


Updated Curriculum Vitae (C. V. 2016) of Professor P. D. Sahare

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Designation		PROFESSOR			
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Educational Qualifications					
Degree		Institution		Year	
Ph.D.		RTM NAGPUR UNIVERSITY NAGPUR		1990	
M.Phil. / M.Tech.		RTM NAGPUR UNIVERSITY NAGPUR		1987	
PG		RTM NAGPUR UNIVERSITY NAGPUR		1985	
UG		RTM NAGPUR UNIVERSITY NAGPUR		1983	
Any other qualification		Nagpur Divisional Board, Nagpur XII th Standad		1979	
Career Profile					
Department of Physics, Nagpur University, Nagpur		Lecturer	1986-87	Teaching and Research	
University of Massachusetts, Amherst, USA		Post-Doctoral Fellow	1990-91	Research	
Department of Physics, Nagpur University Nagpur		CSIR Research Associate	1991-92	Research and Teaching	
RKN College of Engineering, Nagpur		Lecturer	1992-93	Teaching and Research	
University of Pune		Professor	2005-07	Teaching and Research	
University of Delhi		Professor	Since 1993	Teaching and Research	
Administrative Assignments					
Member of Equal opportunity Cell Radiation Safety Officer					
Areas of Interest / Specialization					
Experimental: Spectroscopy, Luminescence, Radiation dosimetry, Laser materials, Detectors and optical sensors					
Subjects Taught					
Experimental Methods in Physics, Electronics, Atoms and Molecules, Optics, Lasers, Nuclear Physics					
Research Guidance					
<i>List against each head (If applicable)</i>					
1. <i>Supervision of awarded Doctoral Thesis</i>					
I) <i>S R Dhakate</i>					
II) <i>Anant Pandey</i>					
III) <i>Vijay Kumar Sharma</i>					
IV) <i>Numan Salah</i>					
V) <i>Ranju Ranjan</i>					
VI) <i>S P Lochab</i>					
VII) <i>J S Bakare</i>					
VIII) <i>Surender Kumar</i>					
IX) <i>Nandkumar Mandlik</i>					
x) <i>Manveer Singh</i>					

- xi) *Surbhi Kumari*
 - xii) *Geeta Rani*
2. *Supervision of Doctoral Thesis, under progress*
 - i) *Martina Saran*
 - ii) *Sudhist Kumar*
 3. *Supervision of awarded M. Phil dissertations 10*
(at RTM Nagpur University and at University of Pune)
 4. *Supervision of M. Phil dissertations, under progress*
Not any (The course in Physics is not running at Delhi University)

Publications Profile

1. *Books/Monographs (Authored/Edited)*

One book entitled "TLD Nanophosphors: Synthesis, Characterization and Applications" under review and publication

Nanotechnology and Laser Induced Plasma, Proceedings, IRNANO-2009.

Nanomaterials and Nanotechnology, Eds. A. Tiwari and P. D. Sahare, VBRI Press, 2011, ISBN: 978-81-920068-3-3.

2. *Research papers published in Refereed/Peer Reviewed Journals in last five years*

Luminescence Characteristics of $K_2Ca_2(SO_4)_3$: Eu, Tb phosphor, Radiat. Eff. Defects Solids, 159 (2004) 321

Thermoluminescence and photoluminescence characteristics of sol-gel prepared pure and europium doped silica glasses J. Phys. D: Appl. Phys., 37 (2004) 842

Pyroelectroluminescence in $LiNaSO_4$: Eu (particle size effect), J. Phys. D: Appl. Phys., 37 (2004) 2742

Modifications in TL characteristics of $K_2Ca_2(SO_4)_3$: Eu by 7Li MeV ion beam, J. Phys. D: Appl. Phys. 38 (2005) 3995

TL and PL in $BaSr(SO_4)_2$:Eu mixed sulphate, phys. stat. solidi (a), 203 (2006) 898

The influence of high-energy 7Li ions on the TL response and glow curve structure of $CaSO_4$:Dy J. Phys. D: Appl. Phys., 39 (2006) 2684

Thermoluminescence and photoluminescence study of $Ba_{0.97}Ca_{0.03}SO_4$: Eu, J. Phys. D: Appl. Phys., 39 (2006) 1786

Thermoluminescence and photoluminescence of $LiNaSO_4$:Eu irradiated with 24 and 48 MeV 7Li ion beam, J. Lum., 121 (2006) 497

TL and PL studies on $CaSO_4$: Dy nanoparticles, Radiat. Measur., 41 (2006) 40

TL, PL and energy transfer in $K_2Ca_2(SO_4)_3$: Eu^{2+} , Ce^{3+} , Radiat. Measur., 41 (2006) 665

Fluorescence quenching of 7-Diethylamino-4-trifluoromethyl Coumarin in presence of acetone, Proc. SPIE 6405 (2006) 640514

Nanocrystalline MgB_4O_7 : Dy for high dose measurement of gamma radiation, *phys. stat. solidi (a)*, 204 (2007) 2416

Effect of high-energy ${}^7Li^{2+}$ ions on the TL behavior of LiF: Mg,Cu,P detectors *Radiat. Measur.*, 42 (2007) 1294

$K_3Na(SO_4)_2$:Eu nanoparticles for high dose of ionizing radiation, P D Sahare, *J. Phys. D: Appl. Phys.*, 40 (2007) 759

Thermoluminescence and photoluminescence study of nanocrystalline $Ba_{0.97}Ca_{0.03}SO_4$: Eu *J. Phys. D: Appl. Phys.*, 40 (2007) 1343

