

**VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**KNOWLEDGE ASSET 2022-23**

**Name** : Dr.K.S.Rudramamba

**Designation:** Assistant Professor

**Department:** Humanities and sciences

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**Experience (in years): Teaching: 18 Research: 3**

**Others (If any, Specify):**



**1. Educational / Technical qualifications:**

S.No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	B.Sc	2003	PME
2	M.Sc	2005	Physics
3	M.Tech	2010	Computer Science
4	PhD	2019	Physics (Glass Science)

**2. Teaching and Learning:**

2.1. Teaching Interests:

- Engineering physics
- Applied Physics
- Solid State Physics
- Quantum Mechanics
- Nanoscience

2.2. Novel Teaching & Learning Techniques adopted:

- **ICT (LBD, LED activities and learning through open educational resources).**
- **Online and Blended Teaching-Learning Process**

2.3. Involvement in curriculum updating / Design:

- Member Board of Studies (physics) at MREC (autonomous), Maisammaguda during (2011-12 and 2013-14).
- Member Board of studies (Physics) at VNRVJIET since 2015.

### 3. Co-curricular and Extra-Curricular Activities

#### 3.1. Interests and Hobbies:

- Listening to music,
- Reading books

#### 3.2. CCA/ECA Organized:

- ◆ Faculty coordinator-2 : Crescendo at VNRVJIET.

#### 3.3. CCA/ECA participated:

#### 3.4. Counseling and Mentoring Activity:

#### 3.5. Committees involved in:

- *Department level:*
  - EP Lab-1 in-charge-2,
  - NBA related files
- *Institute Level:*
  - Project Compendium- Coordinator
  - NIRF ranking first year result analysis coordinator.
  - Faculty coordinator-2- Crescendo

### 4. Conference / Workshop / Seminar / Guest Lectures/FDP:

#### 4.1 Conducted:

- Guest lecture on “**NanoScience and Technology-An introduction to engineering students**” on 30<sup>th</sup> May 2015 at VNRVJIET.
- Webinar on “Importance of classical dance in child’s progress in current scenario” on 06-07-2020.
- Webinar on “Creating google classroom for mentoring students” on 08/07/2020.
- Guest lecture on “Lithium-Ion Batteries- Present and future trends in electric vehicles” on 05-01-2023 at VNRVJIET- KS Auditorium for students.
- Guest Lecture on “Lithium-Ion Batteries- Present and future trends in electric vehicles” on 05-01-2023 at VNRVJIET- B-Block seminar hall for faculty.

#### 4.2 Attended:

1. Attended and completed “**Effective and Efficient Online Teaching in the Age of Corona A Hands On Workshop**” with interaction on 17<sup>st</sup> May 2020 and video quizzes from 13<sup>th</sup> May to 16<sup>th</sup> May 2020 organised by **IIT Bombay**

