

SAIBAL MITRA

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EDUCATION

- 1979-1983** **University of Calcutta**, India
Degree: Bachelor of Science
Major: Physics
Minor: Mathematics, Chemistry
- 1984- 1986** **Clemson University**, Clemson, SC
Degree: Master of Science
Major: Physics
- 1986-1991** **Iowa State University**, Ames, IA
Degree: Doctor of Philosophy
Major: Solid State Physics, Minor: Electrical Engineering
- 1991-1993** **Massachusetts Institute of Technology**, Cambridge, MA
Post Doctoral Research Associate, Department of Chemical
Engineering.
- 1993-1994** **University of Delaware**, Newark, DE
Post Doctoral Research Associate, Institute for Energy
Conversion.

APPOINTMENTS

- 1994 (Fall semester)** **Visiting Assistant Professor** Drury College, Springfield, MO.
- 1994 -1996** **Lecturer, Department of Physics** University of Missouri, Rolla
- 1996 - 2002** **Assistant Professor of Physics and Engineering Physics**
University of Tulsa, Tulsa OK
- 2002 - present** **Associate Professor of Physics and Engineering Physics**
University of Tulsa, Tulsa OK

RESEARCH BACKGROUND AND INTERESTS

- CVD growth of materials (semiconductors, nanomaterials etc.)
- Growth of Novel Ultra-hard materials
- Characterization of materials (SEM, STM/AFM, XRD, IR, NMR)

SYNERGISTIC ACTIVITIES

- Taught a variety of courses (Solid State Physics, Material Science, Electronic Instrumentation Lab, Physics (E&M), Electronic Devices etc.

- Workshop for high school physics teachers to improve their teaching skills (2000-2002).
- Active in student recruitment for the department.

EXTERNAL FUNDING

- "Development and Characterization of Nano-Battery Systems, (with Dale Teeters) OK NSF EPSCoR, \$169,016, (2002-2004).
- Development of Technology Addressing Power Generation and Storage Challenges Faced by NASA (with 9 colleagues), NASA \$1.4 million (2001-2004)
- A Novel Avenue for the Growth of Thin Film Photovoltaic Materials for Space Applications, Research Initiation Grant, OK EPSCoR (Phase I and II) 2000, \$30,000
- Teacher Induction Workshops for Physics Demonstrations and Lab Exercises (with Jerry McCoy), OK State Regents, \$108,492 (2000-2003).

SIGNIFICANT PUBLICATIONS

1. Z. Zhang, C. Dewan, D. Teeters, and S. Mitra, "Carbon Nanotube Synthesis, Characteristics, and Battery Applications", submitted to Mat. Sci. & Engg. B.
2. A. Alagappan and S. Mitra, "Optimizing The Design of CIGS-based Solar Cells: A Computational Approach", submitted to Mat. Sci. & Engg. B.
3. S. Mitra, R. Deshpande, T. Hanrath, and J. Hartman, "Hot-wire Growth of Multi-phase Carbon Nitride Films", Thin Sol. Films, **430**, 300 (2003).
4. S. Mitra, Justin Hartman, and Tobias Hanrath "Demonstration of Growth of Ultra-Hard Nitrides by Chemical Vapor Deposition", Proc. 6th Applied Diamond Conference and 2nd Conference on Future Carbon Technology (ADC/FCT 2001) editors Y. Tzeng, K. Miyoshi, M. Yoshikawa, M. Murakawa, Y. Koga, K. Kobashi, G. A. J. Amaratunga, p 604 (2001).
5. R. Shinar, J. Shinar, S. Mitra, F. Li, H. Kavak, V. L. Dalal, and D. L. Williamson, "Hydrogen Diffusion in Hydrogenated Amorphous Silicon Carbides", Phys. Rev. B. **60** 15875 (1999).
6. S. Mitra, K. K. Gleason, J. Jia, and J. Shinar, "Effects of Annealing on Hydrogen Microstructure in Boron Doped and Undoped rf Sputter Deposited Amorphous Silicon" Phys. Rev. B. **48**, 2175 (1993).
7. S. Mitra and K. K. Gleason, "¹H NMR Studies on the Effects of Annealing on Chemical Vapor Deposited (CVD) Diamond", Diamond and Related Materials **2**, 126 (1993).
8. S. Mitra, C. J. Pope, K. K. Gleason, Y. Makarovskiy, A. L. Lafleur and J. B. Howard, "Synthesis of Fullerenes (C₆₀ and C₇₀) by Combustion of Hydrocarbons in a Flat Flame Burner", Mat. Res. Soc. Symp. **270**, 149 (1992).