Thermoluminescence of $Ba_{0.97}Ca_{0.03}SO_4$:Eu irradiated with 48 MeV 7Li ion beam, *NIMB*, 254 (2007) 231

Thermoluminescence of nanocrystalline LiF:Mg, Cu, P, *J. Lum.*, 124 (2007) 357

A novel optical sensor for ammonia using a laser grade dye—Stilbene 3, *J. Phys. D: Appl. Phys.*, 40 (2007) 7166

Fluorescence quenching of 3-methyl 7-hydroxyl Coumarin in presence of acetone, *Spectrochim. Acta: A*, 66 (2007) 111

Energy transfer studies in binary dye solution mixtures: Acriflavine + Rhodamine 6G and Acriflavine + Rhodamine B, *Spectrochimica Acta: A*

Hydrogen peroxide sensor using laser grade dye Rhodamine B, *Proc. SPIE* 6830 (2007) 68301D

Thermoluminescence of $BaSO_4$:Eu irradiated with 46 MeV Li^{3+} and 150 MeV Ag^{12+} ions, *J. Phys. D: Appl. Phys.*, 41 (2008) 85408

Synthesis and Luminescence Properties of Nanocrystalline LiF:Mg,Cu,P Phosphor, *J. Lum.* 130 (2010) 258

Nanocrystalline MgB_4O_7 : Dy for high dose measurement of gamma radiation, S P Lochab, A Pandey, **P D Sahare**, R S Chauhan, Numan Salah, Ranju Ranjan, *phys. stat. solidi (a)*, 2007, 204, 2416.

Effect of high-energy ${}^7Li^{2+}$ ions on the TL behavior of LiF: Mg,Cu,P detectors, Numan Salah, S P Lochab, D Kanjilal, **P D Sahare** and V E Aleynikov, *Radiat. Measur.*, 2007, 42, 1294.

TL and PL in $BaSr(SO_4)_2$:Eu mixed sulphate, Numan Salah, **P D Sahare**, Pratik Kumar, *phys. stat. solidi (a)*, 2006, 203, 898.

Thermoluminescence and photoluminescence of $LiNaSO_4$:Eu irradiated with 24 and 48MeV 7Li ion beam, Numan Salah, **P D Sahare**, Awadhesh Prasad, *J. Lum.*, 121 (2006) 497

Thermoluminescence and photoluminescence study of $Ba_{0.97}Ca_{0.03}SO_4$: Eu, S P Lochab, **P D Sahare**, R S Chauhan, Numan Salah and A Pandey, *J. Phys. D: Appl. Phys.*, 2006, 39, 1786.

The influence of high-energy 7Li ions on the TL response and glow curve structure of nanocrystalline $CaSO_4$:Dy, Numan Salah and **P D Sahare**, *J. Phys. D: Appl. Phys.*, 2006, 39, 2684.

TL and PL studies on $CaSO_4$: Dy nanoparticles, Numan Salah, **P D Sahare**, S P Lochab, Pratik Kumar, *Radiat. Measur.*, 41 (2006) 40.

TL, PL and energy transfer in $K_2Ca_2(SO_4)_3$: Eu^{2+} , Ce^{3+} , Numan Salah and **P D Sahare**, *Radiat. Measur.*, 41 (2006) 665.

- $K_3Na(SO_4)_2$:Eu nanoparticles for high dose of ionizing radiation, **P D Sahare**, Ranju Ranjan, Numan Salah and S P Lochab, *J. Phys. D: Appl. Phys.*, 2007, 40, 759.
- Thermoluminescence and photoluminescence study of nanocrystalline $Ba_{0.97}Ca_{0.03}SO_4$:Eu, S P Lochab, **P D Sahare**, R S Chauhan, Numan Salah, Ranju Ranjan and A Pandey, *J. Phys. D: Appl. Phys.*, 2007, 40 1343.
- Thermoluminescence of $Ba_{0.97}Ca_{0.03}SO_4$:Eu irradiated with 48 MeV 7Li ion beam, S P Lochab, Numan Salah, **P D Sahare**, R S Chauhan and Ranju Ranjan, *NIMB*, 2007, 254, 231.
- Thermoluminescence of nanocrystalline LiF:Mg, Cu, P, Numan Salah, **P D Sahare**, A A Rupasov, *J. Lum.*, 2007, 124, 357
- A novel optical sensor for ammonia using a laser grade dye—Stilbene 3, **P D Sahare** and Amitansu Pattanaik, *J. Phys. D: Appl. Phys.*, 2007, 40, 7166
- Fluorescence quenching of 3-methyl 7-hydroxyl Coumarin in presence of acetone, Vijay Kumar Sharma, D. Mohan and **P D Sahare**, *Spectrochim. Acta: A*, 2007, 66, 111.
- Energy transfer studies in binary dye solution mixtures: Acriflavine + Rhodamine 6G and Acriflavine + Rhodamine B, **P D Sahare**, Vijay K. Sharma, D. Mohan and A. A. Rupasov, *Spectrochimica Acta: A*, 69 (2008) 1257–1264, doi:10.1016/j.saa.2007.07.003.
- An approach to produce single and double layer graphene from re-exfoliation of expanded graphite, *CARBON*, 49 (2011)
- Photoluminescence Study of Laser Grade POPOP Dye Incorporated into MCM-41, *Adv. Porous Mater.*, 1 (2012) 1.
- Gas sensing behavior of Fluorescein sodium impregnated MCM-41 for Sulphur dioxide, *Sensor lett.* 11 (2013) 526, doi:10.1166/sl.2013.2830.
- Nd doped ZnO as a multifunctional material, *J. Rare Earths*, 30 (2012) 761, DOI: 10.1016/S1002-0721(12)60126-4
- Effects of annealing on the surface defects of zinc oxide nanoparticles, *Nano*, 7 (2012) 1250022, DOI: 10.1142/S1793292012500221
- Thermoluminescence and Photoluminescence properties of $K_2Ca_2(SO_4)_3$:Cu nanophosphor for gamma radiation dosimetry, *Ind. J. Phys. Appl. Phys.*, 50 (2012) 859.
- A new approach to produce single and double layer graphene from re-exfoliation of expanded graphite, S.R. Dhakate, N. Chauhan, S. Sharma, J. Tawale, S. Singh, P.D. Sahare, R.B. Mathur, *Carbon*, 49 (2011) 1946.
- Fluorescence quenching of laser grade dye coumarin 440 in presence of hydrogen peroxide, *Ind. J. Phys.* 2011, 85, 1775
- Thermoluminescence and Photoluminescence of $CaSO_4$:Dy Nanophosphor for 6 MeV Energy electron Dosimetry, *Radiat. Proct. Environ.* 34 (2011) 185, DOI:10.4103/0972-0464.101716.
- Fluorescence quenching of laser grade dye coumarin 440 in presence of hydrogen peroxide, Pattanaik, A., **Sahare, P.D.**, Rani, G. *Indian J. Phys.* 85 (2011) 1775, doi:10.1007/s12648-011-0194-4
- Thermoluminescence study of $K_2Ca_2(SO_4)_3$:Cu nanophosphor for gamma ray dosimetry, *NIMB*, 315 (2013) 273-277, DOI:10.1016/j.nimb.2013.05.073

