



School: **Physical Sciences**

Department: Pure & Applied Physics

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Google Scholar:

<https://scholar.google.com/citations?user=SVQ8VfYAAAAJ&hl=en>

ORCID: <https://orcid.org/0000-0002-9929-0815>

Qualifications:

- ✓ Ph.D in Physics (Materials Science), awarded on 19th Jun 2013, Department of Physics, [Osmania University](#), Hyderabad, Telangana, India.

Research Experience:

- ✓ Dr. D. S. Kothari Postdoctoral Fellow (11th Sep 2013 to 10th Sep 2016), School of Physics, [University of Hyderabad](#), Hyderabad, Telangana, India.
- ✓ Postdoctoral Fellow (11th Sep 2016 to 27th Nov 2019), Materials Research Centre, [Indian Institute of Sciences-Bangalore](#), Bangalore, Karnataka, India.

Teaching Experience:

- ✓ [Assistant Professor](#) (currently working), Guru Ghasidas Vishwavidyalaya (A central University, act 2009), Department of Pure & Applied Physics, Koni, Bilaspur, Chhattisgarh, India. (Since 28th Nov 2019 to till date).

Area of Interest/Specialization: Materials Science

Credentials:

- ✓ Selected as **"Scientist-C"** at [CSIR-CGCRI](#), Kolkata, W.B, India. Advt. No.: 01/2012&2013, (Result File. No.: A-1(4)/2013-R&A/SA dated 13/12/2013)
- ✓ [Associate Fellow](#), Telangana Academy of Sciences, Hyderabad, Telangana (since 2019 onwards).

Awards and Honors:

- ✓ Dr. D. S. Kothari Postdoctoral fellowship
- ✓ UGC Postdoctoral fellowship Award
- ✓ Rajiv Gandhi National Fellowship Award

Research Projects:

[UGC Startup Grant](#), New Delhi, India (ongoing).
(Ref. No: [UGC \(No. F.30\)-551/2021\(BSR\)](#) dated 30th November)

Research Supervision:

1. **Chuleshwari Jaiswal** (Pursuing Ph.D)
(Reg. No.: 215063614, Date: 14 Nov 2022)

Membership in Scientific Societies:

- ✓ [Magnetic Society of India \(MSI\)](#), life time membership no: LM707, since 23/11/2016 onwards.
- ✓ [Materials Research Society of India \(MRSI\)](#), life time member since 06/01/2017 onwards.

Best Peer Reviewed Publications in Journals (up-to 10):

