

Faculty Profile



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Name: Dr. G. S. V. R. K. CHOUDARY
Department: Physics and Electronics
Designation: Assistant Professor
Qualification: M.Sc (Physics), M.Phil, Ph.D (Physics)
Areas of Interest: Material Science, Magnetic Materials, Nano Materials

◆ Research Projects Undertaken:

Development of nano magnetic materials suitable for medical applications using modified sol gel method, Funded by (UGC –SERO) 2017-2019

◆ Publications:

01. Chintala, J. N. P. K., Kaushik, S. D., Varma, M. C., Choudary, G. S. V. R. K., & Rao, K. H. (2020). An Accurate Low Temperature Cation Distribution of Nano Ni-Zn Ferrite Having a Very High Saturation Magnetization. *Journal of Superconductivity and Novel Magnetism*, 34(1), 149–156. <https://doi.org/10.1007/s10948-020-05728-3>
02. Kokkanda Ratnaih, Venkata Krishna Prasad, N., Ramesh Singampalli, Sarma, M.S.S.R.K.N., Choudary, G.S.V.R., & Srinivasa Rao Kurapati, (2021) X-Ray Diffraction and Magnetic Properties of Nd Substituted NiZnFe₂O₄ Characterized by Rietveld Refinement, *Biointerface Research in Applied Chemistry*, Volume 11, Issue 2, 9062 – 9070
03. Lakshminadh, M., Murugan, M., Choudary, G. S. V. R. K., & Varma, M. C. (2020). Impact of annealing temperature on resonance field, line-width, and anisotropy in Ni_{0.65}Zn_{0.35}Fe₂O₄, *AIP Conference Proceedings* 2269 030055; <https://doi.org/10.1063/5.0019888>
04. Nagamalleswari Tummupudi , Sreenivasulu Modem , Nitchal Kiran Jaladi, **Gsvrk Choudary** , Srinivasa Rao Kurapati, (2020) Structural, morphological, optical and mechanical studies of annealed ZnO nano particles, *Physics of Condensed Matter, Physica B* 597 412401
05. Jaganadha Rao, M., Murthy, K. S. R., Ravi Shankar Kumar, CH., Anjali Jha, Choudary, G.S.V.R., and Chaitanya Varma, M., (2020), Structural Analysis using X-Ray Diffraction and FTIR Spectroscopic Studies on Mn²⁺ Substituted CaWO₄ Materials

Synthesized by Coprecipitation Method, *Asian Journal of Chemistry*; Vol. 32, No.1 49-52