Effect of phase transition and particle size on thermoluminescence characteristics of nanocrystalline $K_2Ca_2(SO_4)_3:Cu^+$ phosphor, Radiat. Measur., 47 (2012) 108, DOI: 10.1016/j.radmeas.2012.10.003

Thermoluminescence and Photoluminescence properties of $K_2Ca_2(SO_4)_3: Cu$ nanophosphor for gamma radiation dosimetry, Ind. J. Phys. Appl. Phys., 50 (2012) 859.

High Energy Radiations Dosimetry in the Space, Editorial, J. Astrophys. Arospace Technol. 1 (2012) 1

Preparation and characterization of short length ZnO nanorods and ZnO@ZnS core-shell nanostructures, Nano Commun. Netw. 3 (2012) 197, doi:10.1016/j.nancom.2012.09.003

Elucidation of Mg^{2+} binding activity of adenylate kinase from Mycobacterium tuberculosis H₃₇Rv using fluorescence studies, Biotechnol Appl Biochem, 59 (2012) 429, DOI: 10.1002/bab.1043.

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Preparation and characterization of short length ZnO nanorods and ZnO@ZnS core-shell nanostructures, Nano Commun. Networks 3 (2012) 197-202

Observation of band gap and surface defects of ZnO nanoparticles synthesized via hydrothermal route at different reaction temperature, Opt. Commun. 285 (2012) 5210, DOI: 10.1016/j.optcom.2012.07.125

Redox reactions in Cu-activated nanocrystalline LiF TLD phosphor, NIM B, 289 (2012) 59, DOI: 10.1016/j.nimb.2012.08.003

*Synthesis and dosimetry characteristics of a new high sensitivity TLD phosphor $NaLi_2PO_4:Eu^{3+}$ Singh, Manveer; **Sahare, P. D.**; Kumar, Pratik, Radiat. Measur. 59 (2013) 8-14*

*Thermoluminescence study of $K_2Ca_2(SO_4)_3:Cu$ nanophosphor for gamma ray dosimetry Mandlik, Nandkumar; **Sahare, P. D.**; Patil, B. J.; et al., NIMB 315 (2013) 273-277*

*Structural and Spectroscopic Characterizations of ZnO Quantum Dots Annealed at Different Temperatures Rani, Geeta, **Sahare, P. D.**; J. Mater. Sci. Technol. 29 (2013) 1035-1039*

*Effect of phase transitions on thermoluminescence characteristics of nanocrystalline alumina Rani, Geeta; **Sahare, P. D.**, NIMB, 311(2013) 71-77*

*Spectroscopy of Nickel-Doped Zinc Sulfide Nanoparticles Rani, Geeta; **Sahare, P. D.**, Spectro. Lett. 46 (2013) 391-396*

*Optical Studies of Fluorescent Mesoporous Silica Nanoparticles Kumari, Surbhi; **Sahare, P. D.**, J. Mater. Sci. Technol. 29 (2013) 742-746*

*Photoluminescence Study of Laser Grade POPOP Dye Incorporated into MCM-41, Kumari, Surbhi; **Sahare, P. D.**, Adv. Porous Mater., 1 (2013) 114-121*

*Gas sensing behavior of Fluorescein sodium impregnated MCM-41 for Sulphur dioxide, Surbhi Kumari, **P. D. Sahare**, Sensor lett. 11 (2013) 526, doi:10.1166/sl.2013.2830.*

Optical Studies of Fluorescent Mesoporous Silica Nanoparticles, J. Mater. Sci. Technol., 29 (2013) 742

*TL characteristics of Ce^{3+} -doped $NaLi_2PO_4$ TLD phosphor **Sahare, P. D.**; Singh, Manveer; Kumar, Pratik, J. Radioanal. Nucl. Chem. 302 (2014) 517-525*

