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## **ABOUT MYSELF**

Dr. V. Sessa Sai Kumar is an Assistant Professor of Physics at the Department of Humanities and Basic Science, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, India joined in August 2023 and he has more than 15 years of teaching and research experience. His research interest includes synthesis and characterization of nanomaterials, nanofluids and their applications. He has published his research findings in 21 International peer reviewed journals (SCI and SCOPUS indexed journals with 1200 above citations to his articles. He has presented his work in various International and national conferences. He also has hands on experience with several characterization techniques such as X-ray diffractometer , Atomic force microscopy , Fourier Transform Infra red spectrometer, Raman spectrometer and UV- Visible spectrometer

## **ACADEMIC EDUCATION**

- ▯ **B. Sc (M. P. C)** from R.K. Degree College, Vizianagaram. (2003-2005)
- ▯ **M. Sc (Physics)** from Government Art's College, Rajahmundry.(2005-2007)
- ▯ **M. Tech (Nanotechnology)** from Jawaharlal Nehru Technological University Hyderabad, Hyderabad.(2008-2010)
- ▯ **Ph. D (Nano Science & Technology)** from Jawaharlal Nehru Technological University Hyderabad, Hyderabad. (2011-2019)

## **PROFESSIONAL EXPERIENCE**

- **August 2023 – till date:** Assistant Professor, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana
- ▯ **July 2022 – July 2015:** Assistant Professor & Officer Incharge Examinations, Guru Nanak Institute of Technology (Autonomous) , Ibrahimpatnam, Hyderabad, Telangana
- ▯ **June 2015 – February 2011:** Lecturer (Adhoc) Jawaharlal Nehru Technological University Hyderabad, Hyderabad.

## COURSES TAUGHT

- Engineering Physics
- Applied Physics
- Engineering Physics Lab
- Applied Physics Lab
- Nanotechnology
- Synthesis of Nanomaterials
- Properties of Nano Structures
- Nanocomposites - Design & Synthesis
- NEMS and MEMS
- Nano Electronics and Nano Photonics
- Quantum Mechanics
- Synthesis and Characterization of Nanomaterials Lab
- Argulab

## PUBLICATIONS

1. V. Sesha Sai Kumar , K. Venkateswara Rao, “Synthesis and study of ultrasonic parameters of MgO - Ethylene Glycol nanofluids”, Journal of Nanofluids, Volume 7, Issue 2, 2018, pages 269-274.
2. V. S. Sai Kumar, K. V. Rao, Ch.Prasad, Evaluation of acoustic parameters of CeO<sub>2</sub> - ethylene glycol nanofluids for different concentrations, Digest Journal of Nanomaterials and Biostructures, Volume 12, Issue 4, 2017, Pages 965-972.
3. V.S.Sai Kumar, K.V.Rao, “Polymer Assisted Combustion Synthesis Of La-Doped ZnO Nanoparticles-Structural, Thermal, Optical, Morphological Studies”, Journal of Optoelectronics and Biomedical materials, Volume 9, Issue1,2017 , pages 27-36.
4. V.S.Sai Kumar, K.V.Rao, “Investigation Of Ultrasonic Parameters Of ZnO - Ethylene Glycol Nanofluids” Journal of Ovonic Research, Volume 13, Issue1,2017 , pages 91-99.
5. V. Sesha Sai Kumar, K. Venkateswara Rao, Ch. Shilpa Chakra, A. Shiva Kishore Goud & T. Krishnaveni " Synthesis of Nanocrystalline Bismuth Ferrite by Solution Combustion Synthesis Method" Journal of NanoScience, Nanoengineering & Applications, Volume 1, Issue 2, Sep, 2011, pages 52-58.
6. V. Sesha Sai Kumar, K. Venkateswara Rao, T. Krishnaveni, A. Shiva Kishore Goud, P. Ranjith Reddy " Solution combustion synthesis and characterization of nanosized bismuth ferrite" AIP Conference Proceedings, Volume 1447, Issue 1, 2012, pages 339-340.
7. V. Sesha Sai Kumar, K. Venkateswara Rao “ X-ray peak broadening analysis and optical studies of ZnO nanoparticles derived by Surfactant assisted combustion synthesis” Journal of Nano- and Electronic Physics, Volume 5, Issue 2, 2013, pages 02026.
8. Y. T. Prabhu, V. Sesha Sai Kumar, and K. Venkateswara Rao, “Effect of Fe Doping on Structural, Optical and Magnetic Properties of ZnO Nanoparticles Derived by Surfactant Assisted Combustion Synthesis”. Advanced Science, Engineering and Medicine (American Scientific Publications) Vol. 5, 2013, pages 1–8
9. Y.T.Prabhu, K. VenkateswaraRao, V. SeshaSai Kumar, B.Siva Kumari “Synthesis of

