

Curriculum Vitae

Randall L. Headrick
Associate Professor
Department of Physics
The University of Vermont
Burlington, VT 05405
Office: 802-656-0048
E-mail: rheadrick@uvm.edu

-2002.

ories, Murray Hill, NJ., 1991-1993
owship, 1985, 1986
duate Fellowship, 1982

Synergistic Activities

1. Mentored three undergraduate students during the last five years.
2. Supervised seven Ph.D. students and sponsored three postdoctoral students during the last five years.
3. Currently supervising five Ph.D. students, one Postdoc., and one undergraduate student.
4. Member of the American Physical Society and the Materials Research Society.
5. NSLS Soft Condensed Matter Proposal Review Panel, since 2007.
6. Reviewer of manuscripts for Reviews of Scientific Instruments, Journal of Applied Physics, Applied Surface Science, and Physical Review B.
7. Research has been continuously funded by external sources (DOE, NSF) since 2002.

Refereed Publications

1. "Non-Registered Silicon Produced at Metal-Silicon Interfaces by 14 MeV Oxygen Ions", R.L. Headrick and L.E. Seiberling, Appl. Phys. Lett. **45**, 288 (1984).
2. "MeV Ion Induced Modification of the Native Oxide of Silicon", R.L. Headrick and L.E. Seiberling, Mat. Res. Soc. Symp. Proc. **51**, 363 (1986).
3. "A UHV-Compatible DE-E Gas Telescope for Depth Profiling and Surface Analysis of Light Elements", A.M. Behrooz, R.L. Headrick, L.E. Seiberling, and R.W. Zurmuhle, Nucl. Instrum. Meth. B **28**, 108 (1987).
4. "Medium-energy ion scattering study of the Si(111):As-1x1 surface", R.L. Headrick and W.R. Graham, J. Vac. Sci. Technol. A, **6** (3), 637 (1988).
5. "Geometric Structure of the Si(111):As-1x1 Surface", R.L. Headrick and W.R. Graham, Phys. Rev. B **37**, 1051 (1988).
6. "Medium-

20. "Boron-Silicon Alloy Delta Layer" , B.E Weir, R.L. Headrick, Q. Shen, L.C. Feldman, M. Needels, M.S. Hybertsen, M. Schlüter, and T.R. Hart, Phys. Rev. B **46**, 12861 (1992).
21. "X

44. "Orientation of pentacene films using surface alignment layers and its influence on thin film transistor characteristics", M.L. Swiggers, G. Xia, J.D. Slinker, A.A. Gorodetsky, G.G. Malliaras, R.L. Headrick, C. Dulcey and R.N. Shashidhar, *Applied Physics Letters*, **79**, 1300 (2001).
45. "Ion-induced pattern formation on Co surfaces: an x-ray scattering and Kinetic Monte Carlo study", O. Malis, J.D. Brock, R. L. Headrick, Min-Su Yi, and J.M. Pomeroy, *Phys Rev. B* **66**, art. no. 035408 (2002).
46. "Spontaneous Nanoscale corrugation of SiO₂: The role of ion-irradiation enhanced viscous flow", C.C. Umbach, R.L. Headrick, and K.-C. Chang, *Phys. Rev. Lett.* **87**, 246104 (2002).
47. "Multilayer optics for a wiggler beamline", R.L. Headrick, K.W. Smolenski, A. Kazimirov, C. Liu, and A.T. Macrander, *Rev. Sci. Instrum.* **73**, 1476 (2002).
48. "Si(100) surface morphology evolution during normal-incidence sputtering with 100-500 eV Ar⁺ ions",

4. "Interface phenomena in very thin Si-Ge heterostructures", J.-M. Baribeau, D.J. Lockwood, Z.-H. Lu, and