Study of the structural and morphological changes during the phase transition of ZnS to ZnO
Rani, Geeta; **Sahare, P. D.**, *Appl. Phys. A-Mater. Sci. Process.* 116 (2014) 831-837

NaLi₂PO₄:Eu³⁺ based novel luminescent red phosphor
Sahare, P. D.; Singh, M., *Indian J. Phys.* 88 (2014) 621-630

Structural and photoluminescent properties of Al₂O₃: Cr³⁺ nanoparticles via solution combustion synthesis method, Rani, Geeta; **Sahare, P. D.**, *Adv. Powder Technol.* 25 (2014) 767-772

Gd³⁺ incorporated ZnO nanoparticles: A versatile material
Kumar, Surender; **Sahare, P. D.**, *Mater. Res. Bul.* 51 (2014) 217-223

Study of TL and optically stimulated luminescence of K₂Ca₂(SO₄)(3):Cu nanophosphor for radiation dosimetry, Mandlik, Nandkumar; **Sahare, P. D.**; Kulkarni, M. S.; et al., *J. Lum.* 146 (2014) 128-132

Photoluminescence studies of stilbene laser dye incorporated mesoporous silica nanoparticle (MSN) with sulphur dioxide, Kumari, Surbhi; **Sahare, P. D.**, *J. Porous Mater.* 21 (2014) 45-52

Optically stimulated luminescence (OSL) response of Al₂O₃:C, BaFCl:Eu and K₂Ca₂(SO₄)(3):Eu phosphors
Kumar, Pratik; Bahl, Shaila; **Sahare, P. D.**; et al., *Radiat. Prot. Dosim.* 167 (2015) 453-460

Effect of annealing and impurity concentration on the TL characteristics of nanocrystalline Mn-doped CaF₂
Sahare, P. D.; Singh, Manveer; Kumar, Pratik, *Radiat. Measur.* 80 29-37 (2015)

Synthesis and TL characteristics of MgB₄O₇:Mn, Tb phosphor
Sahare, P. D.; Singh, Manveer; Kumar, Pratik, *J. Lum.* 160 (2015) 158-164

Effect of Temperature on Structural and Optical Properties of Boehmite Nanostructure
Rani, Geeta; **Sahare, P. D.**, *Internat. J. Appl. Cer. Technol.* 12 (2015) 124-132

A new high sensitivity Na₂LiPO₄:Eu OSL phosphor
Sahare, P. D.; Singh, Manveer; Kumar, Pratik, *RSC ADVANCES* 5 (2015) 3474-3481

Effect of pH on lyoluminescence of K₃Na(SO₄)₂:Eu³⁺ phosphor for its application in dosimetry of high-energy radiations, **Sahare P. D.**, Martina Saran, *J. Lum.* 179 (2016) 254-259

Dosimetry characteristics of NaLi₂PO₄:Ce³⁺ OSLD phosphor
Sahare, P. D.; Ali, Neyaz; Rawat, N. S.; et al., *J. Lum.* 174 (2016) 22-28

Lyoluminescence dosimetry of high-energy gamma radiation using MgB₄O₇:Mn²⁺
Sahare, P. D.; Srivastava, S. K., *J. Radioanal. Nucl. Chem.* 307 (2016) 31-36

3.

a) Research papers published in Academic Journals other than Refereed/Peer Reviewed Journals

b) Research papers published in Refereed/Peer Reviewed Conferences

Redox reactions, Thermoluminescence and photoluminescence in europium activated BaSr(SO₄)₂ mixed sulphate. Numan Salah and **P. D. Sahare**. Proceedings of National Seminar on Advanced Materials (NSAM – 2004) held on February 1st, 2004 at Kamla Nehru Mahavidyalaya, Nagpur.

Thermoluminescence characteristics of CaSO₄: Dy nanoparticles and their optical properties. Numan Salah, **P. D. Sahare**, S. P. Lochab and R. K. Kale. Proceedings of International Conference on Luminescence and its Applications (ICLA – 2004) held at BARC Bombay during 9-12 February 2004. P142.

Li₅AlO₄:Cu, A promising TLD material. N. B. Ingle, B. K. Katore, **P. D. Sahare**, S. K. Omanwar and S. V. Moharil. Proceedings of International Conference on Luminescence and its Applications (ICLA – 2004) held at BARC Bombay during 9-12 February 2004. P230.

Thermoluminescence and photoluminescence in K₃NaSO₄:Eu nanoparticles. **P. D. Sahare**, J. S. Bakare, D. G. Wakade, Numan Salah, Rani Jha and Lalhriatzuala. Proceedings of International Conference on Luminescence and its Applications (ICLA – 2004) held at BARC Bombay during 9-12 February 2004. P345.

Preparation and characterization of nanocrystalline MgB₄O₇: Dy for radiation dosimetry using thermoluminescence technique. A. Pandey, **P. D. Sahare**, N. B. Ingle, S. P. Lochab, D. Kanjilal, and S. K. Omanwar. Proceedings of International Conference on Luminescence and its Applications (ICLA – 2004) held at BARC Bombay during 9-12 February 2004. P354.

Thermoluminescence and photoluminescence characteristics of nanocrystalline BaSO₄: Dy Phosphor. Numan Salah, **P. D. Sahare**, J. S. Bakare and S. P. Lochab. Proceedings of International Conference on Luminescence and its Applications (ICLA – 2004) held at BARC Bombay during 9-12 February 2004. P357.

