Raghavan S Narayanan

217, Sylvia Street, Apt #B,
West Lafayette, IN 47906
765-418-1795 (Cell), 765-494-0241 (Office)
Email: narayanr@purdue.edu

Education

PhD program, Materials Engineering, **GPA: 3.40 / 4. 0**
Purdue University**,** West Lafayette, IN **GPA (Major) : 3.54 / 4. 0**
Major: Interface Science and Diffusion
Aug 2000-present

B.Tech. Metallurgical Engineering, **GPA: 3.20 / 4. 0**
Indian Institute of Technology-Madras**,** Chennai, India
July 1996- July 2000

Experience

Research Assistant, *Purdue University***,** Aug 2000-Present
Advisors: Prof. Alexander H King,
Prof. Mysore A Dayananda

Topic: Studies on diffusion through triple junctions
Conducted experiments to show that diffusion of nickel through copper triple junctions (line where three copper crystals meet) is significantly faster than bulk or grain boundary diffusion. This experiment was conducted using copper tri-crystals grown using vertical Bridgman technique.
Also, measured the triple junction line energy in gold thin films using atomic force microscopy.

Teaching Assistant, *Purdue University*, Fall 2000
Conducted lab sessions for a sophomore level class on the Structure and Properties of Materials
Teaching Assistant, *Purdue University*, Spring 2005
Conducting recitations for a sophomore level course on Structure and Properties of Materials

Publications

Jon Hilden, Raghavan Narayanan, Dara V.Gough, Alexander King, "Experimental measurement of the grain boundary triple junction energy in gold," Submitted for publication, Acta Materialia

Ray Kremer, Raghavan Narayanan, Shashank Shekhar, Alexander King, "On the design of controlled tri-crystal specimens for the systematic investigation of static grain boundary triple junction properties," Submitted for publication, Interface Science

Conferences

Jon Hilden, Raghavan Narayanan, Alexander King, "Modeling the effects of triple line tension on surface grain structures," Materials Research Society meet, San Francisco, Spring 2002

Technical Skills

Scanning Electron Microscopy (SEM)
Transmission Electron Microscopy (TEM)
Atomic Force Microscopy (AFM)
Energy Dispersive Spectroscopy (EDS)
Wavelength Dispersive Spectroscopy (WDS)
X-Ray Diffraction (XRD)
Working knowledge on Vacuum systems and Thin film deposition

Graduate Courses include

Thin film Deposition Processing
Solid State Devices
Solid State Physics
Defects in Solids
Phase Transformations in Solids
Transport Phenomena in Solids
Quantum Mechanics

Poster Presentations

Raghavan Narayanan, Alexander King, "Measuring thickness of thin films using EDS technique," Materials Consortium, Purdue University, March 2002

Raghavan Narayanan, Alexander King, "Modeling junction effects on interface migration," Materials Consortium, Purdue University, February 2001

Computer Skills

Programming Environments:	UNIX, DOS/Windows
Programming Languages:	C (Beginners' level)
Other programs:	MATHCAD, CANVAS

Extracurricular Activities and Hobbies

Karate (green belt currently)
Writing articles
Reading scientific non-fiction (fiction occasionally)

References

Provided on request