CURRICULUM VITAE

Dr. GAJENDRA PRASAD SINGH

Assistant Professor

Centre for Nanotechnology

Educational Qualifications

Ph. D. (2009): Indian Institute of Technology, Kharagpur, W. B., India

M. Tech. (2004): Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India

Professional Experience

- **Assistant Professor** (Since 14th July 2011-), Centre for Nanotechnology, Central University of Jharkhand
- **Post doc Research Fellow** (January 2012 - January 2013, on leave) at Kansas State University, Kansas, USA under BOYSCAST Fellowship
- **Assistant Professor** (July 2009-July 2011), Department of Applied Physics, Birla Institute of Technology, Mesra, Ranchi, Jharkhand

Awards/Honors/Fellowship

- **Boyscast Fellowship** (2010-2011), Department of Science & Technology, Govt. of India.
- **Research Associates** (2009), Council of Scientific & Industrial Research, Govt. of India
- **Senior Research Fellowship (**2008-2009**)**, Council of Scientific & Industrial Research, Govt. of India
- **Institute Research Fellowship (**2005-2008**),** Indian Institute of Technology, Kharagpur, W. B.

Project Funded

- Project entitled "Synthesis and Characterization of Electromagnetic Wave Absorption Properties of Ferrite based Nanocomposites for High Speed Communication Applications" Dept. of Science and Technology, funded under SERC Fast Track Scheme for Young Scientists (FAST), 16.44 lakh. Sanction order no.:SR/FTP/ETA-28/2011 dated 21.11.2011.

Area of Research Interest

- Nanomaterials synthesis, Energy application materials, Magnetic materials, and Device applications

List of Publications

1. **G. P. Singh,** K. M. Shrestha, A. Nepal, K. J. Klabunde, C. M. Sorensen (2014): Graphene supported plasmonic photocatalyst for hydrogen evolution in photocatalytic water splitting, Nanotechnology, Nanotechnology, 25 (2014) 265701**.**.
2. A. Nepal, **G. P. Singh**, B. N. Flanders and C. M. Sorensen (2013): One-step synthesis of graphene via catalyst-free gas-phase hydrocarbon detonation, Nanotechnology, 24, 245602 (7pp)**.**
3. **G. P. Singh**, (2013): **Green Graphene**, Research Highlight, *Nature*, doi:10.1038/nindia.2013.81; published online 20 June 2013, http://www.nature.com/nindia/2013/130620/full/nindia.2013.81.html
4. S. Biswas, **G. P. Singh**, S. Ram, H.-J. Fecht (2013): Surface stabilized GMR nanorods of silver coated

CrO_2 synthesized via a polymer complex at ambient pressure, Journal of Magnetism and Magnetic Materials, 339, 175–181.

5. P. S. Das and **G. P. Singh** (2012): Structural, Magnetic and Dielectric properties in Cu substituted Ni-Zn Ferrite for sensors applications, IEEE Explore, 29-33.
6. Kumar Mohit, S.K. Rout, S. Parid **G. P. Singh**, S.K. Sharma, S.K. Pradhan, Ill WomKim (2012): Structural, optical and dielectric studies of $Ni_xZn_{1-x}Fe_2O_4$ prepared by auto combustion route, Physica B: Condensed Matter 407, 935-942.
7. **G. P. Singh** and S. Ram (2010): Optical and electron paramagnetic resonance properties of native Cr_2O_3 surface over CrO_2, Journal of Magnetism and Magnetic materials 322, 1484.
8. **G. P. Singh**, S. Ram, J. Eckert and H. J. Fecht (2009): Synthesis and morphological stability in CrO_2 single crystals of a half-metallic ferromagnetic compound, Journal of Physics: Conference Series, 104, 011210.
9. **G. P. Singh** and S. Ram (2008**):** Impedance and magnetic properties of chemically synthesized CrO_2/Ag nanocomposite particles, Journal of Applied Physics, 103, 07D709-1.
10. **G. P. Singh**, S. Ram and H.-J. Fecht (2008): Silver modified CrO_2 of core-shell nanoparticles and their magnetic and impedance properties, Journal of American Ceramic Society, 91, 322.
11. **G. P. Singh** and S. Ram (2008): Near stationary dielectric properties in half-metallic ferromagnetic Ag:CrO_2 nanocomposite particles at high frequencies, Modern Physics Letters B, 12,1423.
12. **G. P. Singh**, B. Biswas, S. Ram and K. Biswas (2008): Structure and magnetic properties in Ag stabilized ferromagnetic sensors of CrO_2 nanoparticles, Materials Science & Engineering A, 498, 125.
13. **G. P. Singh**, J. Alphonsa, P. K. Barhai and S. Mukherjee (2008**):** Study of phase formation in selected surface roughened plasma nitrided AISI 304 austenite stainless steel, Science & Technology of Advance materials, 9, 0250007.
14. **G. P. Singh**, S. Ram, A. K. Thakur and R. N. P. Chaudhary (2008**):** Electrical properties of ferromagnetic Ag:CrO_2 particles, Indian Journal of Engineering and Materials Sciences, 15 (2008) 171.
15. A. Gautam, **G. P. Singh** and S. Ram (2007): A simple polyol synthesis of silver metal nanopowder of uniform particles, Synthetic Metals, 157, 5-10.
16. **G. P. Singh**, J. Alphonsa, P. K. Barhai, P. Rayjada, P. M. Raole and S. Mukherjee (2006): Effect of surface roughness on the properties of the layer formed on AISI 304 stainless steel after plasma nitriding, Surface Coating & Technology, 200, 5807.

Book Chapter

1. **G. P. Singh** and S. Ram: "Magnetic Nanofluids: Synthesis, Properties and Applications" in *Nanofluids: Research Developent and Applications,* 2013, Editor: Yuwen Zhang, Nova Science Publishers, Inc. 400 Oser Avenue, Suite 1600 Hauppauge, NY 11788-3619, ISBN: 978-1-62618-203-5.
2. S. Ram and **G. P. Singh:** "Advanced composites: Advanced ZrO_2-based ceramic nanocomposites for optical and other engineering applications" in *Selected Topics of Composite Materials,* Editors: Kamal K. Kar and A. Hodzic, Research Publishing Services, Singapore-520236), ISBN: 978-981-08-3713-6.

Professional Membership

- **Life Membership (LM 760)** of Plasma Science Society of India