

Dr. K. Srinivasa Rao

M.Sc., M.Phil., Ph.D.

Head, Dept. of Physics

Govt. Degree College

Mandapeta

- B.Sc. (MPC with Physics as Main subject) from Andhra University, Waltair, A.P. during the year 1985.
- M. Sc. Physics from Department of Physics, University Teaching Department, A. P. S . University, Rewa, M. P. during the year 1987.
- M. Phil. Physics from School of Studies in Physics, Vikram University, Ujjain, M. P. during the year 1988 (Research Supervisor Prof. B D Shrivastava)

Title of Research

Synchrotron As A Source of White X-Ray Radiation For **XAFS** Spectroscopy
(Research Supervisor Prof. S B Shrivastava)

- Ph. D. in Physics from Department of Physics, Sri Venkateswara University, Tirupati, A. P. during November 2011
(Research Supervisor Prof. S. Buddudu)

Title of Research

Studies on development and characterization of BiNbO₄ ceramic powder and Bi₂O₃-B₂O₃-LiF glass system and also their emission performance with the dopant transition metal or rare earth ions.

- Having 33 years of Teaching Experience in UG Physics.
- Working as a Lecturer in Physics, Govt. Degree College, Mandapeta.
- Chairman, Board of Studies in Physics, Adikavi Nannaya University, Rajamahendravaram,
- Life Member, Indian Science Congress Association.
- Life Member, Indian Laser Association.
- Life Member, Indian Association of Physics Teachers.
- University Nominee in BOS Physics for Sri YN College, Nasrpur, VSM College, Ramachandrapuram, SKSD College, Tanuku, DNR College Bhimavaram, Govt. Degree College, Tuni.

Rolls at the College Previously worked

- Head & Chairman Board of Studies in Physics, VSM College (A) Ramachandrapuram
- Chairman, Board of Studies in Physics, Adikavi Nannaya University,
Rajamahendravaram,
- Worked as a Lecturer in Physics at V,S.M. College, Ramachandrapuram from 18th Sept. 1989 to 8th August 2021.
- Worked as a Naval NCC Officer (ANO) since 22nd May 1994 9th Sept 2021.
- Research Supervisor, Adikavi Nannaya University, Rajamahendravaram.
- RUSA Co-Ordinator, VSM College(A), Ramachandrapuram
- Secretary, V. S. M. College Employees Co-operative Credit Society.
- Convener College Science, Research, Discipline and Admissions Committees.
- Organized a 2 days National Conference on “Recent Trends in Advanced Materials and Characterization (RTAMC-2020) during 29th & 30th of January 2020.
- Taken initiation to publish a special issue of a UGC care listed journal namely “Journal of Information and Computational Science” for the RTAMC-2020 Conference with 22 Research Papers.
- Worked as Controller of Examinations and Member Secretary Academic Council, VSM College (Autonomous) during 2016 to 2019.
- Convener, Discipline Committee College Golden Juble Celebrations,
- Member, Discipline, IQAC, UGC, NAAC Steering, Anti Ragging Squad Committees.
- Worked as Secretary, V. S. M. College Employees Co-operative Credit Society during 3rd November 2005 to 30th August 2009 and elected again as Secretary during the year 2021.
- Worked as Chief Superintendent, Intermediate Public Examinations February 2002.
- Worked as Convener, Internal Examinations Committee, and Magazine Committee.