Study of TL and PL in LiF:Mg,Cu,P on 24 MeV ion beam irradiation. Numan Salah, Somrendro Singh and **P. D. Sahare**, Proceedings, NCLA-2005, Bangalore University, Bangalore during 2-4 February, 2005.

Fluorescence quenching of 7-Diethylamino-4-trifluoromethyl Coumarin in presence of acetone, A.Pattanaik, M Nanda, **P D Sahare**, Proceedings of SPIE -- Multispectral, Hyper spectral, and Ultraspectral Remote Sensing Technology, Techniques, and Applications, William L. Smith, Sr., Allen M. Larar, Tadao Aoki, Ram Rattan, Edits., 6405 (2006) 640514-1.

Hydrogen Peroxide Sensor Using Laser grade Dye Rhodamine B, A.Pattanaik, **P D Share**, M. Nanda, Proceedings of SPIE –Advanced Sensor Systems and Applications, Chairs: Yun Jiang Rao, Yanbiao Liao, Gang-Ding Peng, Volume 6830 (2007) 68301D-1

Sensor using Coumarin 440, A. Pattanaik, Geeta Rani, P. d. Sahare, Indian Journal of Physics, Vol 85 (2011)
An Optical Chemical Sensor for Ammonia using a laser grade dye- Coumarin 152A, A.Pattanaik, **P D Sahare**, Page- 336 CONTEMPORARY OPTICS AND OPTOELECTRONICS, Editors: PP Sahu, P Deb, TATA McGraw HILL (2008), ISBN (13 DIGITS)-978-0-07-024888-5

An Optochemical Detection Technique for Potassium Hydroxide, A. Pattanaik, **P D Sahare**, Page- 339, CONTEMPORARY OPTICS AND OPTOELECTRONICS, Editors: PP Sahu, P Deb, TATA McGraw HILL (2008), ISBN: 978-0-07-024888-5

A Sensor for Acetone using a laser grade dye-Malachite green, A.Pattanaik, **P D Sahare**, Page-225, Proceedings of the third International Conference on LUMINESCENCE AND ITS APPLICATIONS, Editors: Santa Chawla, Harish Chander, K V R Murthy, Macmillan India (2008), ISBN 13:978-0230-63468-8

An optical sensor for Hydrogen peroxide using a laser grade dye Stilbene – 3, A. Pattanaik, **P D Sahare**, Page- 303, LUMINESCENCE AND ITS APPLICATIONS, Editors: S Selvasekarapandian, K V R Murthy, V Natarajan, J Malathi, G M Brahmanandhan, D Khanna, Macmillan India (2007), ISBN 13:9780230630543

Photoluminescence of Cu doped sponge-like porous ZnO nanoparticles synthesized via chemical route, AIP Conf. Proc. 1393 (2011) 63, doi:10.1063/1.3653610.

Novel nanostructured zinc oxide ammonia gas sensor, AIP Conf. Proc. 1393 (2011) 219, doi:10.1063/1.3653688.

Synthesis and Luminescent Properties of Li-doped ZnS Nanostructures by Chemical Precipitation Method, AIP Conf. Proc., 1393 (2011) 253.

Effect of Surface Defects on Green Luminescence from ZnO Nanoparticles, AIP Conf. Proc. 1393 (2011) 159, doi: 10.1063/1.3653658.

Sensitization Of Mesoporous Silica Nanoparticles (MSNs) By Laser Grade Dye Acriflavin, Adv. Mater.Lett., DOI:10.5185 amlett.2012.icnano.172.

Concentration effects on Fluorescence yield for some laser grade Coumarin Dye solutions, A. Pattanaik, **P D Sahare**, M Nanda, Page- 285, *LUMINESCENCE AND ITS APPLICATIONS*, Eds.: S Selvasekarapandian, K V R Murthy, V Natarajan, J Malathi, G M Brahmanandhan, D Khanna, Macmillan India (2007), ISBN 13:9780230630543

Fluorescence quenching of laser grade dye Stilbene – 3 in presence of acetone, A. Pattanaik, **P D Sahare**, A Baghel, Page-31, International Conference on Lasers and Nanomaterials (2006), University of Kolkatta, Kolkota

Fluorescence Quenching of 3-(2'-benzothiazolyl)-7-Diethylamino Coumarin in presence of Acetone, A. Pattanaik, **P D Sahare**, R Ranjan, J Mehra, Page-37, XVI National Conference on Atomic and Molecular Physics (2007), Tata Institute of Fundamental Research, Mumbai

A Chemical Sensor for Ammonia using a laser grade dye – Rhodamine B, A. Pattanaik, **P D Sahare**, P-7(13.15 abstract), National Laser Symposium (2007), M S University, Vadodara, Gujrat

Fluorescence quenching of 7-diethylamino-4-trifluoromethyl Coumarin in presence of Potassium hydroxide, A.Pattanaik, **P D Sahare**, M Nanda, Page-60, Topical Conference on atomic and Molecular Physics (2008), Dept.of Physics, Vallabh Vidyanagar, Gujrat

An Optical sensor for Acetone using Fluorescence quenching of 7-amino-4-methyl Coumarin, A.Pattanaik, **P D Sahare**, J Mehra, Page-61, Topical Conference on atomic and Molecular Physics (2008), Dept. of Physics, Vallabh Vidyanagar, Gujrat

Effect of Concentration of Fluorescence Spectrum of Laser dye –Malachite green, A. Pattanaik, **P D Sahare**, Page-70, International Conference on luminescence and its Applications-2008, National Physical Laboratory, Delhi

