CURRICULUM VITAE

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Education



PhD	Indian Institute of Technology Patna	2018
M.Sc.	Indian Institute of Technology Roorkee	2012

Research Interest

Nanomagnetism, Ferroeletricity, Dielectric Material, Nanocomposite, Thin Film

Journal Publications

- R. Kumar, S. Guha, R. K. Singh and M. Kar, Surface anisotropy induced magnetism in BaTiO₃-CoFe₂O₄ (BTO-CFO) nanocomposite, Journal of Magnetism and Magnetic Material, 465 (2018), 93-99.
- S. Guha, R. Kumar, S.Kumar, L. K. Pradhan, R. Pandey and M. Kar, Crystal structure and magnetic properties study on ferromagnet Fe₂MnSi_{0.75}Al_{0.25} Heusler alloy, Physica B: Physics of Condense Matter, 579 (2020), 411805.
- 3. **R. Kumar**, R. K. Singh and M. Kar. Tuning of magnetic property by lattice strain in lead substituted cobalt ferrite, **Materials science and Engineering B**, 220 (2017), 73.
- 4. **R. Kumar**, R. K. Singh and M. Kar. Magnetic interaction between ferrimagnetic CoFe₂O₄ and antiferromagnetic NiO in nanocomposite, **Physica B: Condensed Matter**, **530** (2018), **114**.
- 5. **R. Kumar** and Manoranjan Kar. Correlation between lattice strain and magnetic behavior in nonmagnetic Ca substituted nano-crystalline cobalt ferrite, **Ceramics International**, 42 (2016), 6640.
- R. Kumar and M. Kar. Lattice Strain Induced Magnetism in Substituted Nanocrystalline Cobalt Ferrite, Journal of Magnetism and Magnetic Materials, 416 (2016), 335.
- 7. L. K. Pradhan, R. Pandey, **R. Kumar**, *and* M. Kar. Lattice strain induced multiferroicity in PZT-CFO particulate composite, **Journal of Applied Physics 123(2018)**, **074101**.

 C. Panda, P. Kumar, R. Kumar and M. Kar. Article: Enhanced Magnetic Properties Near MPB in Ho and Mn Co-Substituted Nanocrystalline BiFeO₃, Advance Science Letter, 22 (2016), 766.

Books Chapter

1. Lawrence Kumar, Sanjeet Kumar Paswan, Pawan Kumar, Ram Kishore Singh,

Rajnish Kumar, Sushil Kumar Shukla, Nanotechnology-based filtration membranes for removal of pollutants from drinking water, **Sustainable Environmental Clean-up.**

http://dx.doi.org/10.1016/B978-0-12-823828-8.00011-6, © 2021 Elsevier.

2. Sanjeet Kumar Paswan, **Rajnish Kumar**, Pawan Kumar, Ram Kishore Singh, Ashish Kumar, Sushil Kumar Shukla and Lawrence Kumar, Magnetically separable graphene oxide-based spinel ferrite nanocomposite for water remediation; **Contamination of Water**. https://doi.org/10.1016/B978-0-12-824058-8.00004-9 © 2021 Elsevier.

School/Seminar/Workshop

- Two days workshop on "Quantum Mechanics Theory and Applications" Forum for Interdisciplinary Application in Science (FIDAS), Deen Dayal Upadhyay College, Delhi university
- Indo-Japan Workshop on Magnetism at Nanoscale -2015, NISER Bhubaneswar, Jan 9-12, 2015.
- CSR lecture series, DAE Consortium for scientific research, Indore, Sep 14-25, 2015.
- SERB School on Modern Optics and its Application, IIT Patna, 30th Nov-18th Dec 2015.

Conference proceedings

- 1. **R. Kumar** and M. Kar, Magnetic studies of nanocrystalline cobalt ferrite by Employing the Arrot plot, **AIP Conference Proceeding**, **1728** (2016), **020570**.
- 2. **R. Kumar**, A. M. Goswami and M. Kar, Increase of Dielectric Constant in PVDF by Incorporating La_{1.8}Sr_{0.2}NiO₄ into its Matrix, **AIP Conference Proceeding**, **1728** (2016), 020580.
- 3. R. Kumar. A. K. Aman, R. Singh and M. Kar, Competition Between Strain and Superexchange Mediated Magnetism in Modified Cobalt Ferrite, AIP Conference Proceeding, 1832 (2017), 130030.

Conference presentations

- 1. **R. Kumar**, L. K. Pradhan and M. Kar, Photoluminiscence studies of Cobalt ferrite, IOQO, IIT Patna (2014).
- R. Kumar and Manoranjan Kar, A topical review on magnetoelectric composite, Bihar Science Conference, Magadh Mahila College, Patna (2014)

- 3. **R. Kumar**, R. Pandey and M. Kar, Enhanced Magnetocrystalline anisotropy of Co_{0.99}Ca_{0.01}Fe₂O₄, Indo-Japan Workshop on Magnetism at Nanoscale, NISER Bhubaneswar Jan 9-Jan 12, (2015).
- R. Kumar and M. Kar, Magnetic studies of nanocrystalline cobalt ferrite by Employing the Arrot plot, International Conference on Condense matter and Applied physics, Bikaner, Oct30-31, (2015).
- 5. **R. Kumar**, A. M. Goswami and M. Kar, Increase of Dielectric Constant in PVDF by Incorporating La_{1.8}Sr_{0.2}NiO₄ into its Matrix, International Conference on Condense matter and Applied physics, Bikaner, Oct 30-31, (2015).
- R. Kumar. A. K. Aman, R. Singh and M. Kar, Competition Between Strain and Superexchange Mediated Magnetism in Modified Cobalt Ferrite, DAE Solid State Symposium, KIIT University, Dec 26-30 2016.