

SHALINI GUPTA

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EDUCATION

B.S., Chemical Engineering (GPA 8.4/10), *Institute of Technology, BHU- Varanasi, India* (1998-2002)

Ph.D., Chemical Engineering, *North Carolina State University, Raleigh NC* (2002-Present)

GRADUATE COURSES

Transport Phenomenon-I, Thermodynamics-I, Chemical Engineering Process Modeling, Chemical Reaction Engineering, Transport Phenomenon-II, Colloid Science and Nanoscale Engineering, Nanofabrication of semiconductors

EXPERIENCE

Graduate Research Assistant, Velev & Kilpatrick group, Riddick Hall, North Carolina State University, Raleigh NC 2002-Present

Carolina State University, Raleigh NC

- Designing silver-enhanced immunoassays for antigen/antibody detection
- Dielectrophoretic assembly of composite arrays from live cells and colloidal particles
- Developing cell-based biosensors with direct electrical signal detection.

Graduate Teaching Assistant, North Carolina State University, Raleigh NC 2002-Present

- Transport Phenomena I (2002), Introduction to Chemical Engineering Analysis (2003), Chemical Process Principles (2003), Chemical Process Principles (2004)

Undergraduate Research Assistant, Institute of Technology- BHU, Varanasi, India 1998-2002

- Designed an activated sludge process for waste treatment of effluent discharged into the holy river Ganges (2000). Advisor: Dr. P. K. Misra
- Established control procedures (measuring BOD, COD and chromium content in the waste water discharge) to check the quality of leather (2001). Mirza group of tanneries, Kanpur, India.

- Designed equipment for heat and mass transfer to economize their costs of manufacture (2002). Advisor: Dr. P. Ahuja

HONORS AND ACTIVITIES

NCSU-Cultural Secretary for Indian Student Association (2003-2004), NCSU-International Student Office Coordinator (2003), Vocalist- NCSU Music Club for Indian Student Association (2002-2004), Formal training in Indian Classical music (vocal) and dance (Kaththak)

PRESENTATIONS

Gupta S., Velev O.D. and Kilpatrick P.K.; “Developing Immunoassays and Cell Based Biosensors with Electrical Signal Transduction”; Particles 2004 conference, Orlando, FL; March 2004

Velev O.D., Prevo B.G., Bhatt K.H., Gupta S.; “Colloidal Assembly: Toolbox for Biomolecular Organization and Electrical Interfacing”; 227th ACS National Meeting, Anaheim, CA; March 2004