On the transfer of electronic excitation energy in liquids using a laser dye –Rhodamine B, A. Pattanaik, **P D Sahare**, M Nanda, Page-71, International Conference on luminescence and its Applications-2008, National Physical Laboratory, Delhi

A simulated study of laser induced fluorescence characteristics for Oxygen molecule, A. Pattanaik, **P D Sahare**, M Nanda, Page-70, International Conference on luminescence and its Applications-2008, National Physical Laboratory, Delhi

Concentration effects on fluorescence yield for laser grade dye Stilbene 420 and Rhodamine B solutions, A. Pattanaik, S.Kumari, S.Kumar, V.Kumar, G Rani, **P D Sahare**, Page-poster78, National Conference on Luminescence and its applications(2009), CGCRI, Kolkota

Thermoluminescence characteristics of nanocrystalline Zirconium oxide doped with copper, J Mehra, **P D Sahare**, R Ranjan & A. Pattanaik, Page-109, International Conference on luminescence and its Applications-2008, National Physical Laboratory, Delhi

Thermoluminescence Studies of copper doped nanocrystalline Aluminium Oxide, J Mehra, **P D Sahare**, R Ranjan & A. Pattanaik, Page-62, Topical Conference on atomic and Molecular Physics (2008), Dept.of Physics, Vallabh Vidyanagar, Gujrat

Thermoluminescence properties of Cu doped nanocrystalline ZnO phosphor, J Mehra, **P D Sahare**, R Ranjan, A. Pattanaik, Page-53, Indo Australia Symposium on Multifunctional Nanomaterials Nanostructures and Applications (2007), Dept. of Physics and Astrophysics, University of Delhi

Thermo luminescence properties of Cu and P doped LiNaSO₄ phosphor, J.Mehra, R Ranjan, N,Salah, S P Lochab, **P D Sahare**, A. Pattanaik & A Kumar, Page- 86,Conference on 'Accelerators and low level Radiation Safety' (2007), Inter University Accelerator Center, New Delhi

TL study of CaSr_{1-x}SO₄: Eu Phosphors, S P Lochab, **P D Sahare**, N Salah, R S Chauhan, R Ranjan, A Pandey & A Pattanaik, Page-115, 2nd International Conference on Current Developments in Atomic, Molecular & Optical Physics (2006), Dept. of Physics and Astrophysics, University of Delhi

Optical sensor systems for the atmospheric probing of chemical agents in the Vis-IR region, A. Pattanaik, **P. D. Sahare**, Page – 5 , ORAL Presentation Abstract book of Winter College on Optics in Environmental Science(2009)

Concentration effects on fluorescence yield for laser grade dye- Acriflavin, A. Pattanaik, **P. D. Sahare**, 7th Liquid matter conference (2008), Lund University, Sweden

Laser sensor Systems for the detection of chemical agents in Vis-IR Region, A. Pattanaik, **P. D. Sahare**, ORAL Presentation Abstract book of Workshop for young Scientists on 'Lasers, quantum optics and Biophysics, Gif-Sur-Yvette, France (2007)

Stilbene Laser dye incorporated Mesoporous Nano silica as Ammonia Sensor, Surbhi Kumari, **P. D. Sahare**, Page 1, Laser and Advanced materials , A proceedings of National Conference on Lasers and Advanced Materials 2012, Editors G.G.Muley ISBN No-978-81-92256-6-1, 29-30 May **2012**.

Concentration Effects On Fluorescence Yield For Laser Grade Dye Stilbene 420 And Rhodamine B Solutions Amitansu Pattanaik, Surbhi Kumari, Surender Kumar, Vipin kumar, Geeta Rani and **P. D. Sahare**, Page 79, Proceeding of National Conference on Luminescence and its applications , Feb 19-21 (**2009**), Poster presentation.

Optical Gas Sensor of Sulfur Dioxide using Malachite Green Oxalate Salt, Surbhi Kumari, **P. D. Sahare**, Meenakshi Gupta and J. C. Kapoor , Page 104, Proceedings of International Conference on Sensors and related Networks, Editors J.P. Raina, M. Khalid, Z.C Alex, ISBN NO. 978-81-8424-541-7 (vol. I) Dec 8-10, (**2009**) Oral presentations.

Fluorescence Quenching Of Mesoporous Silica Nanoparticles With Ammonia, Surbhi Kumari, **P. D. Sahare**, Meenakshi Gupta, J.C.Kapoor, Page 167, Proceedings of National conference on Phosphors and their Applications, Editors KVR Murthy, B.N.Lakshminarasappa, V.Natrajan, ISBN NO- 978-81-910787-1-8, November 15-16 (**2010**), Oral presentation.

Optical Gas Sensor of Ammonia using Stilbene 420 dye incorporated alumina porous membrane, Surbhi Kumari, **P.D. Sahare**, Meenakshi Gupta, J.C. Kapoor, Page 157, proceedings of National conference on Safety Technology & Management in Defence, October 27-28 (**2010**), Oral presentation.

Fluorescence Sensitization Of Mesoporous Nanosilica Particles Using Laser Grade Dye Stilbene-420, Surbhi Kumari, **P. D. Sahare**, Meenakshi Gupta, J. C. Kapoor, page 236, Proceedings of National Conference on Luminescence and its applications, Editors K.Somaiah, Dr,K.V.R.Murthy, Feb. 7-9 (**2011**), Oral presentation.

