

Varun Gupta

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Objective

To obtain a challenging position as a materials engineer that will allow me to utilize my technical background as well as my communication skills and analytical abilities.

Education

DREXEL UNIVERSITY, Philadelphia, Pennsylvania, USA
Master of Science in Materials Science and Engineering, May 2006

INSTITUTE OF TECHNOLOGY-BANARAS HINDU UNIVERSITY (IT-BHU), Varanasi, India
Bachelor of Technology, Ceramic Engineering, July 1999-July 2003

Skills

Materials Characterization: Environmental Scanning Electron Microscopy (ESEM, XL-30), Energy Dispersive Spectroscopy (EDS, EDAX), Optical Microscopy, Atomic Force Microscopy, X-ray Diffractometer (XRD), X-ray Microtomography, Raman Spectroscopy, Fourier Transform Infra-Red Spectroscopy (FTIR), Micro-hardness Testing, Thermo Gravimetric Analysis (TGA), Differential Scanning Calorimetry (DSC), Profilometry, HORIBA Laser Particle Size Analyzer, Ball Milling and High Temperature Furnaces.

Thermal Spray Expertise: High Velocity Oxy-Fuel Process (HVOF), Flame Spray and Plasma Spray.

Relevant Coursework

Nanostructure Carbon Materials; Nanostructure Polymeric Materials; Polymers; Metals; Ceramics; Thermodynamics; Kinetics of Materials; Mechanical Behavior of Materials; Finite Elements Methods; Molecular Simulations; Chemistry; Advanced Mathematics; Calculus; Differential Equations..

Professional Experience

Rangoli-Ceramics Ltd., India May-July'03

Summer Intern, Project In-charge

- Developed water resistant ceramic tiles with a team of engineers.
- Initiated a project to reduce the porosity content in ceramic tiles and used statistical methods to counter peeling and glazing problems.
- Presented project updates to the engineering department.
- Increased the percentage water resistance by 35% through innovative designing and modeling.

Research Experience

Department of Materials Science and Engineering, **Drexel University** Sep'03-May'06

Research Assistant, Center for the Plasma Processing of Materials (CPPM), Drexel Plasma Institute (DPI)

- Conducted research on behavior and improvement of polymer-ceramic coatings for corrosion and wear resistant applications.
- Developed better and improved coatings by a thermal spray process.

Department of Metallurgical Engineering & Materials Science, **Indian Institute of Technology, Bombay (IIT-Bombay)**, India July-Aug'02

Research Assistant, Magnetic Materials Laboratory

- Synthesized and Characterized Magnetic data storage materials.
- Characterized the materials by X-Ray Diffractometer (XRD) and Electron Microscopy.

Advanced Center of Materials Science, **Indian Institute of Technology, Kanpur (IIT-Kanpur)**, India May-June'02

Research Assistant, Materials Science Programme

- Synthesized Zinc Ferrites and Manganese Zinc Ferrite by Sol-Gel and Co-Precipitation processes.
- Characterized the materials by XRD, Porosity Analyzer and Transmission Electron Microscopy.

Department of Metallurgical Engineering & Materials Science, **Indian Institute of Technology, Bombay (IIT-Bombay)**, India May-July'01

Research Assistant, Ceramic Engineering Laboratory

- Synthesized photonic materials by Sol-Gel process.
- Utilized high temperature furnaces and hot isostatic pressing.

Honors and Awards

- **Best Paper Award**, International Thermal Spray Conference (ITSC 2006), Seattle, June 2006.
- **Best Poster Award**, ASM International, The Liberty Bell Chapter, Graduate Student Poster Contest, Philadelphia, April 2006.
- **Best Poster Award**, American Society of Composites, Philadelphia, September, 2005.
- **Best Poster Award**, Research Day at Drexel University in the category "Business Research Initiatives", 2004.
- **Ranked among top 8 finalists** for Business Plan at "International Nanotechnology Business Idea Competition", Weatherhead School of Management at Case Western Reserve University, October 2004.
- Business plan (3dTek) selected in **top 33 out of 400** of i2I 2003 Indian Institute of Management, Calcutta, India, 2003.
- Awarded a certificate of merit by the Govt. of India for being in **top 0.1%** among all the students in the country, 1996-1997.
- Ranked among **top 1% out of 200,000** students in IIT- Joint Entrance Examination, 1999
- Awarded "Science Talent Search Certificate" by the State Government, 1997.

Unsolicited Coverage

- Figured in *Drexelink*, February 4, 2005 Vol. 11 Number 2, Nanotechnology Start-Ups Honored at InTICE Competition.
- Figured in *Innovation Philadelphia*, December 8, 2004 Vol. 1 Issue 42, Nanotechnology Big at Drexel (also see related article Nanotechnology Business is Big at Drexel by Holly Burnside)

Publications and Presentations • Poster presentation, AICHE 2006 Annual Meeting, San Francisco, 2006.

- Oral presentation, International Thermal Spray Conference (ITSC-2006), Seattle, 2006. **Best Paper Award**
- Poster Presentation, The Liberty Bell Chapter of ASM International, Annual Poster Contest for Graduate Students, 2006. **Best Poster Award**
- Poster Presentation, Drexel University Research Day, Philadelphia, 2006.
- Oral and Poster presentation, American Society of Composites 20th Annual Technical Conference, Philadelphia, PA, 2005. **Best Poster Award**
- Oral presentation, International Thermal Spray Conference and Exposition (ITSC-2005), Basel, Switzerland, 2005.
- Poster Presentation, Drexel University Research Day, Philadelphia, 2005.
- Poster Presentation, The Liberty Bell Chapter of ASM International, 4th annual poster contest for graduate students, April 21, 2005.
- Poster Presentation, Drexel University Research Day, Philadelphia, 2004. **Best Poster Award**
- Poster Presentation, National Science Foundation (NSF) Conference, 2004.

Affiliations

- Mentor, Drexel Research Experience in Advance Materials (DREAM)
- Secretary, Materials Research Society (MRS Drexel University Chapter)
- Member, Materials Graduate Students Network (MAGNET)
- Member of the ASM International, 2004 to Present
- Member of the Materials Research Society, 2003 to Present
- Member of the American Ceramic Society, 2003 to Present
- Member of the American Society of Materials, 2003 to Present

Additional

- Institute Chess Champion (IT-BHU).
- Awarded certificate of appreciation for contribution to Cultural and Sports, IT-BHU.

Computer Skills • Web administrator for (www.materials.drexel.edu/cppm), Plasma group, Drexel University

- Languages: C, C++, HTML and Fortran
- Database handling, Statistical data analysis
- High proficiency in Microsoft Office, scientific graphic, and desktop publishing software

References Available upon request.