

Name : Dr. Deepannita Chakraborty
Designation : Assistant Professor
Department : Physics
Qualification : M.Sc., M. Phil., TN – SET, Ph. D.
Experience : Teaching: 2.4 Years Research: 4 Years
Area of Specialization(s) : Dilute Magnetic Semiconductors, Nanomaterials, Thin Films
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Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Ph. D.	Physics	Vellore Institute of Technology, Vellore	2019
M. Phil.	Physics	University of Madras	2016
M. Sc.	Physics	University of Madras	2014
B.Sc.	Applied Sciences	PSG College of Technology	2012

Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
SET	Physical Science	UGC	2016
Online Certificate	Biomedical Nanotechnology	NPTEL	2020
Online course	IoT Wireless and Cloud Computing Emerging Technologie	Coursera	2020

Research Publications (Indexed)

International

- M.Malar Selvi, Deepannita Chakraborty & C.Venkateswaran, **Magnetodielectric Coupling in Multiferroic Holmium Iron Garnets**, Journal of Magnetism and Magnetic materials, Vol.423, 39-45, August 2017, ISSN: 0304-8853, DOI: 10.1016/j.jmmm.2016.09.039 (Indexed in

SCOPUS, GOOGLE SCHOLAR).

- Deepannita Chakraborty, S. Kaleemulla, N. M. Rao, & G. V. Rao, **Synthesis And Magnetic Properties Of (Fe, Sn) Co-Doped In_2O_3 Nanoparticles**, Journal of Materials Science: Materials in Electronics, Vol. 28, pp. 18977-18985, September 2017, ISSN: 0957-4522, DOI: 10.1007/s10854-017-7851-0 (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Deepannita Chakraborty, K. Munuswamy, K. Shaik, M. R. Nasina, S. R. Dugasani, & O. Inturu, **Evidence of Room Temperature Ferromagnetism Due to Oxygen Vacancies in $(\text{In}_{1-x}\text{Fe}_x)_2\text{O}_3$ Thin Films**, Journal of Electronic Materials, Vol. 47, pp. 2155-2164, March 2018, ISSN: 0361-5235, DOI: 0.1007/s11664-017-6026-3. (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Deepannita Chakraborty, S. Kaleemulla, M. Kuppan, N. M. Rao, C. Krishnamoorthi, I. Omkaram, **Oxygen Vacancy Induced Room Temperature Ferromagnetism in $(\text{In}_{1-x}\text{Ni}_x)_2\text{O}_3$ Thin Films**, Indian Journal of Physics, Vol.92, 5, pp. 619-628, May 2018. ISSN: 0973-1458, DOI: 10.1007/s12648-017-1145-5. (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Deepannita Chakraborty and S. Kaleemulla, **No Signature of Room Temperature Ferromagnetism in Fe-Doped ITO Thin Films**, Journal of Superconductivity and Novel Magnetism, Vol. 32, pp. 729-737, March 2019. ISSN: 1557-1939, DOI: 10.1007/s10948-018-4745-1. (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Deepannita Chakraborty and S. Kaleemulla, **Effect of Doping Concentration, Temperature and Magnetic Field on Magnetic Properties of Mn Doped ITO Nanoparticles and Thin Films**, Journal of Magnetism and Magnetic Materials, Vol.486, pp 165268-165270, September 2019. ISSN: 0304-8853. (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Deepannita Chakraborty, S. Kaleemulla, K. Chaitanya Kumar and C. Krishnamoorthi, **Influence of Surface Spin Alignment and F-Centers on the Magnetic Behavior of ITO Thin Films**, Journal of Superconductivity and Novel Magnetism, February 2020. ISSN: 1557-1939, DOI: 10.1007/s10948-020-05460-y. (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Deepannita Chakraborty, K. Chaitanya Kumar, S. Kaleemulla, and Inturu Omkaram, **Synthesis and Characterization of Fe doped ITO Nanoparticles**, AIP Conference Proceeding, March 2020. ISSN: 1551-7616, DOI: 10.1063/5.0003080. (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Balaraju Bayappagari, Kaleemulla Shaik, Deepannita Chakraborty, Chaitanya Kumar Kunapalli, **Structural, Optical and Magnetic Properties of Vacuum Annealed Fe, Mn doped NiO Nanoparticles**, Applied Physics A: Materials Science and Processing, Vol 127, 1-9, January 2021, DOI: 10.1007/s00339-020-04161-6. (Indexed in SCOPUS, GOOGLE SCHOLAR).
- Chaitanya Kumar Kunapalli, Deepannita Chakraborty, Kaleemulla Shaik, "Effect of vacuum annealing on structural, optical and magnetic properties of Sn doped ZnS thin films", Optical

Materials, vol.114, pp.110961, April 2021, DOI: 10.1016/j.optmat.2021.110961 (Indexed in SCOPUS)

