

CURRICULUM VITAE

Dr. GADUPUDI VENKATESWARA RAO

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EDUCATION

- **Ph.D in Physics**

Thesis Title: Synthesis, characterization and various properties of CaO-P₂O₅ and CaO-CaF₂-P₂O₅ glasses with silver nanoparticles.

Research Guide: Prof. H.D. Shashikala

Institute: National Institute of Technology Karnataka, Surathkal, Mangalore, Karnataka.

- **M.Sc in Physics**

Specialization: Electronics/Condensed Matter Physics

College: Government College, Rajahmundry, East Godavari (Dist.), Andhra Pradesh.

University: Andhra University.

- **B.Sc in Physics**

Specialization: Maths, Physics & Chemistry

College: VSR & AM Degree College, Martur, Prakasam (Dist.), Andhra Pradesh.

University: Acharya Nagarjuna University.

ACHIEVEMENTS AND AWARDS

Graduate Aptitude Test in Engineering (**GATE-2009**), Feb 2009 in Physics

NITK Research fellowship test, Department of Physics, NITK, Surathkal, 2009.

RESEARCH EXPERIENCE

- (1) Familiar in handling High temperature Muffle furnace and skilled in synthesizing nanoparticles in glasses and rare earth doped glasses for photonics applications using melt quenching technique and heat treatment method

- (2) Familiar in determining the optical energy band gap, Urbach energy of various transparent glasses using fiber optic spectrometer.
- (3) Experience in handling Photoluminescence spectrometer to measure the excitation spectra of different rare earth doped glasses.
- (4) Significant experience to characterize the mechanical properties of glass materials using CLEMEX Digital microhardness tester (Vickers & Knoop indenter attached with optical microscope).
- (5) Good experience in handling Diamond cutting blade to cut the required glass sample dimensions for the characterization.
- (6) Good experience in handling Grinder & Polisher machine to get smooth surface to observe and characterize the surface morphology of materials using optical microscope
- (7) Experience in handling vacuum coating unit and depositing thin films.
- (8) Sound knowledge in Origin, MS Word, Excel and Power Point Presentation.

RESEARCH AREA OF INTEREST

Nanocomposite materials, Rare earth doped glasses and Nonlinear optics.

PUBLICATIONS IN INTERNATIONAL JOURNALS

1. **Venkateswara Rao, G.** and Shashikala, H.D (2014). "Optical and mechanical properties of calcium phosphate glasses." *Glass Physics and Chemistry*, 40(3) 303-309.
2. **Venkateswara Rao, G.** and Shashikala, H.D (2014). "Structural, optical and mechanical properties of ternary CaO-CaF₂-P₂O₅ glasses." *Journal of Advanced Ceramics*, 3(2), 109-116.
3. **Venkateswara Rao, G.** and Shashikala, H.D. (2014) "optical, dielectric and mechanical properties of silver nanoparticles embedded calcium phosphate glass." *Journal of Non crystalline Solids*, 402, 204-209.
4. **Venkateswara Rao, G.** and Shashikala, H.D. (2015) "Effect of heat treatment on optical, dielectric and mechanical properties of silver nanoparticles embedded CaO-CaF₂-P₂O₅ glass." *Journal of Alloys and compounds*, 622, 108-114.

5. **Venkateswara Rao, G.**, Vijaya, N., Joshi, A.S., Shashikala, H.D. and Jayasankar, C.K. (2015) “Mechanical properties of Nd³⁺ doped phosphate laser glasses” *Physics and Chemistry of glasses: Eur. J. Glass Sci. Technol. B*, June 2015, 56(3), 81-84.