06. Gangaswamy, D.R.S., Choudary, G.S.V.R., Varma, M.C. *et al.* Enhanced Magnetic Permeability in $\text{Ni}_{0.55-y}\text{Co}_y\text{Zn}_{0.35}\text{Mg}_{0.10}\text{Fe}_2\text{O}_4$ Synthesized by Sol-Gel Method. *J Supercond Nov Magn* **31**, 3753–3760 (2018).
<https://doi.org/10.1007/s10948-018-4638-3>
07. Gangaswamy, D., Bharadwaj, S., Chaitanya Varma, M., Choudary, G., & Rao, K. (2018). Unusual increase in permeability in cobalt substituted Ni-Zn-Mg ferrites. *Journal of Magnetism and Magnetic Materials*, *468*, 73–78.
<https://doi.org/10.1016/j.jmmm.2018.07.075>
08. Uday Bhasker, S., Choudary, G., & Reddy, M. R. (2018). Modulation in magnetic exchange interaction, core shell structure and Hopkinson's peak with chromium substitution into Ni 0.75 Co 0.25 Fe 2 O 4 nano particles. *Journal of Magnetism and Magnetic Materials*, *454*, 349–355.
<https://doi.org/10.1016/j.jmmm.2018.01.093>
09. Srinivasa Rao, K., Ranga Nayakulu, S., Chaitanya Varma, M., Choudary, G., & Rao, K. (2018). Controlled phase evolution and the occurrence of single domain CoFe_2O_4 nanoparticles synthesized by PVA assisted sol-gel method. *Journal of Magnetism and Magnetic Materials*, *451*, 602–608.
<https://doi.org/10.1016/j.jmmm.2017.11.069>
10. Chaitanya Varma, M., Bharadwaj, S., Choudary, G. S. V. R. K., Murthy, K. S. R., & Rao, K. H. (2017). Influence of magnesium-substituted Ni–Zn ferrites on magnetic and electric losses at lower frequency. *International Journal of Modern Physics B*, *31*(09), 1750063.
<https://doi.org/10.1142/s0217979217500631>
11. Murthy, K. S. R., Choudary, G. S. V. R. K., and Chaitanya Varma, M., Laxminadh. M, (2016) Synthesis and Properties of $\text{Ni}_{0.9}\text{Zn}_{0.1}\text{Fe}_2\text{O}_4$ Ferrite, *International Journal of Engineering Science and Computing*, August 2016, Vol-6, Issue-8,
12. Murthy, K. S. R., Choudary, G. S. V. R. K., and Chaitanya Varma, M., (2016) Structural, Magnetic and Electrical Properties of $\text{Ni}_{0.8}\text{Zn}_{0.2}\text{Fe}_2\text{O}_4$ Ferrite Synthesized By Sol-Gel Method, *Imperial Journal of Interdisciplinary Research (IJIR)* Vol-2, Issue-11, ISSN: 2454-1362,
13. Murthy, K. S. R., Chaitanya Varma, M., Dasari Madhava Prasad & Choudary, G. S. V. R. K., (2016) Synthesis and Properties of Different Concentration of Zinc Substituted In Nickel Ferrite, *Imperial Journal of Interdisciplinary Research (IJIR)* Vol-2, Issue-12, ISSN: 2454-1362
14. Laxminadh. M, Choudary, G. S. V. R. K., Padmaja Rani, G., Sivasankara Rao, ch., & Ravi Kumar, G., (August, 2015) Influence Of Chelating Agent (Pva & Peg) On The Microstructure And Magnetization Of Ni-Zn Nanoferrites, *International Journal of Recent Advances in Multidisciplinary Research* Vol. 02, Issue 08, pp.0631-0636.
15. Rao, K., Choudary, G., Rao, K., & Sujatha, C. (2015). Structural and Magnetic Properties of Ultrafine CoFe_2O_4 Nanoparticles. *Procedia Materials Science*, *10*, 19–27. <https://doi.org/10.1016/j.mspro.2015.06.019>
16. Choudary, G. S. V. R. K., Chaitanya Varma, M., & Rao, K.H., (2014) Effect of Nd^{3+} on Electrical Resistivity and Dielectric properties of Ni-Zn ferrite, *Indian Journal of Research in Pharmacy and Biotechnology* ISSN: 2320-3471; Issue 1, 36-41
17. Prameela, P., Kumar, A. M., Choudary, G., Rao, K., & Reddy, V. (2014). Cation distribution in Ni–Cu–Zn nanoferrites from 57 Fe in-field Mössbauer spectra. *Materials Research Bulletin*, *59*, 1–5. <https://doi.org/10.1016/j.materresbull.2014.04.072>