2. Attended and completed “**The Bodhi Tree and Safe Tools for Effective Online Teaching A hands on Workshop**” with interaction on 21<sup>st</sup> June 2020 and video quizzes from 15<sup>th</sup> June to 17<sup>th</sup> June 2020 organised by **IIT Bombay**
3. Attended E-**International Symposium**”**Synthesis and Characterisation of smart materials and their potential applications** “ ISSCSMPA-2020 held by University school of basic and Applied Sciences, Guru Gobind Singh Indraprastha University, New Delhi from 14-17<sup>th</sup> June 2020.
4. Attended one week online faculty development programme on **Materials:Recent trends and engineering applications.**” held by GRIET Hyd. during 02-07 June 2020.
5. Attended webinar on “**Experimental Biophysics-Organisation of molecules in Biological Membranes**” organized by dept. of Physics, St. Francis College for women, Hyderaabad on 03-06-2020.
6. Participated in online webinar on “**Tackling Anxiety in the context of Impulsive Adaptation to virtual classroom**” organized by center for presencing and design thinking team of VNRVJIET on 28<sup>th</sup> May 2020.
7. Participated in the webinar on “**Artificial Intelligence & Applications in Electrical distribution system**” organized by dept. of EEE & ESI student chapter VNRV JIET on 28<sup>th</sup> May 2020.
8. Attended online FDP on “**The Use of virtual Physics Labs- creating Next Generation Teachers**” organized by Freshman engineering , Geethanjali College of Engineering and technology in association with ISTE from 20-24<sup>th</sup> May 2020.
9. Attended and completed “**Effective and Efficient Online Teaching in the age of Corona. A hands on Workshop**” on 17<sup>th</sup> May 2020 after involving in three day videos from 13-05-2020 to 15-05-2020. organised by IIT Bombay .
10. Attended and completed 8 week NPTEL course “**Fuzzy Logics and Neural networks**” offered by **IIT Bombay** from 24-02-2020 to 17-04-2020.
11. Attended and completed 8 week NPTEL course ”**Medical Biomaterials**” offered by **IIT Bombay** from 24-02-2020 to 17-04-2020.
12. Attended two day workshop on “**Technical Writing**” held at VNR VJIET, Hyderabad on 28-06-2019 & 29-06-2019.
13. Attended and presented a paper in national conference on advances in nano and functional materials NCANFM-2019 on “**Spectroscopic properties of Tb<sup>3+</sup>/Sm<sup>3+</sup>:Tb<sup>3+</sup> SrBiBS glasses** “ held at department of physics, University College of Science, Osmania University Hyderabad during 30-31<sup>st</sup> January 2019.
14. Attended and presented a paper International conference on Science, technology and applications of rare earths - ICASTAR-2018, on “**Optically activated Ce<sup>3+</sup>-Tb<sup>3+</sup> ions co-doped Ga<sub>2</sub>O<sub>3</sub>-BaO-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses** “, Rare earths Association of India Institute of Mineral Engineers, Tamil Nadu Chapter during 23-25<sup>th</sup> Sep 2018.

15. Attended AICTE sponsored two day National seminar on “Recent Trends in LASER Technology & Its Applications” organized by department of EIE at VNRVJIET during 29<sup>th</sup>-30<sup>th</sup> November 2017.
16. Attended and completed 8 weeks FDP 201X Pedagogy for Online and Blended Teaching-Learning Process organized by IIT Bombay during Sep 14, 2017 to Nov 20, 2017.
17. Attended and completed 4 weeks FDP 101X Foundation Program in ICT for Education organized by IIT Bombay during Aug 03, 2017 to Sep 13, 2017.
18. Attended and presented a paper titled” Spectroscopic properties of Sm<sup>3+</sup> ions doped Strontium Bismuth Borosilicate glasses” National Conference on novel materials and Technologies (NCNMAT-2017) during 16-17 th September 2017
19. Attended and Presented a paper titled “Optical And Photoluminescence Properties Of Sm<sub>2</sub>O<sub>3</sub> Doped Zinc oxide lead borosilicate Glasses” in Two-Day National Seminar on “Characterization Techniques of Materials” (NSCTM-2016) held on 28-3-2016 to 29-3-2016 along with M.A.S. Deepika<sup>a</sup>, M. Rajani<sup>a</sup>, B. Shiva RamiReddy<sup>b</sup>, M. Rami Reddy<sup>a\*</sup>.
20. Attended TEQIP sponsored two day national conference on “Materials for specific Applications” held at department of physics, GRIET Hyderabad during 29-30<sup>th</sup> March 2016.
21. Attended Tequip sponsored FDP on “Light harvesting materials” held at GRIET Hyderabad on 10 th December 2015.
22. Attended and presented a paper titled “Influence on  $\gamma$ - ray irradiation on optical and structural properties of Strontium Aluminum Borosilicate glasses” in International Seminar on Glasses and Other Functional Materials (ISGFM-2014) during 11 - 13th December 2014 along with Dr.TGVM Rao, Dr.Rupesh and Dr.Neeraja under supervision of Dr.M.RamiReddy.
23. Presented a paper titled “Investigation of local environment of lead oxyfluorosilicate glasses” in national conference on emerging trends in Science, Technology and Management held on Sep. 2014. Along with Dr.TGVM Rao, Dr.Rupesh and Dr.Neeraja under supervision of Dr.M.RamiReddy.
24. Attended a 6 day FDP on Engineering Physics from 19-Aug-2013 to 24-Aug-2013 at CBIT, Hyderabad.
25. Attended two day work shop on SAHAYAM skills: A helper training program for teachers from Jan 6<sup>th</sup> to 7<sup>th</sup>, 2012 at Osmania University.
26. Attended a one day seminar on Nanomaterials synthesis and applications on 30-Aug-2011 at CBIT, Hyderabad.
27. Attended International Conference on Nano science Engineering and Advanced Computing (ICNEAC – 2011) from 8-July-2011 to 10-July-2011 at Swarnandhra College of Engineering & Technology, Narsapuram, West Godavari (Dt).

