Dr. A. Subha

PERSONAL

Name
Dr. A. Subha

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Languages
English
Hindi
Malayalam

I am a post graduate in Physics from Central University of Kerala and secured PhD in "Synthesis and magnetic properties of substituted copper ferrite nanoparticles" from Central University of Kerala in 2021. My research interests in the area of Experimental Physics and area of interest is condensed matter physics, magnetism and nanomaterials.

Education

2021	Ph.D in Physics, Central University of Kerala, February 2013 - February 2021
2012	M.Sc, Physics (CGPA-7.53), Central University of Kerala, July 2010 - Sep 2012
2010	B.Sc Physics (82%), Kannur University, June 2007 – May 2010

Examination Qualified

Joint CSIR-UGC Test , Elligibility for Lectureship (NET) June 2012.

Research Experience

1. Synthesis of nanomaterials using different wet chemical methods and solid state reaction.
2. Studying crystal structure of nanoparticles especially spinel ferrite nanoparticles.
3. Studying magnetic and electrical properties of nanoparticles.
4. Effect of annealing temperature and different metal ion substitution on structural, magnetic and electrical properties of nanoparticles were studied.
5. Effect of phase transformation on structural and magnetic properties of spinel ferrite nanoparticles.

Teaching Experience

1. 2021 October 28th to 31st March 2022 - Govt College Kasaragod (Assistant Professor)
2. 2022 June 1st to 22nd July 2022 - EKNM Govt College Elerithattu, Kasaragod (Assistant Professor)
3. 2022 July 25th to 31st March 2023 - Govt College Kasaragod (Assistant Professor)
4. 2024 February 21st to 25th March 2024 - Govt College Kasaragod (Assistant Professor)
5. 2024 July 19th to 28th March Govt College Kasaragod (Assistant Professor)

Scientific Skills

1. Material characterization using powder X-ray diffraction (XRD), Raman spectroscopy, Fourier transform infrared spectroscopy (FTIR), Scanning electron Microscopic (SEM) techniques, Transmission electron microscopy (TEM).

2. Magnetic studies using Vibrating sample magnetometer (VSM).

3. Packages : Origin , Image J, Latex

Research publications in international journals

1. **A. Subha**, M.G.Shalini, B.N. Sahu,S.Rout, Subasa C. Sahoo "Role of surface defects and anisotropy variation on magnetic properties of Copper ferrite nanoparticles prepared by co-precipitation method". Mater. Chem. Phys. 286 **(2022)** 126212. https://doi.org/10.1016/j.matchemphys.2022.126212

2. **A. Subha**, M. Govindaraj Shalini, Shantinarayan Rout and S C. Sahoo "Magnetic Ordering and enhancement of magnetization in zinc-Substituted copper ferrite nanoparticles" J Supercond Nov Magn, **(2020)** https://doi.org/10.1007/s10948-020-05613-z.

3. **A. Subha**, M. G. Shalini, B Sahu, S. C. Sahoo " Structural transformation and magnetic properties of copper ferrite nanoparticles prepared by sol–gel method ". Mater. Sci. Mater. Electron. 29 **(2018)** 20790-20799. https://doi.org/10.1007/s10854-018-0221-8

4. **A. Subha**, M. G. Shalini, and S. C. Sahoo " Magnetic studies of $CuFe_2O_4$ nanoparticles prepared by co-precipitation method " AIP Conference Proceedings 1728, **(2016)** 020416. https://doi.org/10.1063/1.4946467

5. M. Govindaraj Shalini, **A. Subha**, Baidyanath Sahu and S. C. Sahoo " Phase evolution and temperature dependent magnetic properties of nanocrystalline Barium Hexaferrite" Mater. Sci. Mater. Electron. 30 **(2019)** 13647-13654. https://doi.org/10.1007/s10854-

International conferences

1. **A. Subha**, M. G. Shalini, S. C. Sahoo "Magnetic studies of $CuFe_2O_4$ nanoparticles prepared by co-precipitation method" International Conference Condensed Matter and Applied Physics (ICC 2015), Bikaner, Rajasthan, India, October, 30-31,2015. (Poster Presentation)

2. **A. Subha**, M. G. Shalini, B. N. Sahu, S. C. Sahoo "Structural Modification and Magnetic Behaviour in $CuFe_2O_4$ Nanoparticles" International Conference on Magnetic Materials and Applications (ICMAGMA **– 2015**) held at VIT University, 2-4 December 2015, Vellore, Tamil Nadu (Poster presentation).

3. **A. Subha**, M. G. Shalini, B. N. Sahu, S. C. Sahoo "Magnetic Properties of Cubic and Tetragonal Copper Ferrite Nanoparticles " International Conference on Magnetic Materials and Applications (ICMAGMA **– 2017**) held during 1–3 February 2017, Hyderabad, India (Poster presentation).

Contributed papers in conference

1. "Magnetic studies of $CuFe_2O_4$ nanoparticles prepared by co-precipitation method", International Conference on Condensed Matter and Applied Physics (ICC-**2015**) Bikaner Rajasthan, 30-31 October 2015 (Poster presentation).

2. "Structural and Magnetic Properties of Fe substituter Copper Ferrite nanoparticles", Materials Research Society of India (MRSI) Symposium held at IIT, Mumbai, February 13-15, **2017** (Poster presentation).

3. "Structural Modification and Magnetic Behaviour in $CuFe_2O_4$ Nanoparticles" International Conference on Magnetic Materials and Applications (ICMAGMA – **2015**) held at VIT University, 2-4 December 2015, Vellore, Tamil Nadu (Poster presentation).

References

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