

Midland College Faculty Vitae

Name:

Terrance Michael Gibbons-Brown

Names of all higher education institutions attended, with degrees earned:

Texas Tech University, PhD

University of North Texas, Bachelor of Science

University of Oklahoma

All previous teaching positions, including the names of the institutions, the position, and beginning and ending dates of employment:

2012-2015 Instructor, Texas Tech University

2006-2011 Teaching Assistant, Texas Tech University

Significant professional publications related to the teaching profession, with a full citation for each:

1. S.K. Estreicher, D. Backlund, T.M. Gibbons and A. Docaj, Vibrational Properties of impurities in semiconductors Modeling and Simulation in Materials Science and Engineering 17, 084006/1-14 (2009)
2. S.K. Estreicher, D. Backlund and T.M. Gibbons, Non-equilibrium dynamics for impurities in semiconductors Physica B 404, 4337-4340 (2009)
3. S.K. Estreicher and T.M. Gibbons, Non-equilibrium molecular-dynamics for impurities in semiconductors: Vibrational lifetimes and thermal conductivities Physica B 404, 4509-4514 (2009)
4. T.M. Gibbons and S.K. Estreicher, Impact of impurities on the thermal conductivity of semiconductor nanostructures: First-Principles Theory Physical Review Letters 102, 255502/1-4 (2009) and 103, 099904/1-2 (2009) (erratum)
5. S.K. Estreicher, D. Backlund, T. M. Gibbons, Theory of defects in Si and Ge: Past, present and recent developments Thin Solid Films 518, 2413-2417 (2010)

6. T.M. Gibbons, By. Kang, S.K. Estreicher and C. Carbogno, Thermal conductivity of Si nanostructures containing defects: Methodology, isotope effects, and phonon trapping Physical Review B 84, 035317/1-10 (2011)
7. T.M. Gibbons, S.K. Estreicher, K. Potter, F. Bekisli, M. Stavola, Huge isotope effect on the vibrational lifetimes of an H₂*(C) defect in Si Physical Review B 87, 115207/1-5 (2013)
8. S.K. Estreicher, T.M. Gibbons, and M. Stavola, Isotope-dependent phonon trapping at defects in semiconductors Solid State Phenomena 205-206, 209-212 (2014)
9. S.K. Estreicher, T.M. Gibbons, By. Kang, and M.B. Bebek, Phonons and defects in semiconductors and nanostructures: phonon trapping, phonon scattering, and heat flow at heterojunctions Journal of Applied Physics 115, 012012/1-8 (2014)
10. S.K. Estreicher, T.M. Gibbons, and M.B. Bebek, Heat flow and defects in semiconductors: the physical reason why defects reduce heat flow, and how to control it Journal of Applied Physics (in print)