18. Chaitanya Varma, M., Choudary, G. S. V. R. K., Mahesh Kumar, A., & Rao, K.H., Estimating the cation distributions in $\text{Ni}_{0.65-x}\text{Zn}_{0.35}\text{Co}_x\text{Fe}_2\text{O}_4$ ferrites using X-ray, FT-IR and Magnetization Measurements, *Hindawi Publishing Corporation, Physics Research International*, volume 2014, Article ID 579745
19. Choudary, G. S. V. R. K., Prameela, P., Chaitanya Varma, M., Mahesh Kumar, A., & Rao, K.H., (2013) Contribution to Analysis of Co/Cu Substituted Ni-Zn Ferrites, *Hindawi Publishing Corporation, Indian Journal of Materials Science*, Volume 2013, Article ID 350707, 7 pages
20. Mahesh Kumar, A., Raju, T.P., Appa Rao, P., Chaitanya Varma, M., Choudary, G. S. V. R. K., Rao, K. S., & Rao, K.H., (Oct 2012) Cation Distribution in $\text{Mn}_{0.7}\text{Me}_{0.3}\text{Fe}_2\text{O}_4$ (Me = Ni, Co and Zn), *International Journal of Advanced Research in Science and Technology* vol.1 Issue 1, pp 1-4.
21. Chaitanya Varma, M., Mahesh Kumar, A., Choudary, G. S. V. R. K., & Rao, K.H., (2012) Effect Of Particle Size On Saturation Magnetization And Magnetic Anisotropy Of $\text{Ni}_{0.65}\text{Zn}_{0.35}\text{Fe}_2\text{O}_4$ Nanoparticles, *International Journal of Nanoscience* Vol. 11 No 3 1240003 (6 pages)
22. Mahesh Kumar, A., Chaitanya Varma, M., Choudary, G., Prameela, P., & Rao, K.H, (2012). Influence of gadolinium on magnetization and DC resistivity of Ni–Zn nanoferrites. *Journal of Magnetism and Magnetic Materials*, 324(1), 68–71. <https://doi.org/10.1016/j.jmmm.2011.07.045>
23. Choudary, G. S. V. R. K., Varma, M. C., Kumar, A. M., Rao, K. H., Ravi Kumar, B.(2011). Enhancement Of Magnetic Properties In Cobalt Substituted Ni-Zn Nanoferrite System. *AIP Conf. Proc.* Published. <https://doi.org/10.1063/1.3601780>
24. Kumar, A. M., Rao, P. A., Varma, M. C., Choudary, G., & Rao, K. H. (2011). Cation Distribution in $\text{Co}_{0.7}\text{Me}_{0.3}\text{Fe}_2\text{O}_4$ (Me = Zn, Ni and Mn), *Journal of Modern Physics*, 02(09), 1083–1087. <https://doi.org/10.4236/jmp.2011.29132>
25. Kumar, A.M. & Varma, M. & **Choudary, G.** & Rao, K.S. & Rao, K.H. & Gopalakrishna, G.. (December, 2010). DC resistivity and magnetic parameters of Ni-Cr-Zn nanoferrites. *Journal of Optoelectronics and Advanced Materials*. Vol 12. Iss 12, pp 2386-2390. <https://joam.inoe.ro/volume/2010/12/12/December%202010/articles>
26. Rao, K. S., Kumar, A. M., Varma, M. C., Choudary, G., & Rao, K. (2009). Cation distribution of titanium substituted cobalt ferrites. *Journal of Alloys and Compounds*, 488(1), L6–L9. <https://doi.org/10.1016/j.jallcom.2009.08.086>

◆ Papers Presented in Conference:

01. “Impact of Sodium Dodecyl Sulphate on Structural Properties in Cobalt Nano Ferrite” Devy.K¹ M Murugan^{2*} GSVRK Choudary³ M C. Verma⁴ A. Patrick, Prabhu International e-conference on Material Processing & Characterization (ICMP&C 2020) 18th and 19th September 2020, CHAITANYA BHARATH Institute of Technology, Hyderabad, Telangana
02. “Impact of annealing temperature on resonance field, line width and anisotropy in $\text{Ni}_{0.65}\text{Zn}_{0.35}\text{Fe}_2\text{O}_4$ ” M Lakshminadh¹ M Murugan^{2*} GSVRK Choudary³ M C Verma⁴ *International Conference on Multifunctional Materials (ICMM 2019), December 19th to 21st 2019, Gethanjali College of Engineering and Technology, Hyderabad*
03. “Co-Zn Nano Ferrites with High Saturation Magnetization and Low Curie Temperature Suitable for Biomedical Applications” P. Appa Rao¹, K S Rao², M Chaitanya Varma³, G