28. **National Conference at JNT University, Hyderabad from 18<sup>th</sup> to 20<sup>th</sup> November, 2010.**
29. Attended two day **FDP on Engineering Physics** from **30-Aug-2010 to 31-Aug-2010 at CMRCET, Hyderabad.**
30. Attended two day refresher course on Information security from 06-July-2010 to 07-July-2010 at MREC.
31. Attended nine day FDP on Engineering Physics from 02-July-2009 to 10-July-2009 at MRCET, Hyderabad.
32. Attended three day National conference on ‘Mathematical modelling in emerging technologies’ from 13-Feb-2009 to 15-Feb-2009, jointly organized by MREC and APSMS.
33. Attended one day State level seminar on Nano Science and Technology at VBIT, Hyderabad on 27-Oct-2007.
  
34. Attended two day refresher course on Neural Networks from 22-June-2007 to 23-June-2007 at MREC, Hyderabad

## **5. Academic Contribution and Research & Consultancy:**

### **5.1. Invited Lectures:**

- Invited **Dr.K.Sadhana** from **University college of Sciences, Osmania University**, to deliver a lecture on “**Nanoscience and Technology-An introduction to Engineering students**” to **VNRVJIET**.

### **5.2. Articles / Chapters published in Books:**

- L. Srinivasa Rao\*, K.S. Rudramamba\*, Haarika Jogu, G.D.N. Pavan Teja and G. Pravallika “Review on synthesis and characterization of bioactive glasses and glass-ceramics for medical applications”. *Frontiers of Life Sciences*, Edition-I/Volume-VIII/pp:14-26, ISBN: 978-93-91768-15-7, Bhumi publishing, Nigave Khalasa, Kolhapur 416207, Maharashtra, India.  
<https://www.bhumipublishing.com/wp-content/uploads/2022/07/Frontiers-in-Life-Science-Volume-VIII.pdf>

### **5.3. Books published:**

S.No	Title of the Book	Publisher	ISBN No.	National/ International
1	Engineering Physics Practicals	University Science Press (Laxmi Publications) New Delhi	9789380856834	International

#### 5.4. Projects Guided:

- a) UG: One minor project on Polymer Nanocomposites – ME -III year students
- b) PG:

#### 5.5. Research Interests:

- Glass Science.
- Material Science
- Nanoscience
- Nano composites and polymers.
- Nano ceramics.

#### 5.6. Ph.D students:

- a) Enrolled: nil
- b) Submitted: nil
- c) Awarded: nil

#### 5.7. Papers published in reviewed Journals:

S.No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/ Citation Index	National/ International
1	Optical properties of Sm <sup>3+</sup> doped strontium bismuth borosilicate glasses for LASER applications	Optical materials; Volume-89; pg:68-79.	0925-3467	3.754 Scopus SCI	International (Elsevier)
2	Energy transfer (ce <sup>3+</sup> --		0921-4526	2.988	International

	Sm <sup>3+</sup> ) Influence of PL emission of Ce <sup>3+</sup> /sm <sup>3+</sup> codoped barium gallium borosilicate glasses.	PhysicaB: condensed matter; Volume: 559;pg:-8-16		Scopus SCI	(Elsevier)
3.	The Structural and warm light emission properties of Sm <sup>3+</sup> / Tb <sup>3+</sup> doubly doped strontium bismuth borosilicate glasses for LED applications	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy; Vol(220),117097	ISSN-1386-1425	4.831 Scopus SCI	International (Elsevier)
4.	Effect of up-conversion luminescence in Er <sup>3+</sup> doped phosphate glasses for developing Erbium-Doped Fibre Amplifiers (EDFA) and G-LED's	Optical Materials- X; Vol(3),100034	ISSN:2590-1478	3.754 Scopus	International (Elsevier)
5	Efficient 2.01 μm Mid-Infrared (MIR) and visible emission in Ho <sup>3+</sup> doped phosphate glasses enhanced by Er <sup>3+</sup> ions	Journal of Infrared Physics &Technology, Volume-107, Article no; 103294	ISSN: 1350-4495	2.997 Scopus	International (Elsevier)
6	The role of CuO as limiting and luminescent probe for orange red emission of Sm <sup>3+</sup> ions in strontium bismuth borosilicate glasses	Optical materials, Vol (109),110340	0925-3467	3.754 Scopus	International (Elsevier)