● **Research Papers Published:**

1. Structural, thermal and dielectric properties of BiNbO₄ ceramic powder
**Journal Ferroelectric Letters Section, Taylor & Francis, New York, USA
37 (6) (2010) 101-109.**
2. Structural and emission characterization of RE³⁺ (=Eu³⁺, Sm³⁺ & Pr³⁺) doped BiNbO₄ ceramic powders
Proc. of Indian National Science Academy (Physical Sciences) Vol. 77, 4/Dec. 2011.
3. Emission Analysis of RE³⁺ (= Nd³⁺ & Er³⁺) Doped Bi₂O₃-B₂O₃-LiF Glass System
American Institute of Physics Proceedings Jan. 2011. Pages 265-268
4. *Structural and Spectral Analysis Host Bi₂O₃-B₂O₃-LiF and RE³⁺(Ho³⁺ or Pr³⁺): Bi₂O₃- B₂O₃-LiF Glasses* **IJESRT International Journal Of Engineering Sciences & Research Technology Vol. 3, Issue 11 Nov. 2014, 227-232.**
5. *Dielectric and Magnetic Properties of Cr³⁺, Mn²⁺ & Fe³⁺ Doped BiNbO₄ Ceramic Powders* **International Journal Of Innovative Research In Science, Engineering and Technology Vol. 3, Issue 12, December 2014, 1333-1340.**
6. *Dielectric Spectroscopy Studies on Lead Sodium Bismuth Potassium Neobate (PNBKN) Ceramic* **International Journal of Advanced Research in Physical Sciences(IJARPS) Volume 2, Issue 3, March 2015, PP 7-21.**
7. *Tunable color emission via energy transfer in co-doped Ce³⁺/Dy³⁺: Li₂O-LiF-B₂O₃-ZnO glasses for photonic applications*
Optical Materials, (ELSEVIER Journal), 72(2017) 781-787, 16th July 2017.
8. *Bright up-conversion white light emission from Er³⁺ doped lithium fluoro zinc borate glasses for photonic applications,* **Journal of Molecular Structure (ELSEVIER Journal), 1155(2018) 394-402, 26th Oct. 2017.**
9. *Efficiency of Solutions to Reduce Water Impurity and Pollutants,* **Research Review International Journal of Multi Disciplinary, January 2019.**
10. *Spectral Investigation of green luminescent Tb³⁺: PVP polymer films,* **Journal of Information and Computational Science, Volume 10, Issue 1, Jan.2020.**
11. *Study on double perovskite Bi₂(NiMn)O₆ material for potential multifunctional devices applications,* **Journal of Information and Computational Science, Volume 10, Issue 1, Jan.2020.**
12. *Transportation of electrical energy based on Electron Spin with helical alignment in metals,* **Journal of Information and Computational Science, Volume 10, Issue1, jan.2020.**

Oral /Poster Papers Presented in International/National Conferences:

1. *Syntheses and Analysis of BiNbO₄ Ceramic Powder*
International Workshop and Symposium on the Synthesis and Characterization of Glass / Glass-Ceramics (IWSSCGGC – 2010).
Centre of Materials for Electronics Technology (C-MET), Pune [July 7-10, 2010].
2. *Analysis of RE³⁺ (= Eu³⁺, Sm³⁺, Pr³⁺) doped BiNbO₄ Ceramic Powders*
International Conference on Multifunctional Materials (ICMM – 2010)
Banaras Hindu University, Varanasi, UP [December 6-9, 2010].
3. *Dielectric Properties of TM (= Cr³⁺, Mn²⁺, Fe³⁺) Doped BiNbO₄ Ceramic Powders*
98th Indian Science Congress Association (ISCA – 2011) S. R. M. University, Chennai, Tamil Nadu [January 3-7, 2011].
4. *Structural, thermal characterization of host Bi₂O₃-B₂O₃-LiF and emission analysis of Pr³⁺ & Ho³⁺ ions doped Bi₂O₃-B₂O₃-LiF glasses*
International Conference on Composites and Nanocomposites (ICNC – 2011)
Mahatma Gandhi University, Kottayam, Kerala State, [January 7-9, 2011].
5. *Emission Analysis of RE³⁺ (= Nd³⁺ & Er³⁺) Doped Bi₂O₃-B₂O₃-LiF Glass System*
XVI – National Seminar on Ferroelectrics & Dielectrics, (NSFD-XVI)
Guru Ghasidas Viswavidyalaya, Bilaspur, Chattisgarh State[December 2-4, 2010].
6. *Studies on development and characterization of BiNbO₄ ceramic powder and Bi₂O₃-B₂O₃-LiF glass system and also their emission performance with the dopant transition metal or rare earth ions*
National Conference on “Emerging Trends in Material Science, Spec-2011”, Muthayammal College of Arts & Science, Rasipuram, Tamilnadu, during February 4-5, 2011.