1. Optical absorption and IR studies on $25\text{Bi}_2\text{O}_3-(75-x)\text{B}_2\text{O}_3-x\text{BaO}$ ($0 \leq x \leq 25$) glasses. *SCI-Journal, I.F: 6.2*
[Journal of Alloys and Compounds](#), Volume 490, Issues 1–2, 4 February 2010, Pages 1–4.
R. Vijaya Kumar, Shashidhar Bale, ChSrinivasu, M.A. Samee, K. Siva Kumar, Syed Rahman
2. Mixed cation effect in $x\text{R}_2\text{O}-(40-x)\text{Na}_2\text{O}-50\text{B}_2\text{O}_3-10\text{Bi}_2\text{O}_3$ ($\text{R} = \text{Li}, \text{K}$) glasses. *SCI-Journal, I.F: 5.4*
[Materials Research Bulletin](#), Volume 45, Issue 10, October 2010, Pages 1533–1536.
Syed Rahman, Shashidhar Bale, R. Vijaya Kumar, N. Srinivasa Rao
3. MDSC, electrical conductivity and optical absorption studies of $40\text{B}_2\text{O}_3-20\text{CdO}-(40-x)\text{Bi}_2\text{O}_3-x\text{Li}_2\text{O}$ glasses. *SCI-Journal, I.F: 3.5*
[Solid State Sciences](#), Volume 13, Issue 2, February 2011, Pages 379–383.
R. Vijaya Kumar, Ch. Srinivasu, K. Siva Kumar
4. AC impedance studies on $\text{LiFe}_5-x\text{Mn}_x\text{O}_8$ ferrites. *SCI-Journal, I.F: 6.2*
[Journal of Alloys and Compounds](#), Volume 513, 5 February 2012, Pages 289–293.
B. Ramesh, S. Ramesh, R. Vijaya Kumar, M. Lakshmi pathi Rao
5. Structural studies of $40\text{B}_2\text{O}_3-20\text{CdO}-(40-x)\text{Bi}_2\text{O}_3-x\text{Li}_2\text{O}$ glasses. *SCI-Journal, I.F: 3.9*
[Optical Materials](#), Volume 35, Issue 12, October 2013, Pages 2267–2274.
R. Vijaya Kumar, P. Gayathri Pavani, B. Ramesh, Md. Shareefuddin, K. Siva Kumar
6. Effect of alkaline earth oxides on spectroscopic investigations of copper ion doped lithium borate glasses. *SCI-Journal, I.F: 3.5*
[Journal of Non-crystalline Solids](#), Volume 426, 15 October 2015, Pages 47–54.
Ashok Bhogi, R. Vijaya Kumar and P. Kistaiah
7. Characterization of ZnO based BoroTellurite glass system. *SCI-Journal, I.F: 0.7*
[Physics and Chemistry of Glasses](#): April 2016, 57 (2), 104–110
[European Journal of Glass Science & Technology Part-B](#)
P. Gayathri Pavani, R. Vijayakumar and V. Chandra Mouli
8. Magnetic and dielectric properties of Co doped nano crystalline Li ferrites by auto combustion method. *SCI-Journal, I.F: 2.7*
[Journal of Magnetism and Magnetic Materials](#), Volume 406, 2016, Pages 110–117.
G. Aravind, M. Ragasudha, D. Ravinder, R. Vijaya Kumar
9. Correlated vibrations of the tetrahedral and octahedral complexes and splitting of the absorption bands in FTIR spectra of Li-Zn ferrites. *SCI-Journal, I.F: 2.5*
[Vibrational Spectroscopy](#), Volume 92, 2017, Pages 67–272.
V. Rathod, Anupama A.V., R. Vijaya Kumar, V.M. Jali, B. Sahoo
10. Electrical properties of $\text{NdCr}_{1-x}\text{Fe}_x\text{O}_3$ perovskite ceramic nanoparticles-An impedance spectroscopy Studies. *SCI-Journal, I.F: 5.4*
[Materials Research Bulletin](#), Volume 94, October 2017, Pages 385–398
Jada Shanker, B. Vittal Prasad, M. Buchi Suresh, R. Vijaya Kumar, D. Suresh Babu
11. Influence of Fe substitution on structural and electrical properties of Gd orthochromite ceramics. *SCI-Journal, I.F: 6.2*
[Journal of Alloys and Compounds](#), Volume 732, 25 January 2018, Pages 314–327
Jada Shanker, K. Venkataramana, B. Vittal Prasad, R. Vijaya Kumar, D. Suresh Babu

