

CURRICULUM VITAE

Personal Information:

Dr. M. SUSHMA REDDI

M. Sc, Ph. D.

C/O Door No- 2-42,

Chillapetarajam Vill,

Ranasthalam MD,

Srikakulam Dist,

Pin code: 532409.

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Contact Number: +91 9550095565

Research Experience:

Researcher: 01/2014 – 05/2018

Department of Physics, Andhra University, Visakhapatnam, Andhra Pradesh, India.

Supervisor: Prof. K. Samatha, Department of Physics, Andhra University,
Visakhapatnam, Andhra Pradesh, India.

My research work lies in the field of “Materials Science (Ferrites)”.

Thesis Title: “Systematic Study of Cr Substituted Copper-Cobalt Nano Ferrites”.

Teaching Experience:

From 2018 – till date Assistant Professor (Ad-hoc)

Department of Physics, College of science, Dr.B.R. Ambedkar University, Etcherla,
Srikakulam, Andhra Pradesh, India.

Responsibilities:

Handling theory and laboratory classes for M.Sc. Physics students.

Educational Qualifications:

01/2014- 05/2018

Ph.D. in Physics,

Department of Physics, Andhra University, Visakhapatnam, Andhra Pradesh, India.

Supervisor: Prof. K. Samatha, Department of Physics, Andhra University, Visakhapatnam, Andhra Pradesh, India.

Thesis Title: “Systematic Study of Cr Substituted Copper-Cobalt Nano Ferrites”.

06/2010- 04/2012

M.Sc. in Physics

Department of Physics, M. R. P. G. College, Vizianagaram, Andhra Pradesh, India.

06/2007- 04/2010

B.Sc. in Physics

Govt. Degree College(Men), Srikakulam, Andhra Pradesh, India.

Achievements:

- Andhra Pradesh State Eligibility Test (APSET) was qualified in **2012**
- Selected for UGC-BSR Meritorious Fellowship in 2015 - 2016.

Research Interest:

- Synthesis, characterization of nanoferrite materials and their applications.
- Magnetic materials ferro and antiferro magnetic materials, rare earth ferrites.
- Magnetic storage devices and bio medical applications of magnetic materials.

List of Publications:

1. **M. Sushma Reddi**, M. Ramesh, T. Sreenivasu, G.S.N. Rao, K. Samatha, “Investigation of Structural, magnetic and dielectric properties of Cr^{3+} substituted $Cu_{0.75}Co_{0.25}Cr_xFe_{2-x}O_4$ ferrite nanoparticles”, **AIP Conference Proceedings**, 030202 (2018); doi: 10.1063/1.5032537.
2. S. Yonatan Mulushoa, M. Tulu Wegayechu, G. Tewodros Aregai, N. Murali, **M. Sushma Reddi**, B. Vikram Babu, T. Arunamani, K. Samatha, “Synthesis of spinel $MgFe_2O_4$ ferrite material and studying its structural and morphological properties using solid state method”, **Chemical Science Transactions**, 6 (2017) 653-661.
3. L. Seeta Devi, K. Vijaya Babu, B. Madhavilatha, **M. Sushma Reddi**, K. Samatha,

- V. Veeraiah, “*Structural and Electrochemical Characterizations of Nanostructured Olivine $\text{LiNi}_{1-x}\text{Co}_x\text{PO}_4$ ($x=0.0$ and 0.5) Cathode Materials for Lithium-ion Batteries*”, **South African Journal of Chemical Engineering**, 25 (2018) 42-47.
4. B. Vikram Babu, K. Vijaya Babu, G. Tewodros Aragai, L. Seeta Devi, B. Madhavi Latha, **M. Sushma Reddi**, K. Samatha, V. Veeraiah, “*Structural, electrical and magnetic properties of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ anode material for lithium-ion batteries*”, **Results in Physics**, 9 (2018) 284-289.
 5. B. Vikram Babu, **M. Sushma Reddi**, G. Chandana, K. Surendra, A. RamaKrishna, K. Samatha “*Microstructural, impedance and conductivity studies of magnesium doped lithium titanate materials for Li-ion batteries*”, **Materials Today: Proceedings**, 21/10/2020, <https://doi.org/10.1016/j.matpr.2020.09.366>.
 6. B. Vikram Babu, **M. Sushma Reddi**, K. Surendra, A. Rama Krishna, K. Samatha, V. Veeraiah, “*Synthesis, characterization and electrical studies of Nb-Substituted $\text{Li}_4\text{Ti}_5\text{O}_{12}$ anode materials for Li-ion batteries*”, **Materials Today: Proceedings**, 21/10/2020, <https://doi.org/10.1016/j.matpr.2020.09.310>.
 7. B. Vikram Babu, M. Sushma Reddi, G. Chandana, A. Rama Krishna, N. Gnana Praveena, V. Kondala Rao, M. Tulu Wegayehu, J. Suresh, B. Trinadh, K. Samatha, V. Veeraiah, “*Microstructural and electrical properties of Mg substituted $\text{Li}_4\text{Ti}_5\text{O}_{12}$ synthesized by ceramic method*”, **AIP Conference Proceedings 2269, 030112 (2020)**; <https://doi.org/10.1063/5.0019597>.
 8. K. Surendra, B. Vikram Babu, **M. Sushma Reddi**, G. Chandana, A. Rama Krishna, D. Deenabandhu, A.D.P. Rao, “*Impact of Niobium on Lithium - Titanate Anode Materials of Lithium-ion Batteries*”, Solid State Technology, Vol. 63 No. 1s (2020)
 9. PK Rao, S Srinivasulu, BV Babu, **MS Reddi**, AR Krishna “*Anticancer and antibacterial activity of green synthesized silver nanoparticles using *Adina cordifolia**” Materials Today: Proceedings 43, 1700-1706
 10. PK Rao, BV Babu, **MS Reddi**, KA Devi, AR Krishna, “*Biologically synthesized silver nanoparticles from *shorea robusta L. plant* and associated antibacterial property*” Materials Today: Proceedings 43, 1819-1824