Courses/Training Programmes Attended :

- Attended 4 week Orientation Course held from 14th December 2000 to 10th January 2001 at Sri Venkateswara University, Tirupathi.
- Attended Refresher Course in Physics held from 20th August 2001 to 9th September 2001 at Andhra University Vishakhapatnam.
- Attended Refresher Course in Physics held from 2nd August 2004 to 22nd August 2004 at Andhra University Vishakhapatnam.
- Attended Refresher Course in Physics held from 5th February 2007 to 2nd March 2007 at Jawaharlal Nehru University, New Delhi.
- Attended National Seminar (UGC) on “Natural Calamities – Role of Scientists and Administrators at Sri Y. N. College, Narasapur on 2nd February 2008 .
- Participated 96th Indian Science Association held from 3rd January 2008 to 7th

January 2008 at Andhra University Vishakhapatnam.

- Participated and presented a paper titled “Studies on Dielectric and Magnetic properties of TM doped Bi NbO₄ Ceramic Powders” in 98th Indian Science Association held from 3rd January 2011 to 7th January 2011 at S.R.M University, Chennai.
- Participated Regional Workshop on “Innovative Experiments in Physics (South Zone)” organized by Vigyan Prasar, Department of Science and Technology, New Delhi and APCOST, Govt. of A.P. at Dept. of Physics, Sri Venkateswara University, Tirupati held from 7th February 2011 to 10th February 2011.
- Participated 100th Indian Science Association held from 3rd January 2013 to 7th January 2013 at Calcutta University Calcutta.
- Participated “Professional Development Programme on ICT Techniques in Higher Education” during March 10-15,2014 at University of Hyderabad, Hyderabad.
- Participated National Seminar on “Human Development index and India” during 14th and 15th November 2014 at V. S.M. College, Ramachandrapuram.
- Participated National Conference on “Advanced Technology Oriented Materials, ATOM-2014” on 8th and 9th December 2014, Govt. Arts College, Rajahmundry.
- Participated National Seminar on “Multi Functional Materials Synthesis and Applications” (MPMSA – 2018) , The Hindhu College, Machilipatnam.
- Participated National Workshop “Spectro Photometry & Chromotography, 20th June, 2016, Sir CRR College, Eluru.
- Participated National Seminar “Applications of Nanomaterials in Energy and Environment 17-18 , Aug. 2016, ASD College for Women, Kakinada.
- Participated National Seminar “Advabce Materials in Science & Technoloy” 23-24, Sept. 2016, PR Govt. College, Kakinada.
- Participated workshop “Value Based Skill Oriented Examinaiton System, 28th Dec. 2016, Adikavi Nannaya University,Rajamahendravarm.
- Participated National Seminar “Indian Agriculture Challenge, 17-18 Nov. 2017, V S M College, Ramachandrapuram.
- Participated International Conference “Renewable Energy – Research & Education”, 8-10, Feb.2018, Govt. Arts College, Rajamahendravarm.
- Participated Workshop on “Bio-Diversity Friendly Sector Plans for Port & Shipping, Fertilizers and Salt Pans, 4th July 2018, Adikavi Nannaya University, Rajamahendravarm.
- Participated National Seminar” A Study on Interaction between Human Society and Natural Environment including Natural Resource Management on 24th & 25th January 2019.
- 7 Day Teacher Training Programme on “Usage of ICT in Teaching Learning Process”

during 2-9 December 2019 organized by MVS JS & RVR College of Arts and Science, Malkipuram.

- Organized a 2 days National Conference on “Recent Trends in Advanced Materials and Characterization (RTAMC-2020) during 29th & 30th of January 2020.
- Faculty Development Programme on “Focus on Free Open Source Software (FOSS) during 26th & 27th February 2020 organized by VSM College(A), Ramachandrapuram.

