

Curriculum Vitae

Personal Information:

Dr. M. Sushmareddi

M. Sc., Ph. D.

Chillapetarajam Vill,

Ranasthalam MD,

Srikakulam Dist,

Pin code: 532409.

Email: sushmamunakala@gmail.com

Contact Number: +91 9550095565

Research Experience

01/2014- 12/2018

Researcher

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

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

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

Teaching Experience:

From 2018 – till date

Assistant Professor (Ad-hoc) at Dr. B.R. Ambedkar University, Etcherla, Srikakulam.

Responsibilities:

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

Educational Qualifications:

- **Ph.D., (Physics) 2018**
Andhra University, Visakhapatnam, India.
- **M.Sc., (Physics) 2010-2012**
M. R. P. G. College, Vizianagaram, Andhra Pradesh, India.
- **B.Sc., (Physics) 2007-2010**
Govt. Degree College, Srikakulam, Andhra Pradesh, India.

Achievements:

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

Administrative Experience:

- ❖ Coordinator & Nodal officer, APSCHE, Dr. B.R. Ambedkar University, Srikakulam.
- ❖ Serving as Head/Course Co Coordinator, Department of Physics, Dr. B.R. Ambedkar University, Srikakulam during the academic year 2020-21.
- ❖ Member, Board of Studies, Department of Physics, Dr. B.R. Ambedkar University, Srikakulam from 2018.

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 nano ferrites.
- Proficient in Microsoft office, Origin 8.0

Research Interests:

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

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 Wegayehu, G. Tewodros Aregai, N. Murali, **M. Sushma Reddi**, B. Vikram Babu, T. Arunamani, K. Samatha, “Synthesis of spinel

- MgFe₂O₄ 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. Madhavalatha, **M. Sushma Reddi**, K.Samatha, V. Veeraiah, "*Structural and Electrochemical Characterizations of Nanostructured Olivine LiNi_{1-x}Co_xPO₄ (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 Li₄Ti₅O₁₂ anode material for lithium-ion batteries*", **Results in Physics**, 9 (2018) 284-289.
 5. 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).
 6. B. Vikram Babu¹, **M. Sushma Reddi**, G. Chandana, A. Rama Krishna, N. Gna na Praveena, V. Kondala Rao, M. Tulu Wegayehu, J. Suresh, B. Trinadh, K. Samatha, and V. Veeraiah, "Microstructural and electrical properties of Mg substituted Li₄Ti₅O₁₂ synthesized by ceramic method" **AIP Conference Proceedings** 2269, 030112 (2020); <https://doi.org/10.1063/5.0019597>.
 7. P.Koteswara Rao, B.Vikram Babu, **M. Sushma Reddi**, K.Anjani Devi, A.Rama Krishna. "Biologically synthesized silver nanoparticles from shorea robusta L. plant and associated antibacterial property" **Materialstoday Proceedings**, Volume 43, Part 2, 2021, Pages 1819-1824.
 8. D.Vijaya Lakshmi, B.Vikram Babu, A.Rama Krishna, **M.Sushma Reddi**, M.K.Raju, B.Sathish Mohan, B.Sridharg P.V.Lakshmi Narayana, "Structural, morphological and vibrational properties of Li₄Ti_{5-x}Nb_xO₁₂ anode materials", **Materials Science for Energy Technologies**, Volume 5, 2022, Pages 30-35.
 9. B. Vikram Babu, **M. Sushma Reddi**, A. Rama Krishna, B. Sathish Mohan, G. Chandana, K. Anjani Devi, B. Sridhar & K. Samatha, "Structural, Impedance and Modulus Studies of Effect of Magnesium (Mg) Substitution on Spinel Li₄Ti₅O₁₂ Anode Materials" **Transactions on Electrical and Electronic Materials** (2022), <https://doi.org/10.1007/s42341-021-00377-2>.
 10. B. Vikram Babu, **M. SushmaReddi**, G. Chandana, K. Surendra, A. Rama Krishna, K.Samathaa "Microstructural, impedance and conductivity studies of magnesium

- doped lithium titanate materials for Li-ion batteries” **Materialstoday Proceedings** Volume 43, Part 2, 2021, Pages 1539-1544.
11. B.Vikram Babu, **M. Sushma Reddi**, K.Surendra, A.Rama Krishna, K.Samatha, V.Veeraiah, “Synthesis, characterization and electrical studies of Nb-Substituted Li₄Ti₅O₁₂ anode materials for Li-ion batteries” **Materialstoday Proceedings**, Volume 43, Part 2, 2021, Pages 1485-1490.
 12. P.Koteswara Rao, S.Srinivasulu, M.Ravindranadh, B.Vikram Babu, **M. SushmaReddi**, A.Rama Krishna, “Anticancer and antibacterial activity of green synthesized silver nanoparticles using *Adina cordifolia*” **Materialstoday Proceedings**, Volume 43, Part 2, 2021, Pages 1700-1706

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. 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.

18. National seminar on “Recent trends in Nanoscience & Nanotechnology” organized by the Department of Nanotechnology, Acharya Nagarjuna University on 30th & 31st January, 2020.
 19. National Workshop on “Women in Science” organized by College of Science, Dr. B. R. Ambedkar University, Srikakulam on 28th February, 2020.
 20. International Conference on Science, Engineering & Technology (ICSTE-20) on 6th December 2020 in Tirupati.
 21. Advances in nanomaterials & Single crystals on Practical Device Applications, organized by the Department of Physics, Adikavi Nannaya University on 3rd Feb-2021.
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References contact information

Prof. K. Samatha
Professor
Department of Physics
Andhra University
Visakhapatnam- 530003
Mob: +91- 9441044529
Email: samatha_k2002@yahoo.co.in