List of Seminars/workshops/Conferences attended

1. National Conference on “Advanced Functional Materials and Compute Applications in Materials Technology (CAMCAT-2014)” during December 18th

- and 19th, 2014 Organized by the Dept. of Physics and Computer Science, Dr. V. S. Krishna Govt. Degree and P.G. College (A), Visakhapatnam.
2. 3rd International conference on “Recent Innovations in Science, Engineering and Management (ICRISEM-16)” organized by Sri Venkateswara college of Engineering and Technology, Srikakulam, Andhra Pradesh on 27-feb-2016.
 3. Awareness workshop on “Experimental Research Facilities in Physics” organized by Department of Basic Sciences & Humanities and Social Sciences, JNTUK-University College of Engineering Vizianagaram.
 4. Three days National Level Workshop on “Nanotechnology- Current and Future Scope (NCFS – 2016)” organized by Department of Mechanical Engineering, Sri Sivani College of Engineering on 5-7th October, 2016.
 5. 2nd A.P. Science Congress, 2016 at Andhra Pradesh Academy of Sciences, Amaravati held at P.B. Siddhartha College of Arts and Sciences, Vijayawada during 7-9th November 2016.
 6. Two days national seminar on “Recent trends in nano science and nano technology on 26th & 27th November 2016-Rtnsnt-2016” organized by Department of Physics, M.R. College (autonomous), Vizianagaram.
 7. The Indian Science Congress Association held at Sri Venkateswara University, Tirupati from January 3 to 7, 2017.
 8. One day national seminar on “Recent Advances in Chemical Sciences on 26th October 2017-RACS-2017” organized by Department of Chemistry, Dr. B.R. Ambedkar University, Srikakulam.
 9. A. P. Science Congress, 2017 on 7-9th November 2017 held at Andhra University, Visakhapatnam.
 10. 2nd International Conference on Condensed Matter and Applied Physics on 24-25th November, 2017 held at Bikaner, Rajasthan.
 11. National workshop on advanced techniques related to analytical, molecular, material testing and statistical tools on 27-29th march, 2018 held at Andhra University, Visakhapatnam.
 12. National seminar on “Physics and Chemistry of Non-Crystalline Materials” on 1st and 2nd December-2017, at Kakani Venkata Ratnam College, Nandigama, Andhra Pradesh.
 13. Two days national seminar on “Emerging Trends in Materials Science and Technology (NSETMST-2018)” held on 9th and 10th March, 2018 at Department of

Physics, Andhra University, Visakhapatnam.

14. Attended for the faculty development programme from 21-01-2019 to 27-01-2019 at Dr. B.R. Ambedkar University, Etcherla, Andhra Pradesh organized by MGNCRE.
 15. Participated in International Conference on “Water, sanitation and hygiene (WASH-2019)” held on 23rd-24th February, jointly organized by Departments Of Biotechnology, Chemistry, Social work and HSS and Basic sciences, Dr. B.R. Ambedkar University, Etcherla, .
 16. A. P. Science Congress, 2019 on 28-30th November 2019 held at Dr. B. R. Ambedkar University, Srikakulam.
 17. Participated in National Webinar on “Agri-Nanotechnologies & Dielectric Materials”
 18. Participated in the one week AICTE sponsored short term training programme on “Synthesis Characterization of Applications of Nanomaterials” during 24th to 29th August-2020.
 19. Participated in International Conference on Science, Engineering & Technology (ICSTE-20) on 6th December-2020 at Tirupati.
 20. National seminar on “Recent trends in Nanoscience & Nanotechnology” organized by the Department of Nanotechnology, Acharya Nagarjuna University on 30th & 31st January, 2020.
 21. National Workshop on “Assessment & Accreditation of HEI’s & Colleges” on 3rd Feb-2020, organized by Internal Quality Assurance cell (IQAC), Dr. B. R. Ambedkar University, Srikakulam.
 22. National Workshop on “Women in Science” organized by College of Science, Dr. B. R. Ambedkar University, Srikakulam on 28th February, 2020.
 23. National Webinar on “Recent Advances in Materials for Sensing and Energy Harvesting” on 22nd June-2020, organized by Dept. of Physics & Dept. of S&H of VFSTR (Deemed to be University), Guntur.
 24. Participated in Faculty Development Programme on “Advances in Nanomaterials & Single Crystal on Practical Device Applications” Organized by Dept. Of Physics, Adikavi Nannaya University on Aug 4th 2021
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Skills:

- Strong knowledge and research experience in magnetic materials.
 - Experience in the preparation of nanomaterials by sol-gel autocombution, citrate gel autocombution methods.
 - Strong background in Synthesis, characterization and analysis of structural, magnetic, electrical and properties of nanoferrites.
 - Proficient in Microsoft office, Origin 8.0
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Research Interests:

- Synthesis and Characterization of Nanomaterials and their applications.
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