Other Publications: International / National Journals

- Deepannita Chakraborty, S. Kaleemulla, N. Madhusudhana Rao, K. Subbaravamma, G. Venugopal Rao, **Structural and Optical Properties of Electron Beam Evaporated ITO And Ni:ITO Thin Films**, International Research Journal of Engineering and Technology (IRJET) Vol.4, issue 9, 227-230, 2017, ISSN: 2395-0072.
- Deepannita Chakraborty, N. Madhusudhana Rao, G. Venugopal Rao, S. Hainath Babu, S.Kaleemulla, & C. Krishnamoorthi, **Ferromagnetism and Photoluminescence Properties of Fe Doped Indium-Tin-Oxide Nanoparticles Synthesized by Solid State Reaction**, Mechanics, Materials Science & Engineering, Vol 9. doi: 10.2412/mmse.47.72.37. ISSN: 2412-5954.
- Deepannita Chakraborty, S. Kaleemulla, N. Madhusudhana Rao, K. Subbaravamma, G. Venugopal Rao, **Structural and Optical Properties of ITO And Cu Doped ITO Thin Films**, AIP Conference Proceedings Vol. 1942, 120002, 2018. ISSN:0094-243X
- Deepannita Chakraborty, S. Kaleemulla, N. Madhusudhana Rao, K. Subbaravamma, G. Venugopal Rao, **XRD, UV-VIS-NIR and FT-IR Studies of ITO and Cr: ITO Thin Films Prepared by Electron Beam Evaporation Technique**, Mechanics, Materials Science & Engineering, December 2017 – ISSN 2412-5954.

Presentations in Conference

- **Magnetization Reversal Phenomena in $\text{Ho}_3\text{Fe}_5\text{O}_{12}$ Ceramics**, International Conference on Magnetism and Magnetic Materials, IIT MADRAS, 8-Aug-14 to 9-Aug - 14.
- **Magnetic and Dielectric Studies on $\text{Ho}_3\text{Fe}_5\text{O}_{12}$** , National conference on Hierarchically Structured Materials, SRM University, Ramapuram Campus, Chennai, 4– Mar – 16 to 5- Mar-16.
- **Magnetic and Dielectric Studies of $\text{Er}_3\text{Fe}_5\text{O}_{12}$** , International conference for Functional Materials, PSN College of Engineering and Technology, Tirunelveli, 7– Sep -16 to 10–Sep - 16.
- **Ferromagnetic and Photoluminescence Properties of Fe Doped Indium-Tin-Oxide Nanoparticles Synthesized by Solid State Reaction**, International Conference on Materials Processing and Applications, Vellore Institute of Technology, Vellore Campus, 12 – Dec -16 to 14 – Dec -16.

- **XRD, UV-VIS-NIR And FT-IR Studies of ITO and Cr: ITO Thin Films Prepared by Electron Beam Evaporation Technique**, International Conference on Advanced Materials Science and Technology ,Vellore Institute of Technology, Vellore Campus, 9 – Oct-17 to 11 – Oct -17.
- **Structural and Optical Properties of ITO And Cu Doped ITO Thin Films**, 62nd DAE Solid State Physics Symposium , Bhabha Atomic Research Centre, Mumbai, 26 – Dec -17 to 30 – Dec - 17.
- **Effect of annealing on structural and optical properties of Mn ITO thin film**, 2nd Virtual Conference on Recent Advances in Technology & Engineering (CRATE 2021), VEMU Institute of Technology, Chittoor, 13-Aug-21 to 14-Aug-21.
- **Impact of oxidation number on the structural and optical properties of Sn doped ZnO nanoparticles**, 2nd Virtual Conference on Recent Advances in Technology & Engineering (CRATE 2021), VEMU Institute of Technology, Chittoor, 13-Aug-21 to 14-Aug-21.
- **Effect of Magnesium and Aluminium substitution in Zinc ferrite nanoparticles synthesized by lemon peel extract assisted co-precipitation method**, International Virtual Conference on Global Advanced Trends in Applied Mathematics, Sri Ramakrishna Institute of Technology, Coimbatore, 21-Oct-21.

Participation in Conference

International

- International Virtual Conference on Advances in Nanomaterials and It's Recent Applications, Dr. N.G.P. Institute of Technology, Coimbatore, 15-17 July, 2020, Three days.
- One day International Virtual Conference on “Photovoltaics and Materials Science”, Vellore Institute of Technology, Vellore, 23 June, 2020, One day.
- 62nd DAE Solid State Physics Symposium, Bhabha Atomic Research Centre, Mumbai, 26-30 December, 2017, Five days.
- 2nd International Conference on Advances in Materials Science and Technology, VIT University, Vellore, 9-11 October, 2017, Three days.
- International Conference on Materials Processing and Applications, VIT University, Vellore, 14-16 December, 2016, Three days.
- International Conference on Functional Materials, PSN College of Engineering and Technology, Tirunelveli, 7-10 September, 2016, Four days.
- International Colloquium on Materials, Manufacturing and Metrology, IIT Madras, Chennai, 8-9 August, 2014.