12. Cation distributions and magnetism of Al-substituted CoFe_2O_4 - NiFe_2O_4 solid solutions synthesized by sol-gel auto-combustion method. *SCI-Journal, I.F: 5.2*
[Ceramics International](#), Volume 44, Issue 17-2018, Pages 20708-20715.
 R. VijayaKumar, A.V. Anupama, R. Kumar, H.K. Choudhary, G. Aravind, B. Sahoo
13. Magnetic reversal in $\text{NdCr}_{1-x}\text{Fe}_x\text{O}_3$ perovskite nanoparticles. *SCI-Journal, I.F: 4.6*
[Materials of Chemistry and Physics](#), Vol 251 (2020) 12398.
 Jada Shankar, R. Vijaya Kumar, G. Narsing Rao, D. Suresh Babu
14. Impact of Fe substitution on electrical properties of ErCrO_3 semiconductor perovskite ceramic nanoparticles. *SCI-Journal, I.F: 6.2*
[Journal of Alloys and Compounds](#), Volume 841, 15 November 2020, 155730
 Jada Shankara, R. Vijaya Kumar, M. Buchi Suresh. D. Suresh Babu
15. Effect of Mg-substitution in Co-Ni-Ferrites: Cation distribution and magnetic properties. *SCI-Journal, I.F: 4.6*
[Materials of Chemistry and Physics](#), Vol 251 (2020) 12381
 S.V. Bhandare, R. Kumar, A.V. Anupama, M. Mishra, R. Vijaya Kumar, V.M. Jali, B. Sahoo
16. Experimental and theoretical electron paramagnetic resonance and optical studies of Cu^{2+} spin probe in $\text{BaO}-\text{TeO}_2-\text{Bi}_2\text{O}_3-\text{B}_2\text{O}_3$ glass system. *SCI-Journal, I.F: 3.1*
[Optik](#), Volume 156, March 2018, Pages 289-296
 B. Srinivas, R. Vijaya kumar, Abdul Hameed, G. Ramadevudu, M. Narasimha Chary, Md. Shareefuddin
17. EPR and optical absorption studies of Cu^{2+} ion doped in $x\text{Li}_2\text{O}-(40-x)\text{Bi}_2\text{O}_3-20\text{CdO}-40\text{B}_2\text{O}_3$ glasses
 R. Vijaya Kumar, R. Bhogi Ashok, Shareefuddin. Md, Siva Kumar. K, Ghanashyam Krishna. M, Sunandana. C. S.
[Physics and Chemistry of Glasses: Volume 57, Number 5, October 2016, pp. 223-226\(4\)](#)
[European Journal of Glass Science & Technology Part-B](#) *SCI-Journal, I.F: 0.7*
18. Experimental and theoretical investigations on the EPR parameters and molecular orbital bonding coefficients of VO^{2+} ions in BTTB glasses. *SCI-Journal, I.F: 1.9*
[Philosophical Magazine \(Taylor & Francis\)](#), Vol 17, Pages 1625-1640, 2018.
 B. Srinivas, Abdul Hameed, R. Vijaya Kumar, M. Narasimha Chary, Md. Shareefuddin

Published Papers in national & International Conferences: 15

19. Spectroscopic studies of $x\text{Li}_2\text{O}-(40-x)\text{Bi}_2\text{O}_3-20\text{CdO}-40\text{B}_2\text{O}_3$ Glasses
 R. Vijaya Kumar, A. Edukondalu, P. Muralimohan, M. Srinivas, K. Siva Kumar
[IOP Conf. Series: Materials Science and Engineering](#) 73 (2015) 012008.
21. Effect of Alkaline-earth Metals on Physical and Optical Absorption Studies of Alkali Fluoro-borate Glasses
 Rajashekar Reddy, R. Vijaya Kumar, V. Atchiaiah Naidu and P. Kistaiah
[Research Journal of Recent Sciences](#), Vol. 3(ISC-2013), 1-8 (2014)
22. Physical and optical absorption studies on $x\text{Na}_2\text{O}-(40-x)-\text{Bi}_2\text{O}_3-20\text{CdO}-40\text{B}_2\text{O}_3$ glasses
 R. Vijaya Kumar, V. Rajashekar Reddy, S. Srinu Naik, and K. Siva Kumar
[AIP conference Proceedings](#) 1591, Pages 762-764, 58th DAE Conference
23. Optical Characterization of Sodium Calcium Fluoroborate Glasses Containing Certain Transition Metals
 Rajashekar Reddy, R. Vijaya Kumar and P. Kistaiah
[IJIRSET](#), Volume 3, Special Issue 2, pages 72-79

