12516 Audelia Road,
Apt # 906
Dallas, TX 75243

Rudra Gnawali

Phone (239) 331-9453
Email: gyawali.rudra@gmail.com
rgnawali@memphis.edu

Objective:

To obtain a position with an academic research institution, company, industry that is involved in manufacture, synthesis and design for advanced materials in science, technology, health and medical areas.

Experience:

University of Memphis — Memphis, Tennessee.
Teaching Assistant and Research Assistant — Jan. 2012 – Dec 2013.

Taught Physics and Conceptual Lab, a class of 100 undergraduate students. Prepared exams conducted grading and project preparation for Physics and Engineering students.

Banaras Hindu University, India — Varanasi, India
Graduate Assistant/ Research Assistant — 2007-2009
Taught B.Sc lab and was involved in research with the combination of Material industries and scientific instruments companies. Fabricated Carbon Nanotubes using Chemical Vapor Deposition (CVD) method. Learned about magneto-resistance and high temperature superconductivity on $YBa_2Cu_3O_7$ and a number of experimental techniques for characterization of the materials such as XRD, AFM, SEM, TEM, UV-VIS NIR

Tribhuvan University, Patan Multiple Campus — Kathmandu, Nepal.
Assistant Lecturer — Aug. 2009 – Dec. 2011

Taught a class of forty graduate students of Classical Mechanic and Biomedical Physics. Was actively involved as a supervisor for graduate student's project work in achieving their M.Sc. degree.

Golden Gate International College — Kathmandu, Nepal
Lecturer — Aug.2009 – Dec.2011

Taught basic Physics to 11th and 12th grade students. Delivered lectures in areas of Electricity and Magnetism, Heat, Thermodynamics and Mechanics. Prepared yearly plan for lab classes, project works and coordination for Physics classes.

St. Xavier College Maitighar — Kathmandu,Nepal
Assistant Lecturer — Jun. 2009 – Oct. 2011.
Taught a class of sixty graduate students of Bio Medical Physics and conducted advanced Lab.

University of Memphis — Memphis, Tennessee.
Material Lab Coordinator — Jan. 2012 – Dec. 2013.
Handled instruments such as: ESR, FTIR, TSL, UV-VIS, NIR, XRD, VSM, and AFM
Tested medical grade polymers used in implant devices. Conducted tests on these materials concentrating primarily on free radical analysis using a variety of techniques such as UV-Vis-NIR spectrophotometry, FTIR, Thermoluminescence, and Electron Spin Resonance (ESR). Explored information about medical graded biomaterials specifically Polycarbonate Urethane (PCU) and Poly Ether Ether Keton (PEEK) for their use in hip and knee replacements. Conducted tests of free radicals using ESR. Also involved in projects involving magnetic Nanomaterial such as, synthesis and characterization of exchange-coupled Pr_2Co_7-FeNi nanocomposite, and template based synthesis of high coercivity $SrFe_{12}O_{19}$ ferrites. Performed structural, phase and morphology characterization of prepared samples using XRD, TEM and SEM, using vibrating sample magnetometer (VSM) and using DSC and TGA to study the thermal properties, the phase transition. Used UV-VIS spectrometer, Raman spectrometer, ESR and FTIR for spectral analysis.

Research Activities:

- "Thermoluminescence in UV and X-irradiated Polyetheretherketone (PEEK)" at Society for Biomaterials Meetings, Boston, Massachusetts, April 2013.
- "Detection of thermally stimulated luminescence in Polyetheretherketone (PEEK)" at International PEEK Meeting, Philadelphia, Pennsylvania, April 2013.
- "Effects of irradiation on optical and thermo-luminescence properties of medical grade Polycarbonateurethane (PCU). Accepted for Poster presentation SFB meeting 2014. Denver CO.
- "Effects of irradiation on optical and thermo-luminescence properties of medical grade Polycarbonateurethane (PCU). Under review.
- "ESR and FTIR study on medical grade Polycarbonateurethane (PCU)". Paper under review at Kathmandu Journal, Nepal.
- "Radiation effects on medical grade Polycarbonateurethane (PCU)". Paper published on http://umwa.memphis.edu/etd/.
- "X-irradiated Polyetheretherketone (PEEK): Thermoluminescence observations with DSC correlation" Accepted for SFB conference 2014 Denver CO.
- "X-Ray and UV-induced free radicals in Polycarbonateurethane (PCU). Accepted for SFB conference 2014 Denver CO.

Conferences and Presentations:

- Attended a two day seminar on "New trends of research in physics" at Banaras Hindu University (BHU), India in 2007.
- Participated at symposium on spectroscopic studies, BHU, India in 2008.
- Attended international conference on "Disorder, complexity and biology II" (DISCOMB), January 2009, India.
- Presented poster on topic "Reentrant phase transition on ferroelectric liquid crystal" at (DISCOMB) International conference India 2009
- *Participated in an* International conference on "Frontier's of physics" (ICFP), June 2009, Kathmandu, Nepal.
- *Attended a meeting* on "Soft matter *physics"* March, *2010* at Jawaharlal Nehru University (JNU), India.
- Attended a workshop at Amrit science campus, Kathmandu, 2011
- Participated in an International conference on" Society of Biomaterials" Boston, MA 2013

Achievements:

- Received an award of Rs. 50,000 ($700) from district education foundation, Government of Nepal for high score in general knowledge competition at district level in 1998
- Received a grant of Rs. 60,000 ($800) for "Training in Medical transcriptionist" from the Ministry of Education, Government of Nepal in 2002
- Received a grant undergraduate full fellowship for three years Bachelor in science from Tribhuvan University, Kathmandu in 2003.
- Received an award of "Graduate Fellowship" from Indian embassy Kathmandu, Nepal in 2007.
- Teaching and Research assistantship from The University of Memphis, TN in Jan 2012 –Dec 2013

Education

- BSC Physics, Math - Tribhuvan University Nepal.
- MSC Physics (Solid State specialization) – Banaras Hindu University (BHU), India
- MS Physics (Material Science Concentration)- University of Memphis, TN, USA

Professional Training:

- Software engineering 2002 - 2003
  College of software Engineering Kathmandu (Affiliated by MICROSOFT CO, USA)

- Medical transcriptionist (3 month course) 2002
  Lord Buddha education foundation, Maitidevi, Kathmandu, Nepal

Skills:

- FORTAN 77/90 ,Visual C++ , Matlab
- Database management (SQL) and web page designing.

References:

Dr. Sanjay Mishra
Professor
University of Memphis, TN,
srmishra@memphis.edu

Abdul Wahid Pualo
Civil Engineer
9737 Amberton Parkway
Dallas Texas
abdul.pulao@att.net

Dr. M.Shah Jahan
Professor
University of Memphis, TN
mjahan@memphis.edu