- ZnO nanoparticles by a novel surfactant assisted amine combustion method”  
Advances in Nanoparticles, (Scientific Research Publishing) Vol 2, 2013, pages 45-50, doi:10.4236/anp.2013.21009.
10. G. Venkaiah, K. Venkateswara Rao, V. Sessa Sai Kumar, CH. Shilpa Chakra  
“Solution Combustion Synthesis and Characterization of Nano crystalline Lanthanum Ferrite using Glycine as a fuel” International Journal of Materials, Methods and Technologies, Vol.1, No.1, February 2013, pages 01 – 07.
  11. Y.T.Prabhu, K. Venkateswara Rao, V. Sessa Sai Kumar, B.Siva Kumari, “X-Ray Analysis of Fe Doped ZnO Nanoparticles by Williamson-Hall and Size-Strain Plot Methods” International Journal of Engineering and Advanced Technology, Volume-2 Issue-4, April 2013, pages 268-274.
  12. Y.T.Prabhu, K. Venkateswara Rao, V. Sessa Sai Kumar, B.Siva Kumari, “X-Ray Analysis by Williamson-Hall and Size-Strain Plot Methods of ZnO Nanoparticles with Fuel Variation” World Journal of Nano Science and Engineering, Vol.4 No.1 ,2014, pages 21-28.
  13. Y.T. Prabhu, K. Venkateswara Rao and V. Sessa Sai Kumar , “Surfactant- Assisted Combustion Method for the Synthesis of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> Nanocrystalline Powders” Int. J. Pure Appl. Sci. Technol., Volume 18, Issue 1, 2013, pages 1-11.
  14. Subhashini Vedala, K Venkateswara Rao, M Sushama, V. Sessa Sai Kumar,  
"Microstructural, Optical and Morphological Studies of SnO<sub>2</sub> Nanoparticles Obtained by Sol-Gel Method", Invertis Journal of Renewable Energy, Vol. 4, No. 2,2014, pages 83-86.
  15. Yendrapati Taraka Prabhu, Kalagadda Venkateswara Rao, Bandla Siva Kumari, Vemula Sessa Sai, Tambur Pavani, "Nickel and nickel oxide nanocrystals selectively grafting on multiwalled carbon nanotubes" Nano Convergence, Vol-2, Issue-1,2015 pages 1-5, Springer publications.
  16. Y. T. Prabhu, K. Venkateswara Rao, B. Siva Kumari, Vemula Sessa Sai Kumar,Tambur Pavani " Synthesis of Fe<sub>3</sub>O<sub>4</sub> nanoparticles and its antibacterial application" International Nano Letters, (DOI) 10.1007/s40089-015-0141-z, Feb 2015,pages 1-8 , Springer publications.
  17. G.Nithesh Sharma, K.Venkateswara Rao, V.Sessa Sai Kumar, Ch.Shilpa Chakra, V.Rajendar, P. Ranjith Reddy, "La<sub>2</sub>O<sub>3</sub> Nano powders by mixture of fuels approach through chemical combustion for dielectric studies", IOP Conference Series: Materials Science and Engineering, Volume 73, Issue1, 2015,pages 012099.
  18. V.Sessa Sai Kumar , Mohammad Mohiddin, “A Low Cost Air Quality Monitoring Sensor System with Arduino Uno Micro Controller Board on Smart Phone and Laptop”, Advances in Industrial Engineering and Management, Volume 7 , Issue 2,2019, pages 1-8.
  19. C.S Chakra, V.S .Sai Kumar, S Madhuri, P Anusha, TR Kumar, D Rakesh,  
“Adsorption studies and fluoride removal from aqueous solutions by graphene oxide-zinc oxide nanocomposite”, Digest Journal of Nanomaterials and Biostructures, Volume 14, Issue1, 2019, Pages 183-192.
  20. N.Vaishnavi ,M.Shireesha ,V. Sessa Sai Kumar ,N.Rama, “Equation of state models to study compression behavior under pressure: ZnO nanoparticles as an example”, Solid State Technology, Volume 63, Issue 5,2020.
  21. Abhiram Subramanian, M.Shireesha, Yasser Mirza Baig, G.Niharika, E.Sunanda, P.Sarath, Aradhyula Jatin Bhanu Shankar, V. Sessa Sai Kumar, “PACKING A REVOLUTIONARY ACT”, Journal of Tianjin University Science and Technology, Volume 55 Issue05,2022

## **BOOKS**

1. "Solution Combustion Synthesis of Nanocrystalline Bismuth Ferrite" by V.Sesha Sai Kumar, K.Venkateswara Rao, Publishers; Lambert Academic Publications, AV Akademikerverlag GmbH & Co, KG, Deutschland/Germany (ISBN 978-3-659-34512-8).
2. "Novel Synthesis of Fe doped ZnO Nanoparticles & Properties" by Y.T.Prabhu, K.Venkateswara Rao, V.Sesha Sai Kumar, Publishers; Lambert Academic Publications, AV Akademikerverlag GmbH & Co, KG, Deutschland/Germany (ISBN 978-3-659-35372-7)
3. "Seed germination activity – ZnO nanoparticles" by P.Swapna, K.Venkateswara Rao, V.Sesha Sai Kumar, , Publishers; Lambert Academic Publications, AV Akademikerverlag GmbH & Co, KG, Deutschland/Germany (ISBN 978-3-659-37806-5).
4. "Engineering Physics Lab Manual" by V.Sesha Sai Kumar, Publishers; Lambert Academic Publications, AV Akademikerverlag GmbH & Co, KG, Deutschland/Germany (ISBN 978-3330344020).

## **Conferences / FDPs attended**

1. Participated in a 3 Week Residential Faculty Induction Training Program held on 1-30th June 2018 at TLC-IITH.
2. Participated in "International Conference on Nano Science, Nano Engineering & Applications", Jawaharlal Nehru Technological University, Hyderabad held on 4-6th October 2018.
3. Participated in "National Conference on Nano Science, Nano Engineering & Applications", Jawaharlal Nehru Technological University, Hyderabad held on 27-28th April 2012.
4. Participated in Workshop on "Introduction to Nano Science & Technology", Jawaharlal Nehru Technological University, Hyderabad held on 3-4th Sep 2011.
5. Participated and presented a paper in "56th DAE Solid State Symposium", SRM University, Kattankulathur held on 19-23rd Dec 2011.
6. Participated in and presented paper in "National Conference on Materials for Energy Storage and Conversions", Sri Venkateswara University- Tirupathi held on 23-24th Jan'10