

Publications

Highlights

Keller RR, Barbosa N, Geiss R, Read DT, An electrical method for measuring fatigue and tensile properties of thin films on substrates, *Key Engineering Materials* 345-346: 1115 (2007)

Rice P, Wallis TM, Russek SE, Kabos P, Broadband electrical characterization of multiwalled carbon nanotubes and contacts, *Nano Letters* 7: 1086 (2007)

Read DT and Tewary VK, Multiscale model of near-spherical germanium quantum dots in silicon, *Nanotechnology* 18: 105402 (2007)

Keller RR, Hurley DC, Read DT, Rice P, Metrologies for Mechanical Response of Micro- and Nanoscale Systems in Micro and Nano Mechanical Testing of Materials and Devices, Springer-Verlag, in press

Publication List

Journal Articles

Heyliger PR, Flannery C, Johnson WL, Vibrational modes of nanolines, *Nanotechnology*, submitted

Barbosa N, Slifka AJ, Spatially- and temporally-resolved thermal imaging of cyclically heated interconnects by use of scanning thermal microscopy (SThM), *Micros. Res. Tech.*, in press (2008)

Geiss R, Read DT, Defect behavior in aluminum interconnect lines deformed thermo-mechanically by cyclic joule heating, *Acta Materialia* 56: 274 (2008)

Read DT and Tewary VK, Multiscale model of near-spherical germanium quantum dots in silicon, *Nanotechnology* 18: 105402 (2007)

Barbosa N, Keller RR, Read DT, Vinci RP, Comparison of electrical and microtensile evaluations of mechanical properties of an aluminum film, *Metall. Mater. Trans.* 38A: 2160 (2007)

Keller RR, Geiss R, Barbosa N, Slifka AJ, Read DT, Strain-induced grain growth during rapid thermal cycling of aluminum interconnects, *Metall. Mater. Trans.* 38A: 2263 (2007)

Read DT, Keller RR, Barbosa N, Geiss R, Results of a nanoindentation round robin on thin film copper on silicon, *Metall. Mater. Trans.* 38A: 2242 (2007)

Keller RR, Barbosa N, Geiss R, Read DT, An electrical method for measuring fatigue and tensile properties

of thin films on substrates, *Key Engineering Materials* 345-346: 1115 (2007)

Rice P, Wallis TM, Russek SE, Kabos P, Broadband electrical characterization of multiwalled carbon nanotubes and contacts, *Nano Letters* 7: 1086 (2007)

Read DT and Tewary VK, Multiscale model of near-spherical germanium quantum dots in silicon, *Nanotechnology* 18: 105402 (2007)

Hurley, DC, Kopycinska-Müller M, Kos, TB, Mapping mechanical properties on the nanoscale with Atomic Force Acoustic Microscopy, *JOM* 59: 23 (2007)

Hurley DC, Kopycinska-Müller M, Geiss R, Langlois E, Kos AB, Acoustics says 'Nano-Nano' to materials characterization, www.acoustics.org/press (2006)

Hurley DC, Kopycinska-Müller M, Langlois E, Kos TB, Barbosa N, Mapping substrate/film adhesion with contact-resonance-frequency AFM, *Appl. Phys. Lett.* 89: 021911 (2006)

Conference Proceedings

Utegulov ZN, Shaw JM, Draine BT, Kim SA, Johnson WL, Surface-plasmon enhancement of Brillouin light scattering from gold-nanodisk arrays on glass, in *Plasmonics: Metallic Nanostructures and Their Optical Properties V*, MI Stockman ed., *Proc. SPIE* 6641: 66411M (2007)

Read DT, Geiss R, Alers G, High amplitude AC tests of 300 nm damascene interconnect structures, Proc. MRS Spring 990: 0990-B09-09 (2007)

Geiss R, Read DT, Need for standardization of EBSD measurements for microstructural characterization of thin film structures, Proc. 2007 International Conference on Frontiers of Characterization and Metrology for Nanoelectronics (2007)

Johnson WL, Flannery C, Kim SA, Geiss R, Soles CL, Heyliger PR, Elastodynamic characterization of imprinted nanolines, Proc. MRS Spring 924E: 0924-Z08-31 (2006)

Book Chapters

Hurley DC, Contact Resonance Force Microscopy Techniques for Nanomechanical Measurements in Applied Scanning Probe Methods Vol. 11, Springer-Verlag, in press (2008)

Keller RR, Hurley DC, Read DT, Rice P, Metrologies for Mechanical Response of Micro- and Nanoscale Systems in Micro and Nano Mechanical Testing of Materials and Devices, Springer-Verlag, in press (2008)