

Curriculum Vitae

Name: **Bhaskar Jyoti Sarkar**

Current Position: **Assistant Professor**
(Since 4th February 2021) **Department of Physics**
Vivekananda Mahavidyalaya, Burdwan.

Previous Employment:
27.08.2008 – 03.02.2021 **Assistant Professor**
Department of Physics
Deshabandhu Mahavidyalaya, Chittaranjan.

Education:

- 2018** **Ph.D. (Degree in Physics),** The University of Burdwan.
Title of the Thesis: Studies of Magnetic Behavior of some Transition Metal Ion Doped Nanocrystalline Rare Earth Oxides Prepared by Chemical Route
- 2008** **B.Ed. (Science),** The University of Burdwan.
- 2001** **M. Sc in Physics** with specialization in Nuclear Physics, The University of Burdwan.
- 1999** **B. Sc (Hons.) in Physics** from Burdwan Raj College, The University of Burdwan.

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Research interest: Synthesis and Characterization of Magnetic Nanoparticles.

List of Publications (Latest First):

- [1] **B. J. Sarkar**, A. Bandyopadhyay, *J Mater Sci: Mater Electron* **32**, 1491–1505 (2021).
[Studies of magnetic behavior of chemically synthesized interacting superparamagnetic copper ferrite nanoparticles]
- [2] A. Bandyopadhyay, **B.J. Sarkar**, S. Sutradhar, J. Mandal, P.K. Chakrabarti, *Journal of Alloys and Compounds*, **865** 158838 (2021).
[Synthesis, structural characterization, and studies of magnetic and dielectric properties of Gd³⁺ doped cerium oxide (Ce_{0.90}Gd_{0.10}O_{2-δ})]
- [3] **B. J. Sarkar**, M. Dalal, A. Mitra, J. Mandal, A. Bandyopadhyay, P. K. Chakrabarti, *Journal of Alloys and Compounds*, **752**, 448 (2018).
[Room temperature antiferromagnetic ordering in chemically prepared nanocrystalline Co-doped neodymium oxide (Nd_{1.90}Co_{0.10}O_{3-δ})].
- [4] **B. J. Sarkar**, J. Mandal, M. Dalal, A. Bandyopadhyay, P. K. Chakrabarti, *Applied Physics A*, **124**, 393 (2018).
[Room temperature ferromagnetism of nanocrystalline Nd_{1.90}Ni_{0.10}O_{3-δ}].
- [5] **B. J. Sarkar**, J. Mandal, M. Dalal, A. Bandyopadhyay, B. Satpati, P. K. Chakrabarti, *Journal of Electronic Materials*, **47**, 1768 (2018).
[Microstructural investigation, Raman and magnetic studies on chemically synthesized nanocrystalline Ni-doped gadolinium oxide (Gd_{1.90}Ni_{0.10}O_{3-δ})].
- [6] J. Mandal, M. Dalal, **B. J. Sarkar**, P. K. Chakrabarti, *Journal of Electronic Materials*, **46**, 1107 (2017).
[Room temperature antiferromagnetic ordering of nanocrystalline Tb_{1.90}Ni_{0.10}O₃].
- [7] **B. J. Sarkar**, A. K. Deb, P. K. Chakrabarti, *RSC Advances*, **6**, 6395 (2016).
[XRD, HRTEM, Raman and magnetic studies on chemically prepared nanocrystalline Fe-doped gadolinium oxide (Gd_{1.90}Fe_{0.10}O_{3-δ}) annealed in vacuum].
- [8] **B. J. Sarkar**, A. Bandyopadhyay, J. Mandal, A. K. Deb, P. K. Chakrabarti, *Journal of Alloys and Compounds* **656**, 339 (2016).
[Paramagnetic to ferromagnetic phase transition of Co doped Gd₂O₃ prepared by chemical route].

[9] A. Bandyopadhyay, N. Bhakta, S. Sutradhar, **B. J. Sarkar**, A. K. Deb, S. Kobayashi, K. Yoshimura, P. K. Chakrabarti, *RSC Advances*, **6**, 101818 (2016).

[Microstructure investigation, optical properties and magnetic phase transition of Tm^{3+} substituted nanocrystalline ZnO ($\text{Zn}_{0.95}\text{Tm}_{0.05}\text{O}$)].

[10] J. Mandal, **B. J. Sarkar**, A. K. Deb, P. K. Chakrabarti, *Journal of Magnetism and Magnetic Materials*, **371**, 35 (2014).

[Magnetic phase transition of nanocrystalline Fe-doped samarium oxide ($\text{Sm}_{1.90}\text{Fe}_{0.10}\text{O}_3$)].

[11] A. Bandyopadhyay, S. Sutradhar, **B. J. Sarkar**, A. K. Deb, P. K. Chakrabarti, *Applied Physics Letter*, **100**, 252411 (2012).

[Vacancy mediated ferromagnetism in Co doped Dy_2O_3].

Paper presented in National/ International Conference/ Workshop

[1] **B. J. Sarkar**, A. Bandyopadhyay, P. K. Chakrabarti, *National Seminar on Recent Trends in Condensed Matter Physics including Laser Applications (NSCMPLA-2017), The University of Burdwan.*

[XRD, TEM, Raman and Magnetic studies on nanocrystalline ($\text{Gd}_{1.90}\text{Ni}_{0.10}\text{O}_3$) prepared by chemical route].

[2] **B. J. Sarkar**, A. Mitra, J. Mandal, A. Sinha Mahapatra, P. K. Chakrabarti, *National Thematic Workshop on Recent Advances in Materials Sciences, (2016), The University of Burdwan.*

[XRD, Raman and magnetic studies on chemically prepared nanocrystalline $\text{Nd}_{1.90}\text{Co}_{0.10}\text{O}_{3-\delta}$ annealed in vacuum].

[3] **B. J. Sarkar**, S. Mukherjee, P. K. Chakrabarti, *Third National Seminar on recent trends in Condensed Matter Physics including Laser Application (TNSCMPLA-2013), The University of Burdwan.*

[Magnetic behavior of multiferroic nanoparticles of LaFeO_3 dispersed in nanocomposite matrix of $(\text{La}_2\text{O}_3)_{1-x}(\text{LaFeO}_3)_x$].

[4] A. Bandyopadhyay, **B. J. Sarkar**, S. Sutradhar, J. Mandal, A. K. Deb, S. Acharya, S. Mukherjee and P. K. Chakrabarti, *International Conference On LASER, Material Science and Communication (ICLMSC 2011), The University of Burdwan.*

[Microstructural characterization by Rietveld analysis and enhanced magnetic behavior of Eu_2O_3 nanoparticles by doping with Fe^{3+}].