- S V R K Choudary^{4*}, and K H Rao⁵ *International Conference on Materials Science & Technology 1-4 March, 2016, University of Delhi, Delhi, India*
04. Effect Of Nd³⁺ on Electrical Resistivity and Dielectric Properties of Ni-Zn ferrite, G S V R K Choudary, M Chaitanya Varma, and KH Rao, *National Conference on Advanced Functional Materials and Computer Applications in Materials Technology (CAMCAT-2014) pages 36-41 on December 2015*
 05. “Effect Of Co/Cu Substitution On Structural and Magnetic Properties of Small Sized Ni-Zn ferrite System” G S V R K Choudary, P.Prameela, M Chaitanya Varma, A.Mahesh Kumar, K.H Rao *Second International Conference on Materials for future-2011(ICMF-2011) Govt. Engg. College, Kozhikode, Thirusur.*
 06. “Analysis of effect of cobalt on The Structural and Magnetic Properties of Ni-Zn Nano Ferrite” G S V R K Choudary, M Chaitanya Varma, A Mahesh Kumar, P Prameela, KH Rao, B Ravi Kumar *International Conference on NANOSCIENCE, NANOTECHNOLOGY & ADVANCED MATERIALS, 17-19 December,2010, Gitam University, Visakhapatnam, INDIA 530045.*
 07. “Anisotropic Considerations at critical crystallite size in Ni-Zn Ferrite Nano Particles” A Mahesh Kumar,, M Chaitanaya Varma, G S V R K Choudary, K H Rao, J M Greneche *International conference on Nano Science and Technology ICONSAT – 2010 at IIT, Bombay*
 08. “Influence of pH value on crystallite and grain size in Ni-Zn nanoferrite particles” A Mahesh Kumar,, M Chaitanaya Varma, G S V R K Choudary, M Malleswari, G S N Rao and K H Rao, *International Conference on Recent Trends in Nanoscience and Technology, p. 52-54 (2006) Kolkata.*

❖ **Workshops/ Refresher courses /Training programs Attended:**

Attended one-week AICTE sponsored online Short-Term Training Programme (STTP) on Emerging Trends in Nanomaterials for Electronic and Optoelectronic Devices (Series I: Synthesis and Functionalization of Nanomaterials) organized by Department of Electronics & Communication Engineering from May 10-15, 2021.

Attended online certificate course on NMR Spectroscopy-Principle and Applications organized by Department of Applied Chemistry, Karunya Institute of Technology and Sciences, Coimbatore, Tamil Nadu, India from 25th -27th February 2021

Attended 40-hour online Faculty Development programme on Nanomaterials: Experimental Design & Theoretical modeling from 13th to 20th February 2021, organized by Department of Sciences, IIITDM, kurnool

Attended and organized a Five-day Faculty Development Programme Material Characterization Techniques from 2nd to 6th. February 2021

Attended one day **Workshop** on “MATLAB-for Scientific Computation and Visualization” organized by Department of Physics, Bhavans Vivekananda College of Science Humanities and Commerce, Sanikpuri, Secunderabad from 8th January 2021

Attended Online Workshop on **Rietveld Refinement Method** organized by UGC-DAE Consortium for Scientific Research, Mumbai Centre in association with Indore Centre, September 22 - 24, 2020.

Participated International e-conference on Material Processing & Characterization (ICMP&C 2020) from 18th and 19th September 2020, organized by CHAITANYA BHARATH Institute of Technology, Hyderabad, Telangana

Attended one week Faculty Development programme on Recent Trends in Material Science and Technology from 25th to 29th August 2020, organized by Department of Physics, HITAM

Attended Two day Workshop on Material Characterization Techniques from 20th to 22nd July 2020, organized by Chitkara University Research and Innovation Network, Chitkara University, Punjab.

Attended **Work shop** on “Physisc with Low Temperature and High Magnetic Field” at UGC-DAE Consortium for Scientific Research, University Campus, Khandwa Road, Indore from March 14 to 18, 2011

Attended one day **Work shop** on “Nano-materials and devices for Energy Applications” Feb 17, 2010 at IIT, Bombay, Mumbai, India.

Attended five day Faculty Development programme on Building Competancy for online Teaching organized by Department of Languages & IQAC, Bhavans Vivekananda College of Science Humanities and Commerce, Sanikpuri, Secunderabad from June 6-10,2020

◆ **Membership of Professional Bodies:**

From 2018 to till date, Joint Secretary in Dr AS RAO AWARDS COUNCIL a voluntary organization

From 2013 to 2015 was a member in BOS JBIT