PUBLICATIONS IN INTERNATIONAL CONFERENCES

1. **Venkateswara Rao, G.** and Shashikala, H.D. “*Optical behavior of binary calcium phosphate and barium phosphate glasses*” International Conference on Specialty Glass and Optical Fiber. Materials, Technology and Devices (ICGF-2011). 4-6 August, 2011 at CSIR-CGCRI, Kolkata, INDIA.
2. **Venkateswara Rao, G.**, Nagaraja, K. K. Nagaraja, H. S. and Shashikala, H.D. “*Preparation and Characterization of Copper doped Calcium Phosphate Glasses.*” The Third International Conference on Frontiers in Nanoscience and Technology, Cochin Nano-2011, August 14-17, Cochin, INDIA.
3. **Venkateswara Rao, G.**, Bhattacharya, S. and Shashikala, H.D. “*Synthesis of silver nanoparticles embedded calcium phosphate glass*” International union of materials research society, Materials Society of India, International conference in Asia (IUMRS-ICA 2013), December 16-20, 2013, Indian Institute of Science, Bangalore, INDIA.
4. **Venkateswara Rao, G.**, Vijaya, N., Joshi, A.S., Shashikala, H.D. and Jayasankar, C.K. “Mechanical properties of Nd³⁺ doped phosphate laser glasses” International seminar on glasses and other functional materials (ISGFM, 2014), December 11-13, 2014, Acharya Nagarjuna University, Guntur, India.

WORKSHOPS / SEMINARS/ SYMPOSIUMS PARTICIPATED

1. Participated DAE - BRNS 5th National Symposium on “**Pulsed Laser Deposition of Thin films and Nanostructured Materials (PLD 2009)**”, December 02-04, 2009, Indian Institute of Technology, Madras, Chennai, INDIA.
2. Participated International Conference on “**Recent trends in Materials and characterization (RETMAC-2010)**”, February, 14-15, 2010, National Institute of Technology Karnataka Surathkal, INDIA.

3. Successfully Completed “**Faculty Development Program**”, Sponsored by Dept. of Science & Technology, Govt. of India, New-Delhi and organized by NITK-STEP, August 19-30, 2010, National Institute of Technology Karnataka Surathkal, INDIA.
4. Attended the Awareness Work shop on “**The Facilities of UGC - DAE Consortium for Scientific Research**” September 6-7, 2010, Department of Physics, Manipal University, Manipal, INDIA.
5. Attended the Workshop on “**Experimental Techniques in Nonlinear Optics**”, January 19-20, 2011, Raman Research Institute, Bangalore, INDIA.
6. Attended one day symposium on “**Recent Advances in Photonics**”, March 29, 2011. Centre for Atomic and Molecular Physics, Manipal University, Manipal, INDIA.
7. Participated Pre-conference work shop held in connection with “**The Third International Conference on Frontiers in Nanoscience and Technology**”, Cochin Nano-2011, August 14, 2011 Cochin, INDIA.
8. Attended one day symposium on “**Nanoscience & Technology**”, March 09, 2012. Centre for Atomic and Molecular Physics, Manipal University, Manipal, INDIA.
9. Attended one day symposium on “**Recent Advances in Photonics**”, March 10, 2012. Centre for Atomic and Molecular Physics, Manipal University, Manipal, INDIA.
10. Successfully Completed “**Two week refresher course in Experimental Physics**”, July 16-31, 2012, at National Institute of Technology Karnataka Surathkal organized by Indian Academy of Science, Bangalore, (IASc), Indian National Science Academy, New Delhi, (INSA) and National Academy of Sciences, Allahabad (NASI), INDIA.
11. Participated Work shop on “**Experimental Physics for High school Teachers**”, January, 19, 2013, Organized by Department of Physics, National Institute of Technology Karnataka Surathkal, & Block resource centre, Department of Public instructions, Mangalore- North Range, INDIA.
12. Attended three days “**Frontiers in Astronomy**” Sponsored by Sciences Academies, Feb 01-03, 2013, National Institute of Technology Karnataka Surathkal, INDIA.
13. Attended three days work shop on “**Quantum Mechanics and Applications**”, March 22-24, 2013, National Institute of Technology Karnataka Surathkal, INDIA.
14. Attended “**DAE-BRNS, National Laser Symposium**” (NLS-23), December 03-06, 2014, Dept. of Physics, Sri Venkateswara University, Tirupati, INDIA.
15. Participated “**International seminar on glasses and other functional materials**” (ISGFM, 2014), December 11-13, 2014, Acharya Nagarjuna University, Guntur, INDIA.

PERSONAL INFORMATION

Gender : Male
Marital Status : Single
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Yeddanapudi (Mandal),
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Yours Sincerely

G. Venkateswara Rao