

Manish Chhowalla

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EDUCATION:

- **Ph.D. in Engineering**, Officially Awarded in May 2000 but defended in May of '98.
University of Cambridge: Electronics Power and Energy Conversion Group, Electrical Engineering Department, Cambridge UK.

Thesis title: *Carbon thin films with enhanced properties from cathodic arc plasmas.*
(Supervisor: Prof: Gehan A. J. Amaratunga, 1966 Chair in Power Electronics).

- **B. S.** Materials Science and Engineering, May 1992.
Rutgers University, College of Engineering
New Brunswick, NJ, USA.

APPOINTMENTS:

4/2007 - Pres	Associate Professor with Tenure, Materials Science & Engineering, Rutgers, The State University of New Jersey, Piscataway, NJ.
2003 - 2007	Assistant Professor, Materials Science & Engineering, Rutgers, The State University of New Jersey, Piscataway, NJ.
2001- 2003	Royal Academy of Engineering Postdoctoral Research Fellow, Engineering Department, University of Cambridge, Cambridge UK.
1999-2001	Research Associate, Engineering Department, University of Cambridge, Cambridge UK.
1/1998 – 12/1998	Senior Research Scientist, DecoBond (A new Division of Ion Bond)
1995-1998	PhD Student, Engineering Department, University of Cambridge, Cambridge UK.
1992-1994	Scientist, Multi-Arc Inc. (Now Ion Bond Inc.), Rockaway, NJ.

AWARDS AND ACHIEVEMENTS:

- The Rutgers University Board of Trustees Fellowship for Scholarly Excellence (20007).
- U.S. National Science Foundation's CAREER Award for Young Investigators (April 2006)
- Sigma Xi Outstanding Young Investigator for the Mid-Atlantic Region
- Royal Academy of Engineering Research Fellowship (2001 – 2003).
- Wolfson College (University of Cambridge) Junior and Senior Research Fellow
- Cambridge University Newton Trust Scholarship
- >40 Invited Talks at Major International Conferences

- Over 90 publications (3 in Nature, 1 in Nature Materials) with over 2400 citations (H index is approximately 25).

GRANTS AWARDED AT RUTGERS UNIVERSITY:

- PI on “Investigation of boron carbide structure and properties with Si and Al doping” from the Army Research Office, August 15, 2007 – August 14, 2010 (\$431,842).
- Co-PI on “Engineered Nano-Composite Oxides for Missile Domes” from ONR-DARPA, Rutgers Share: \$849,351. PI: Bernie Kear, Co-PI: Adrian Mann, Aug. 1, 2007 – July 31, 2009.
- Principle Investigator (PI) on “Investigation of structure and properties of Si doped boron carbide” from Ceramic Division (CER) in the Division of Materials Research (DMR) at NSF (DMR 0604314), July 1, 2006 – June 30, 2009 (\$420,000).
- PI on Early Faculty Development NSF CAREER Award “Organic memory devices based on insulating polymers and C60 fullerene molecules” from EPDT Program at NSF (ECS 0543867), April 1, 2006 – March 30, 2011 (\$450,000).
- Co-PI on “Dynamic behavior and optimization of advanced armor ceramics” US Army Weapons and Materials Directorate in response to ARL Materials Research Program Announcement for The Materials Centers for Excellence, 4/1/06 – 3/30/15, (\$6,750,000).
- PI on “Single wall carbon nanotube architectures for molecular-scale spin injection devices” (ECS 0400501) from EPDT Program at NSF, 4/1/04 – 3/30/07 (\$179,000).
- PI on “Transparent and semi-conducting thin films of SWNTs for organic photovoltaics and flexible electronics” from the Rutgers Academic Excellence Fund 4/1/05 – 3/30/06 (\$50,000).
- PI on Bi-national Fund Proposal Number 2002303 “Large Scale Synthesis of Carbon Nanostructures” 9/1/03 – 8/30/07 (\$116,000).
- PI on NASA – N J Space Grant Consortium – A NASA Sponsored Program (Federal Grant) “Carbon Nanotube Gas Sensors” \$25,000 with \$25,000 in kind support from Honeywell, 9/1/03 – 8/30/04.
- Co-PI on DURIP “Combined Micro-Raman and Near-field Scanning Optical Microscope for Characterization of Nanostructured Materials” Award No. N000140410809, (\$279,317), Office of Naval Research.
- Investigator on "Integrated Imaging System for Transmission Electron Microscope" NSF-DMR-IMR 0414520 (\$199,000) 8/1/2004 - 7/31/2005.

PROFESSIONAL SERVICE ACCOMPLISHMENTS:

- Co-organizer of the first 2007 NANO Forum on Carbon Nanotubes-Based Transparent Conducting Films and Thin Film Transistors to be held in Suwon, Korea, November 1-2, 2007.
- International Session Organizer and Chair for Nano-Singapore 2006
- Organizing and international committee for The First International Conference on One Dimensional Nano-Materials (ICON), Taipei, Taiwan Jan. 10 – 15 (2005).
- Session chair for the last six years at the International Conference on Metallurgical Coatings and Thin Films.
- Member of the Materials Research Society, American Physical Society, American Ceramic Society and American Association for the Advancement of Science.
- Treasurer for Sigma Xi Rutgers Chapter

- Proposal Reviewer Panelist for NSF, EPA and DOE.
- Referee for journals such as Nature, Nature Materials, Nature Nanotechnology, Advanced Materials, Applied Physics Letters, Nano Letters, IEEE Transactions on Nano-electronics, Nanotechnology amongst others.

EDUCATIONAL SERVICE ACCOMPLISHMENTS:

- Developed two new courses (Introduction to Nano- Electronics, - Photonics, and – Magnetics and accompanying Laboratory Module). Modernized introductory laboratory course to include polymers and metals along with ceramics. Introduced modules in the nano course include nanotechnology and organic electronics.
- PhD student won the MRS Graduate Student Award at MRS FALL 2005 Meeting
- Faculty Mentor for MRS and ASM Student Chapters
- Mentor to seven Ph.D. students and two postdoctoral researchers. One postdoctoral researcher was appointed as a Lecturer at the DeMontford University in the U.K and one Ph.D. student is a Nokia Fellow at the University of Cambridge.
- Mentor to over 10 undergraduate students and several high school students.
- Materials Science and Engineering Department Class of 2006 Faculty Advisor
- Regular coordinator and participant in outreach activities such as open house, ‘Nanodays’, Pizza with Professors (at the all women’s Douglass College), Nanotechnology Demonstrations at Local High Schools.