

Radhika Naik-Deshpande

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HIGHLIGHTS

- Extensive hands-on experience of planning and executing *radiotracer analysis, reactor and cyclotron irradiations*, operating relevant *instrumentation and analytical software for data analysis*.
- Knowledgeable of *licensing requirements and procedures for radioisotope purchase*.
- Proficient in *presenting scientific data and results* via oral and written scientific works.
- Skilled in programming with *FORTRAN, C++ and Visual Basic*.

EDUCATION

- PhD, Nuclear Chemistry, Oregon State University, Corvallis, OR, USA, 2007
Thesis: Studying fusion reactions for effect of P_{CN} on heavy nucleus formation and for nuclear structure effects. **Advisor:** Dr. Walter Loveland
- MSc, Inorganic Chemistry (*distinction, 2nd in university*), Mumbai University, India, 2002
- BSc, Chemistry (*distinction*), Mumbai University, India, 2000

RESEARCH EXPERIENCE

- Post-doctoral research fellow, Institute of Materials Engineering
Australian Nuclear Science and Technology Organisation, NSW, Australia
Dr. Gerry Triani (Oct 2009-Jun 2010)
 - Evaluating the structure - function relationships in thin films and porous materials for innovative use in industrial applications using radiotracer probes synthesized with reactor and cyclotron produced radioisotopes.
- Post-doctoral research fellow, Institute of Materials Engineering
Australian Nuclear Science and Technology Organisation, NSW, Australia
Dr. Suzanne Smith (Jul 2007-Sep 2009)
 - Designing and executing high-throughput radiotracer assays using reactor and cyclotron produced radioisotopes to assess the structure - function relationship of novel materials for medical, industrial and environmental applications.
 - Responsible for ordering, purchase, cataloging and distribution of radioisotopes and knowledgeable of licensing requirements and procedures.
- Graduate Research Assistant, Chemistry Department
Oregon State University, Corvallis, OR, US, **Advisor:** Dr. Walter Loveland (2003-2007)
 - Prepared Zn targets using electroplating technique for irradiation in cyclotron.
 - Radiochemical Solvent Extraction for separation of As and Ge from fusion products.
 - Prepared samples for neutron activation and performed quantitative analysis.
 - Analyzed data using FORTRAN and PAW (Physics analysis workstation).
 - Handled LSC, alpha, beta and gamma counters and participated in Radio Immunoassay and Nuclear spectrometry experiments.
- Nuclear Chemistry Laboratory trainee
Institute of Science, Mumbai, India, **Supervisor:** Dr. Z. R. Turel (2002-2003)
 - Prepared solid and liquid samples for irradiation in reactor.
 - Used beta and gamma spectrometers for data analysis.

PUBLICATIONS:

- “Investigating potential application of fine silk powders for controlled release”, ***Radhika Naik***, Rangam Rajkhowa, Dharmaprakash MS, Sabrina Hureau, Lijing Wang, Suzanne Smith and Xungai Wang (accepted in *J App Pol Sci*)
- “Metal binding properties of novel wool powders”, ***Radhika Naik***, Guiqing Wen, Dharmaprakash MS, Sabrina Hureau, Akira Uedono, Xungai Wang, Xin Liu, Peter G. Cookson, and Suzanne V. Smith. *J App Pol Sci* **115**(3), 1642 (2010).
- “Measurement of the Fusion Probability, P_{CN} , for the Reaction of ^{50}Ti with ^{208}Pb ”, ***R.S. Naik***, W. Loveland, P. H. Sprunger, A.M. Vinodkumar, D. Peterson, C.L. Jiang, S. Zhu, X. Tang, and E.F. Moore, P. Chowdhury. *Phys Rev C* **76**, 054604 (2007).
- “The sub-barrier fusion of ^9Li with ^{70}Zn ”, W. Loveland, A. M. Vinodkumar, ***R.S. Naik***, P.H. Sprunger, B. Matteson, J. Neeway, M. Trinczek, M. Dombisky, P. Machule, D. Ottewell, D. Cross, K. Gagnon and W.J. Mills. *Phys Rev C* **74**, 064609 (2006).

RECENT PRESENTATIONS:

- Role of nanoporosity in metal binding properties of wool powders, Materials and Australian Ceramics (MAC09) conference, Surfers Paradise, Australia (July 2009).
- Metal binding properties of powdered silk, Materials and Australian Ceramics (MAC09) conference, Surfers Paradise, Australia (July 2009).
- Metal binding and porosity of Eri and Mulberry silk powders: a comparative study, Inorganic Chemistry (IC08) conference, University of Canterbury, Christchurch, New Zealand (December 2008).
- Metal binding properties of powdered wool vs commercial resins, Inorganic Chemistry (IC08) conference, University of Canterbury, Christchurch, New Zealand (December 2008).
- Silk powders – metal binding properties and their potential for controlled drug release, Centre for Antimatter Matter Studies (CAMS) workshop, University of Western Australia, Perth, Australia (November 2008).
- Metal binding properties of powdered wool, 7th International Conference on Nuclear and Radiochemistry, Eötvös University, Budapest, Hungary (August 2008).

AWARDS AND AFFILIATIONS

- David P. Shoemaker Memorial Fellowship (2005-2006) and the Benedict award (2004-2005) from the Department of Chemistry, Oregon State University.
- American Nuclear Society (ANS, 2006-Present)
- Radiochemistry Society (2006-Present)
- Women in Nuclear (WIN) Global (2006-Present)
- Indian Association of Nuclear Chemists and Allied Scientists (IANCAS) (2006-Present)

COMPUTER SKILLS

- Experienced in using Genie, Apex and Maestro radioanalytical software.
- Proficient in FORTRAN and C++ and some experience of Java, Visual Basic.
- Experienced in using PAW, SRIM, UPAK for data analysis and in working on Linux and VAX-VMS workstations.
- Well-versed in use of LabView, Mathematica, MS Office suite (with MS Project).