24. Vibrational spectra and structure of Li₂O-K₂O-WO₃-B₂O₃ glasses
A. Edukondalu, Abdul Hameed, B. Kavitha, R. Vijaya Kumar, K. Siva Kumar
[Materials Today Proceedings](#): Volume 2, Issue 3, 2015, Pages 913-917
25. FTIR and Raman studies on 25Bi₂O₃-(75-x)B₂O₃-xBaO glasses
R. Vijaya Kumar, A. Edukondalu, B. Srinivas, G. Sriramulu, M. Ghanashyam Krishna, K. Siva Kumar
[AIP conference Proceedings](#), 59th DAE Conference, 1665, 070038 (2015).
26. Optical Characterization of Copper Ion Doped Li₂O-SrO-B₂O₃ Glasses
Ashok Bhogi, R. Vijaya Kumar and P. Kistaiah
[Third National Conference on Applied Physics and Materials sciences](#)
Vasavi College of Engineering, Hyderabad, Telangana
7-8 August 2015. Page.71-73. ISBN: 978-93-82570-64-6.
27. Study of Physical and Optical properties of MgO based bismuth borate glasses
P. Gayathri Pavani, R. Vijaya Kumar, G. Aravind and V. Chandra Mouli
[Science Spectrum](#), Vol 1(1) pages 26-32 January 2016, ISSN 2455-5053
28. Dielectric Properties of Nano Crystalline Cobalt Substituted Lithium Ferrites by Citrate-gel Auto Combustion Method
G. Aravind, B. Nehru, R. Vijaya Kumar, D. Ravinder,
[Materials Today](#), 3 (2016) 1423-1428.
29. DSC and Optical studies on BaO-Li₂O-B₂O₃-CuO glass system
Ashok Bhogi, R. Vijaya Kumar, Saik Kareem Ahmmad and P. Kistaiah
[AIP conference Proceedings](#), 1728, 020583 (2016), doi: 10.1063/1.4946634.
30. Physical and Optical Absorption Studies of Fe³⁺ - ions doped Lithium Borate glasses containing Alkaline earths
Ashok Bhogi, R. Vijaya Kumar and P. Kistaiah
[AIP conference Proceedings](#), 1731, 070038 (2016); doi: 10.1063/1.4947870.
31. Electron paramagnetic resonance spectra of copper ion doped lithium barium borate glasses
Ashok Bhogi, R. Vijaya Kumar, and P. Kistaiah
[AIP conference Proceedings](#), 1832, 070025-1-070025-3, 61st DAE Conference
32. FC and ZFC magnetic properties of ferrous-spinels (MFe₂O₄) prepared by solution combustion method
G. Aravind, R. Vijaya Kumar, V. Nathaniyal, T. Rambabu, and D. Ravinder
[AIP conference Proceedings](#), 1859, 020079-1-020079-5,
International Conference on Functional Materials, Characterization, Solid State.
33. Optical absorption and FTIR studies of Cu²⁺ ion doped in 25Li₂O-15BaO-(60-x)B₂O₃ glasses
Ashok Bhogi, R. Vijaya Kumar, P. Kistaiah
[IOP Conf. Series: Materials Science and Engineering](#), 360 (2018) 012018.
34. Structure and Magnetic Properties of Ni Substituted Co Mg Nano crystalline Ferrites Synthesized by Sol Gel Auto Combustion Method
Shilpa Bhandare, Harish Choudhary, AV Anupama, R. Vijaya Kumar, Rajeev Kumar, Vivekanand Jali, and Balaram Sahoo
[AIP conference Proceedings](#), 1859, 020079-1-020079-5.

Administrative Responsibilities:**Member in:**

- ✓ NSS Program Officer for BOY's (Pure & Applied Physics)
- ✓ Departmental Discipline Committee (Pure & Applied Physics)
- ✓ Supervision of Departmental Cleaning (from Stores side)

Additional Information:
