

## RESUME

### Dr. R. P. Patel

Associate Professor

Department of Pure and Applied Physics,

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### Education Qualifications:

- Working as **Associate Professor** ( from November 2019) Department of Pure & Applied Physics, Guru Ghasidas Vishwavidyalaya (GGV), Bilaspur (C.G), India
- **Ph D** , Department of Post Graduate Studies & Research in Physics Electronics, Rani Durgawati University, Jabalpur (M.P.) in **2001**. Title of Ph. D. *“Study of Electroluminescence in Thin Film of ZnS:Sm and ZnS:Tm Phosphors”*
- M.Sc. (Physics) with first division , Department of Post Graduate Studies & Research in Physics & Electronics, Rani Durgawati University, Jabalpur (M.P) in **1996**.
- B.Sc. (PCM) with second division , Govt. Model Science College, R.D. University, Jabalpur in **1994**.
- H.S.S.C. (PCM) with first division . M. P. Board, Bhopal (M P) in 1991.

### Teaching Experience: 19 years

- **Sep 20018 to Nov. 2019** ( **Professor and Head**) Department of Physics, Kalinga University Naya Raipur (C.G.) India
- August 2015 to Sep. 2018 Professor PIE Tech, Raipur,
- **July 2007 to. August 2015** as **Reader/Associate Professor. / Professor**, Shri Shankaracharya Group of Institutions, Bhilai (C.G.)  
**India**

- Sep. 2003 - July 2007, Lecturer, RIT, Raipur **(C.G.) India**
- Nov 2002 - Sep. 2003 Cristian College of Engineering & Technology, Bhilai. **(C.G.) India**
- Dec 2001 to Nov 2002 as Lecturer RCET, Bhilai. **(C.G.) India**
- April 2001 to Dec.2001 Worked as project assistant in a project titled “Development &
- Study of Thin Film Electroluminescence Display” Sponsored U.G.C., New Delhi

### **Research Area:**

#### **Ph. D. Supervised**

1. Mrs Durga Banchhor thesis submitted at Chhattisgarh Swami Vivekananda Technical University, Bhilai (C.G.)
2. Mr. Alope Verma on going
3. Ms. Kruti Vohara on going

### **RESEARCH INTREST**

- Optoelectronic Properties of Materials
- Synthesis and characterization of Nanophosphors & Nano Materials
- Electroluminescence.
- Mechnoluminescence.
- Photoluminescence.
- Thermoluminescence.
- While LED materials
- Solar cell materials

### **Invited Talks 07**

Talk delivered on doordarshan (National Chanel ) Raipur, C. G.

Paricharcha as Expert of Subject (Physics) on DILLI DORDARSHAN (D.D.)

Member of Editorial Boards & Reviewer

1. I manager publication, Journal on Material Science
2. American journal of Physics and its application

### **Professional Recognition**

- Member- Board of studies in Physics at Swami Vivekananda Technical University, Bhilai
- Life Member –Luminescence Society of India
- Reviewer of various reputed journal

### **National Seminar/Workshop Organized:**

- **Convener** of National Conference on Material Science and Environmental Sciences held on 14-15 Oct. 2019, Sponsored by CSIR
- Organizing **Co-convener** of workshop entitled “National workshop on physics & applications of luminescence to nano-science, radiation dosimetry and geology” (NWPAL-09) held on Dec.3-4, 2009 Sponsored by DST and C.G.COST.
- Organizing **Secretary** of national conference on entitled “Recent advances in nano-science and nanotechnology” 12-13<sup>th</sup> jan.2009. Sponsored by DST and C.G.COST
- Member National conference on luminescence and its application (NCLA 2011)

### **Professional Training:**

- Faculty development program in entrepreneurship at CITCON, Govt. of India from 11/12 / 17 to 23/12/2017.
- Refresher course in research methodology at Pt. R S University from 1 June to 21 June 2013.

- International workshop on Material Modeling Science and Simulation 24-27 June 2013 Organized by Department of Applied Physics, Shri Shankaracharya Group of Institutions, Bhilai, India and Michigan Technological University, Houghton , USA
- International workshop on Advanced Material Science and Astrophysics 19-21 Feb. 2012 Organized by Pt R S University , India and Michigan Technological University, Houghton , USA
- Teacher Training Programme held on Teaching Methodology, from 11<sup>th</sup> to 14<sup>th</sup> July 2006, Organized by Quality Improvement Cell Chhattisgarh Swami Vivekananda Technical University, Bhilai (C.G)
- MATLAB and SIMULINK , Certificate course of one week, August 2003 at RIT Raipur

**List of Publications:      Research Papers Published in Journals**

1. B.P. Chandra, N.L. Patel, S.S. Rahangdale, V.K. Patle and **R.P. Patel**, Rapidly decaying fast electron emission produced during fracture of organic and inorganic materials Indian Journal of Pure & Applied Physics, Vol.38 (11) Nov.2000, ISSN 0975-1041.
2. B. P. Chandraa, **R.P. Patel**, Anubha S. Gour, V.K. Chandraa and R.K. Guptaa, Cleavage mechanoluminescence in elemental and III–V semiconductors, J. of Lumi.104 (2003) 35–45, ISSN- 00232313.
3. B P Chandra, N L Patel, S S Rahangdale, **R. P. Patel** and V K Patle, Characteristics of the fast electron emission produced during cleavage of crystal., Pramana journal of physics, Vol. 60 no 1, 109 - 122 (2003), ISSN 0973-7111.
4. B. P., Chandra R. K. Gautam, A.K. Luka and R.P. Patel, Luminescence induced by elastic and plastic deformation of II-IV semiconductors at fixed rates, J. of optoelectronics and advanced materials – rapid communications, Vol. 3, No. 11, November 2009, p. 1181 – 1189, ISSN 1841 – 7132.
5. **R.P. Patel**, Theoretical approach to the brightness of A.C. thin-film electroluminescence device , Journal of Electrical and Electronics Engineering , Vol. 2, Issue 1, Feb 2013, 41-48, ISSN 2278-9952

6. **R.P. Patel**, Characteristics of ZnS:Sm and ZnS; Tm Thin film electroluminescence device with MgF<sub>2</sub> dielectric layer, International Journal of electrical and electronics engineering, Vol.3, Issue 2 2014, 19-24, ISSN 2278-9952.
7. **R.P. Patel**, Preparation and characterization of long persistence strontium aluminate phosphor, *i-manager's Journal on Material Science*, Vol 2 No3 2014, 27-30, ISSN 2347-2235.
8. Durga Verma, **R.P. Patel**, Mohan L. Verma and Upma, Structural characterization and optical properties of Eu<sup>2+</sup> and Dy<sup>3+</sup> doped Sr<sub>2</sub>SiO<sub>4</sub> phosphor by solid state reaction Method, International Journal of Luminescence and applications, Vol 6 (1) February, 2016, pages 52-57 ISSN:2277-6362.
9. **R.P. Patel**, Preparation of Sr<sub>2</sub>SiO<sub>4</sub>: Eu<sup>2+</sup>, Dy<sup>3+</sup> nano-phosphors prepared by combustion method and its thermoluminescence properties International journal of Science, Volume- 2 Special Issue-1, 88-91 (2015) ISSN ; 2348 – 6058 .
10. Durga Verma, **R. P. Patel**, Mohan L. Verma Preparation of Eu-activated Sr<sub>2</sub>SiO<sub>4</sub> phosphor by a combustion method and its optical Properties , International journal of Advanced Engineering Research and Studies/IV/II/Jan.March,2015/271-272 ISSN; 2249–8974
11. Durga Verma and **R. P. Patel**, Low temperature solution combustion synthesis and luminescence prop :Dy<sup>3+</sup> phosphors, Advances in Applied Science Research, 2015, 6(6):89-94, ISSN :0976-8610
12. B.P. Chandra , V.K. Chandra , Piyush Jha , **R.P. Patel** , R.N. Baghel , Possibility of elasto-mechanoluminescence dosimetry using alkali halides and other crystals Radiation Measurements,78 (2015) 9-16 ISSN 1350-4487.
13. M.M. Ashish, G.R. Sinha, **R. P. Patel**, Biometric: fingerprints protection, Biometrics & Biostatistics International Journal. Volume 7 2018; 1(3):146- 150 ISSN 2378-315X.
14. Durga Verma, **R. P. Patel**, Govind B. Nair and S. J. Dhoble, Structural and optical properties of Eu<sup>3+</sup> activated Sr<sub>2</sub>SiO<sub>4</sub> phosphors prepared by combustion method SCIENCE JOURNAL – 2018, Rashtrasant Tukadoji Maharaj Nagpur University, Vol. XIV, pp. 57 -61 ISSN: 09726330.
15. Durga Verma, **R. P. Patel**, Mohan L. Verma, Optical properties of Sr<sub>2</sub>SiO<sub>4</sub>: Eu<sup>2+</sup>, Dy<sup>3+</sup> phosphors prepared by combustion method, Journal on Materials Science, Poland 36(3), 2018, pp. 387-396 ISSN2018-0029.
16. Durga Verma, **R. P. Patel**, Mohan L. Verma, Structural and optical properties of Dy<sup>3+</sup> doped Sr<sub>2</sub>SiO<sub>4</sub> phosphors, Journal on material science, Poland Volume 37: Issue 1 (Mar 2019) Pages: 55–64 ISSN 2018-0029.
17. Alope Verma, A.K. Diwakar and **R.P. Patel**, Synthesis and Characterization of High-Performance Solar Cell, International Journal of Scientific Research in Physics and Applied Sciences Vol.7, Issue.2, pp.24-26, April (2019) ISSN: 2348-3423

18. Durga verma and **R. P. Patel**, Preparation of Sr<sub>2</sub>SiO<sub>4</sub>:Dy<sup>3+</sup> phosphors by solid-state reaction method and their thermo luminescence properties, i-manager's Journal on Material Science, ISSN 2347-2235

**Research Papers Published in Proceeding**

<b>S. No.</b>	<b>Title</b>	<b>Journal</b>
•	Presentation and characterization of image storage phosphors AFB <sub>r</sub> :Eu <sub>2</sub>	Symposium on recent development in material science
•	Electroluminescence of ZnS:Cu, Sm, Cl and ZnS: Cu, Dy, Cl phosphors	International symposium on luminescence and its application
•	Brightness of A.C. thin film electroluminescence devices	National seminar on luminescence and its application
•	Electroluminescence of CaS:Cu, Dy, Cl phosphors	National seminar on luminescence and its application
•	FractoMechanoluminescence in II-VI semiconductor	National seminar on luminescence and its application
•	Theoretical approach to the brightness of A.C.	National seminar on luminescence and its application
•	synthesis of opto-electronics materials for TFEL display devices,	NSNSM, Nagpur
•	Effect of temperature on the brightness of ZnS:Sm, TFEL	National seminar on luminescence and its application
•	Dependence of thermoluminescence on size of nanoparticles	National seminar on luminescence and its application

**Total paper presented in Conference/Seminar: 30**