Certificate Courses/FDPs/Seminars/Workshops/Webinars Attended during Lockdown Period (ONLINE)

1. Two Weeks Faculty Development Programme on "MANAGING ONLINE CLASSES and CO-CREATING MOOCS" from April 20-May 06, 2020 Organized by Ramanujan College, University of Delhi, New Delhi in association with Ministry of Human Resource and Development (MHRD).
2. One Week National Online Faculty Development Program on “ICT Tools for Effective Teaching Learning” during 11-16 May 2020 organized by Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra.
3. Two Day National Level Workshop on “Modern Methods For Remote Teaching-Learning Practices” during 12-13, May 2020, organized by Krishna University, Machilipatnam in association with Andhra Pradesh State Council Of Higher Education.
4. Ten days “INDIAN SUMMER SCHOOL ON CRYSTAL GROWTH” (ISSCG-2020) during 14-23 May 2020, organized by SSN Research Centre, SSN Institutions, Chennai in association with Indian Association for Crystal Growth (IACG).
5. A National level three days National Level FDP on “Tools For Online Classroom Post Covid-19” during 18-20 May 2020 organized by P B Siddhartha College, Vijayawada in association with Codegnan, CSI Vijayawada Chapter.
6. One day Webinar on “CSR and SD: Lessons from the Pandemic”, during 15th May 2020 organized by Adikavi Nannaya University, Rajamahendravaram in association with Institute of Public Enterprise.
7. Webinar on “Guidelines for Writing a Research Paper” on 22nd May 2020 organized by Arasu Engg. College, Kumbakonam.
8. One week International FDP on “Technology Assisted Teaching and Virtual Learning ICT Tools” during 25-30, May 2020 organized by SBVR College, Badvel sponsored by UGC.
9. One day Live Webinar on “Career Opportunities in Medi Care Physics, 26th May 2020, organized by Parvathy’s Arts and Science College, Dindigul, TN.
10. One day Webinar “Coping Strategies for India’s Economy during Post Covid-19 on 23rd May 2020 by Adikavi Nannaya University, Rajamahendravaram in association with Arun Jaitley National Institute of Financial Management (NIFM), Faridabad.
11. Two Week Workshop on “e-Learning to e-Training: A Comprehensive Guide for all your Administrative Work” during 25th May – 3rd June 2020, organized by Ramanujan College, University of Delhi, New Delhi in association with Ministry of Human Resource and Development (MHRD).

12. 7 Day FDP (Webinar) on “Revised Accreditation Framework of NAAC” during 27th May 2020 to 2nd June 2020, Govt. Arts College(A), Rajamahendravaram.
13. Webinar on “Growth and Investigation of Nonlinear Optical Single Crystals for Opto-electronic Devices” on 3rd June 2020 organized by GRT Institute of Engg. And Technology Tiruttani.
14. 5 day FDP in “LMS Video & Pedagogy” during August 3-7,2020, Organized by Commissioner of Collegiate Education, AP
15. 5 day AP CCE – US FDP on “New Knowledge In Physics and Energy Materials: Advance Research Techniques, during 6-10, July 2020 Organized by Commissioner of Collegiate Education, AP.
16. day FDP "Teaching Learning methods from micro teaching to peer learning" from 30th April to 06th May 2022 organized by Ramanujan College, University of Delhi, New Delhi in association with Ministry of Human Resource and Development (MHRD).
17. 7 day FDP “Blended learning” from June 21-27, 2022 organized by Ramanujan College, University of Delhi, New Delhi in association with Ministry of Human Resource and Development (MHRD).

NCC Training Programmes Attended:

- Participated Naval NCC Pre-Commission Training at INS VENDURTY, Naval Base, Cochin during January 1994 to April 1994 and granted as Commissioned Officer in Naval NCC by NCC Directorate, New Delhi.
- Participated Refresher Course in Naval NCC at INS VENDURTHY, Naval Base, Cochin during 10th March 1997 to 29th March 1997 and granted a rank Sub. Lt.
- Participated Refresher Course in Naval NCC at INS CIRCARS, Naval Base, Visakhapatnam during 1st September 2003 to 18th September 2003 and granted a rank Lieutenant.
- Participated Refresher Course in Naval NCC at INS CIRCARS, Naval Base, Visakhapatnam during 5th June 2008 to 22nd June 2009 and granted a rank Lieutenant Commander.
- Participated more than 22 Naval NCC Training Camps including Godavari Sailing expeditions, four times as Contingent Commander for the 6(A) overall champion team in IGC Competitions and also participated several social service activities.
- **My cadets selected and participated in**
 - YEP Youth Exchange Programmes (International) – 03 Cadets
 - Republic Day Camps New Delhi – 09 Cadets
 - All India Nau Sainik Camps – 06 Cadets
 - RDC/IDC State – 08 Cadets