7	Optimized NIR and MIR emission properties of Tm <sup>3+</sup> /HO <sup>3+</sup> ions in lead phosphate glasses	Journal of Infrared Physics & Technology Vol (113),103617	ISSN: 1350-4495	2.997 Scopus	International (Elsevier)
8.	Optical properties and energy transfer probing for white light emission in Ce <sup>3+</sup> /Tb <sup>3+</sup> /Sm <sup>3+</sup> tri-doped barium gallium borosilicate glasses	Optical materials, Vol (120),111412	0925-3467	3.754 Scopus SCI	International (Elsevier)
9	Red light component tuning by n-UV/blue light excitations in Sm <sup>3+</sup> /Eu <sup>3+</sup> co-doped Y <sub>2</sub> O <sub>3</sub> -Al <sub>2</sub> O <sub>3</sub> -Bi <sub>2</sub> O <sub>3</sub> -B <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> glasses for W-LED applications	Optical materials, Vol-134 (part A), 113148.	0925-3467	3.754 Scopus SCI	International (Elsevier)
10	Spectroscopic features of Tb <sup>3+</sup> doped strontium zinc borate glasses for green laser applications	Journal of Molecular Structure, Vol-1274, 134514	ISSN: 0022-2860	3.841 Scopus SCI	International (Elsevier)

#### 5.8. Papers presented at National / International Conference:

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1.	Spectroscopic properties of Tb <sup>3+</sup> /Sm <sup>3+</sup> :Tb <sup>3+</sup> SrBiBS	Advances in nano and functional materials NCANFM-2019 30-31 <sup>st</sup>	National conference	30-31 <sup>st</sup> January

	glasses	January 2019.		2019.
2.	Optically activated Ce <sup>3+</sup> -Tb <sup>3+</sup> ions co-doped Ga <sub>2</sub> O <sub>3</sub> -BaO-B <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> glasses	Science, technology and applications of rare earths - ICASTAR-2018	International conference	23-25th Sep 2018
3.	Spectroscopic properties of Sm <sup>3+</sup> ions doped Strontium Bismuth Borosilicate glasses	Novel materials and Technologies(NCNMAT-2017)	National conference	16-17 th September 2017
4.	Optical and Photoluminescence Properties of Sm <sub>2</sub> O <sub>3</sub> Doped Zinc oxide lead borosilicate Glasses	“Characterization Techniques of Materials” (NSCTM-2016)	National seminar	28- 29 March 2016
5.	Influence on $\gamma$ -ray irradiation on optical and structural properties of Strontium Aluminum Borosilicate glasses	Glasses And Other Functional Materials	International Seminar	11 - 13th December 2014
6.	Investigation of local environment of lead oxyfluorosilicate glasses”.	Emerging trends in Science, Technology and Management	National conference	Sep. 2014
7.	Computer simulations of point defects in Divalent Metal Oxides.	A.P.Science congress and Annual convention of APAS held at JNTUH	National conference	18-20 Nov 2010

#### 5.9. Sponsored research Projects:

<b>S.No</b>	<b>Title</b>	<b>Agency</b>	<b>Period</b>	<b>Grant amount</b>	<b>Ongoing / Completed</b>

5.10 Consultancy Projects:

<b>S.No</b>	<b>Title</b>	<b>Agency</b>	<b>Period</b>	<b>Sanctioned Amount</b>	<b>Ongoing / Completed</b>

**6. Awards / Honors received:**

Recognized as reviewer for Journal of Non-Crystalline solids and got certificate of reviewing manuscripts in ELSEVIER journal.

**7. Motto:**

Start where you are

Use what you have

Do what you can

If you can dream

You can do.