Novel Nanostructured Zinc Oxide Ammonia Gas Sensor, Surbhi Kumari, **P. D. Sahare**, Meenakshi Gupta, J.C.Kapoor, page 139, Proceedings of International Conference on Advances in Condensed and Nanomaterials, Editors S.K.Tripathi, Keya Dharambir, Ranjan Kumar, G.S.S.Saini, Feb. 22-26 (**2011**), Poster presentation.

Sensitization Of Mesoporous Silica Nanoparticles (Msns) By Laser Grade Dye Acriflavin, S. Kumari, **P. D. Sahare**, J.C. Kapoor, M. Gupta, page 91, Proceedings of International Conference on Nanomaterials and Nanotechnology, Editors Ashutosh Tiwari, and P.D.Sahare, ISBN NO- 978-81-920068-3-3, Dec. 18-21 (**2011**), Oral presentation.

Synthesis and Luminescent Properties of Lidoped ZnS Nanostructures by Chemical Precipitation Method, Rani, Geeta; **Sahare, P. D.**, International Conference on Advances in Condensed and Nano Materials (ICACNM-2011). AIP Conference Proceedings, Volume 1393. AIP Conference Proceedings, Volume 1393, Issue 1, p.253-254

Sensitization Of Mesoporous Silica Nanoparticles (Msns) By Laser Grade Dye Popop, Surbhi Kumari, **P.D. Sahare**, Meenakshi Gupta , Page 513, Proceedings of International Conference and Workshop on

Nanostructured Ceramics and other Nanomaterials, March 13-16, (**2012**), Oral presentation.
Fluorescence Sensitization Of Mesoporous Silica Nanoparticles (Msns) By Laser Grade Dye Fluorescein Sodium, Surbhi Kumari, **P.D. Sahare**, Proceedings of XIth International Conference on nanostructured materials, Aug. 26 (**2012**), Oral presentation.

TLD Nanophosphors for Their Applications in TLD and OSL Dosimetry, **P. D. Sahare**, a Key Note Address at 1st Congress on Advanced Materials during 13-17, May 2011 organized jointly by University of Jinan, Jinan

c) Research papers Published in Conferences/Seminar other than Refereed/Peer Reviewed Conferences

Nanophosphors and Their Applications – A key note address at National Seminar on Recent Trends in Luminescence (NSRTL-2008) organized by Luminescence Society of India (Jabalpur Chapter) and Rani Durgavati University, Jabalpur during 25-26 April 2008. Also chaired a technical session.

Nanocrystalline TLD Phosphors, Invited Talk at National Seminar cum Conference on "Emerging Trends in Physics" (NSC-ETP 2007) held during December 17-19, 2007 at R. K. College, Madhubani, 847211 also chaired a technical session.

4. *Other publications (Edited works, Book reviews, Festschrift volumes, etc.)*

Conference Organization/Presentations (in the last three years)

List against each head (If applicable)

1. *Organization of a Conference*

National Conference on Luminescence and its Applications 2003 in collaboration with National Physical Laboratory, New Delhi, India

International Conference on Luminescence and its Applications 2008 in collaboration with National Physical Laboratory, New Delhi, India

Indo-Russian Workshop on Nanotechnology and Laser Induced Plasma at the University of Delhi, Delhi, India in 2009

2. *Participation as Paper/Poster Presenter*
Several presentations were made.

Research Projects (Major Grants/Research Collaboration)

"Response of TLD Materials to SHI" sponsored by Inter-University Accelerator Centre, New Delhi

"Development of X-ray radiation diagnostics equipment for investigation of the X-ray emission from laser and discharge produced plasma using TLD and X-ray storage phosphors", Indo-Russian ILTP Project sponsored by DST, Delhi and RAS, Moscow.

"TLD Nanophosphors for Ion-Beam dosimetry" sponsored by Inter-University Accelerator Centre, New Delhi
"Development of Nanophosphors for Space Dosimetry" sponsored by ISRO at University of Pune
"Development of Gas Sensors for Polluting and Fire Extinguished Gases" sponsored by CFEES, DRDO, Delhi
"Modifications by SHI Beam in Wide Band Gap Semiconductor Nanoparticles for Their Applications as Multifunctional Materials"
sponsored by IUAC, Delhi

Awards and Distinctions

National Overseas Scholarship to visit USA.

UGC and CSIR Research Associateships.

Distinguished Research Scientist Award -2011, International Association for Advanced Materials (IAAM) URL:

www.iiamonline.com

Best Editor Award -2011, International Association for Advanced Materials (IAAM) URL: www.iiamonline.com

Association With Professional Bodies

1. *Editing*

Associate Editor, Advanced Materials Letters

URL: www.amlett.com

Member, Editorial Board,

Journal of Astrophysics and Aerospace Technology

OMICs Publishing Group, USA

URL: <http://www.omicsgroup.org/journals/editorialboardJAAT.php>

Lead Guest Editor, Special Issue,

"Nanostructured Materials: Optical Properties and Applications"

Hindawi Publishing Corporation

URL: <http://www.hindawi.com/>

Lead Guest Editor, Special Issue,

"Luminescent Phosphors and Their Applications",

Hindawi Publishing Corporation

URL: <http://www.hindawi.com/>

Associate Editor

International Journal of Chemical Research

Bioinfo Publications

ISSN : 0975-3699 (Print) E-ISSN : 0975-9131 (Online)