National:

- National Conference on Hierarchically Structured Materials, SRM University, Ramapuram Campus, Chennai, 4th and 5th March 2016.
- National Virtual Conference on Novel Materials, Characterization and Applications, Auxilium College, 09th to 10th June 2020.

Participation in Workshop

- Theoretical Physics Workshop, Bharathiar University, Coimbatore.
- Becoming Emotionally Competent Workshop, University of Madras, Guindy Campus, Chennai.
- Saving Time In Searching Journal Literature Through Jgate Workshop, University of Madras, Guindy Campus, Chennai.
- Workshop On Rietveld Analysis Of Powder X-Ray Diffraction Data & Interpretation, SRM University, Ramapuram Campus, Chennai.
- e-workshop on " Introduction to origin software", 29-Sep-20 to 30-Sep-20, K.L. University, Andhra Pradesh.
- One day National Workshop on Functional Materials, Centre for Functional Materials, Vellore Institute of Technology, Vellore, 24th March 2021.
- e-Workshop on “Phase Identification of Polycrystalline Materials using XRD data in Softwares”, 25-Sep-21, Panorama association, Department of Physics, Dr. N.G.P. Arts and Science College, Coimbatore.
- An International Online Workshop on Materials Science and Computational Methods, 15-Feb-22 to 16-Feb-22, PG and Research Department of Physics, Jamal Mohamed College, Trichy.
- Two day online international workshop on Nanomaterials for clean energy and space astronomy, 22-Feb-22 to 23-Feb-22, Department of Physics and Astronomy Club of Ethiraj College for Women in association with Indian Science Congress.
- DST- SERB sponsored National Workshop on “Nanomechanical and Tribological Characterization of Materials” 04-Mar-22 to 05-Mar-22, Centre for Nanoscience and Nanotechnology, Sathyabama Institute of Science and Technology, Chennai.

Participation in Orientation Programme / Short Term Courses

- 1) IoT Wireless and Cloud Computing Emerging Technologies, Coursera, Nov-2020.
- 2) Digital Teaching Techniques, ICT Academy, Aug. 2020.
- 3) Non-linear Dynamics- An Introduction, Bharathidasan University, Jul. 2020.

- 4) Journey from Semiconductor Physics to Smart Devices to Intelligent Automation, National Institute of Technology Srinagar and Semiconductor Society of India, May 2021.

Participation in Faculty Development Programme

- FDP on “Framework for Internet of Things (IoT) Applications”, Center for Internet of Things (IoT), Dr.N.G.P. Arts and Science College, 21-Sep-21 to 24-Sep-21 and 28-Sep-21 to 30-Sep-21.
- AICTE Sponsored Faculty Development Programme on “Recent Trends in Nanomaterials and its Applications”, Department of Chemical Engineering, Coimbatore Institute of Technology, Coimbatore, 15th-27th February 2021.
- International webinar on “Tuning the Morphology of Nanomaterials for Electrochemical Sensing Applications”, Department of Chemistry, Kongunadu College of Engineering and Technology, Trichy, 19 June, 2020, One day.
- Online FDP on “Recent Trends in Physics”, Department of Physics, Holy Cross College, 3-6 June, 2020, Four days.
- Webinar on “Fascination of Non Linear Effect in Optics-Non Linear Optics”, Department of Physics, KPR Institute of Engineering and Technology, 30 May,2020, One day.
- One week FDP Programme on “Quality Initiatives in Higher Education”, Dr. N.G.P. Arts and Science and Consortium Colleges, 13-Apr-20 to 20-Apr-20

Conference / Seminar / Workshop Organized

- Committee Member, National Conference on Recent Trends in Basic and Applied Sciences, Dr. N.G.P. Arts and Science College, Coimbatore, 02-Mar-20 to 03-Mar-20.
- Organized an Intercollegiate Spectra`22 in Dr.N.G.P Arts and Science College, Coimbatore on 28-feb-22.

Invited Speaker / Session Chair- Conference / Seminar / Workshop

- Resource Person for the workshop “5 days International Virtual Workshop on Introduction to Research based Characterization Tools and Techniques” on 24th August 2021 at Rathinam College of Arts and Science.
- Virtual Alumni Talk on “Research Friendly Software for Review and Bibliography” on 24th December 2021 at Vellore Institute of Technology, Vellore.

Awards / Honors

Awards / Honors	Agency / Institute	Year of Award
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Research Award	Vellore Institute of Technology, Vellore	2017
DRNGPASC PhD Awardee	Dr. N.G.P. Arts and Science College, Coimbatore	2020