(1997).
  - “Trapping Mechanism to Account for Persistent Photoeffects in Heavily Doped GaAs/AlGaAs Multiple Quantum Wells,” Andrew Gannon, David Donnelly, and Billy Covington, J. Appl. Phys. 79(9), 7169(1996).
  - “Anomalous Temperature Behavior of Raman Spectra from Visible Light Emitting Porous Si,” Z. C. Feng, J. R. Payne, and B. C. Covington, Solid State Comm. 87(2), 131(1993).
  - “Growth and Optical Properties of InAs/(In,Ga)Sb Strained Layer Superlattices Grown on the {111} Orientations, J. A. Dura, T. D. Golding, J. T. Zborowski, D. Donnelly, and B. C. Covington. Journ. of Electronic Materials, 22(8),1087(1993).

- “Properties of InGASb/InAs Strained Layer Superlattices and InAsSb Epilayers Grown on the [111] Orientations,” J. A. Dura, J. T. Zborowski, T. D. Golding, D. Donnelly, and B. C. Covington. Proceedings, 1992 MCT Workshop.

**Synergistic Activities:**

(i) Professional activities

- Science Advisory Council, EPA Waste Minimization and Management Research Center, Southwest Texas State University, 1998-1999.
- Board of Directors, Rural 2000 Education Consortium, 1996-98.
- External Advisory Board Director, Institute for Environmental and Industrial Science, Southwest Texas State University, 1996-1999.
- Board of Directors, Secretary, Consortium for the Future (eight nationwide universities) 1996-1998.
- Texas Higher Education Coordinating Board Formula Advisory Committee, 1994-1997.

(ii) Awards and Honors:

- Certificate of Special Congressional Recognition for Outstanding and Invaluable Service to the Community, presented by U. S. Congressman Charles Wilson, July, 1996.
- Distinguished Alumnus of the Department of Physics, Texas Tech University, 1994.
- Excellence in Research Award, Sam Houston State University, 1987.
- Recognition for Outstanding Scholarship and Teaching, College of Arts and Sciences Sixth Annual Honors Convocation, Sam Houston State University, 1987.

**Collaborators & Other Affiliations:**

- (i) Collaborators (other than IMR investigators)  
 Jacob Grun (Naval Research Lab.), Larry Larson (International SEMATECH), Ed Strickland (International SEMATECH/Motorola), David Sing (International SEMATECH/Motorola), Sanjay Banerjee, (University of Texas), C.K. Manka (Research Support Instruments, Inc.).
- (ii) Graduate Advisor:  
 Dr. Henry Thomas (retired)  
 Texas Tech University  
 Department of Physics  
 Lubbock, Texas 79409
- Postdoctoral Advisor:  
 Dr. Robert J. Spry  
 Air Force Materials Laboratory  
 Wright Patterson AFB, Ohio 45431