Editor-in-Chief

Journal of Luminescence & Applications,

Columbia International Publishing,

URL: <http://www.uscip.org/>

2. *Reviewing*

Biologicals

IEEE Transactions on Nuclear Science

Indian Journal of Applied Physics

Journal of Luminescence

Journal of Physics and Chemistry of Solids

Journal of Physics D: Applied Physics

NIM B

Radiation Effects and Defects in Solids

Radiation Measurements

Spectra Chemica Acta

Scripta Materialia
Wesleyan Journal of Research
Biological Chemistry
Biotechnology and Applied Biochemistry

3. *Advisory*
Member, Governing Body, MG Institute of Technology and Management, Lucknow, UP, India
4. *Committees and Boards*
Member, many selection committees of State Public Service Commission, UP and LNM, University, UP
5. *Memberships*
Luminescence Society of India
International Association of Advanced Materials
Indian Physics Association
6. *Office Bearer*
President, Luminescence Society of India (Delhi Chapter)
President, International Association of Advanced Materials (South Asian Chapter)

Other Activities

Social work.

--- P D Sahare

Representative list of Publications in Journal (last Five year):

1. Novel Nanostructured Zinc Oxide Ammonia Gas Sensor, Surbhi Kumari, P. D. Sahare, Meenakshi Gupta, and J. C. Kapoor, AIP Conf. proc., 1393,219 (2011).
2. Sensitization Of Mesoporous Silica Nanoparticles (MSNs) By Laser Grade Dye Acriflavin, Surbhi Kumari, P. D. Sahare, Meenakshi Gupta, DOI: 10.5185/amlett.2012.icnano.172.
3. Photoluminescence Study of Laser Grade POPOP Dye Incorporated into MCM-41, Surbhi Kumari, P. D. Sahare, Adv. Porous Mater., American Scientific Publishers, 1 (2012) 1.
4. Optical Studies of Fluorescent Mesoporous Silica Nanoparticles, Surbhi Kumari, P. D. Sahare, *J. Mater. Sci. Technol.*, 29 (2013) 742.
5. Gas sensing behavior of Fluorescein sodium impregnated MCM-41 for Sulphur dioxide, Surbhi Kumari, P. D. Sahare, *Sensor lett.* 11 (2013) 526, doi:10.1166/sl.2013.2830.
6. Nd doped ZnO as a multifunctional material, Surender Kumar and P. D. Sahare, *J. Rare Earths*, 30 (2012) 761, DOI: 10.1016/S1002-0721(12)60126-4
7. Effects of annealing on the surface defects of zinc oxide nanoparticles, Surender Kumar and P. D. Sahare, *Nano*, 7 (2012) 1250022, DOI: 10.1142/S1793292012500221
8. Thermoluminescence and Photoluminescence properties of K₂Ca₂(SO₄)₃: Cu nanophosphor for gamma radiation dosimetry, N.T. Mandlik, J.S. Bakare, P.D. Sahare, V.N. Bhoraskar, S.D. Dhole, *Ind. J. Phys. Appl. Phys.*, 50 (2012) 859.
9. Fluorescence quenching of laser grade dye coumarin 440 in presence of hydrogen peroxide, A. Pattanaik, P.D. Sahare, G.Rani, *Ind. J. Phys.* 2011, 85, 1775, DOI: 10.1007/s12648-011-0194-4.
10. A new approach to produce single and double layer graphene from re-exfoliation of expanded graphite, S.R. Dhakate, N. Chauhan, S. Sharma, J. Tawale, S. Singh, P.D. Sahare, R.B. Mathur, *Carbon*, 2011, 49, 1946-1954.
11. High Energy Radiations Dosimetry in the Space, P. D. Sahare, Editorial, *J. Astrophys Aospace Technol* 1 (2012) 1-2

12. Preparation and characterization of short length ZnO nanorods and ZnO@ZnS core-shell nanostructures, Geeta Rani, P.D. Sahare, *Nano Commun. Netw.* 3 (2012) 197, doi: 10.1016/j.nancom.2012.09.003
13. Elucidation of Mg²⁺ binding activity of adenylate kinase from Mycobacterium tuberculosis H37Rv using fluorescence studies, Laxman S. Meena, Sanjay R. Dhakate, and Purushottam D. Sahare, *Biotechnol Appl Biochem* *Biotechnol Appl Biochem*, 59 (2012) 429, DOI: 10.1002/bab.1043.
14. Effect of phase transition and particle size on thermoluminescence characteristics of nanocrystalline K₂Ca₂(SO₄)₃:Cu⁺ phosphor, P.D. Sahare, J.S. Bakare, S.D. Dhole, Pratik Kumar, *Radiat. Measur.* 47 (2012) 1083
15. Observation of band gap and surface defects of ZnO nanoparticles synthesized via hydrothermal route at different reaction temperature, Kumar, Surender, Sahare, P. D., *Opt. Commun.* 285 (2012) 5210 DOI: 10.1016/j.optcom.2012.07.125
16. Redox reactions in Cu-activated nanocrystalline LiF TLD phosphor, Singh, Manveer; Sahare, P. D. *NIM B*, 289 (2012) 59, DOI: 10.1016/j.nimb.2012.08.003
17. Photoluminescence of Cu doped sponge-like porous ZnO nanoparticles synthesized via chemical route, Vipin Kumar and **P. D. Sahare**, *AIP Conf. Proc.* 1393, 2011, pp. 63-64; doi:http://dx.doi.org/10.1063/1.3653610.
18. Novel nanostructured zinc oxide ammonia gas sensor, Surbhi Kumari and **P. D. Sahare**, *AIP Conf. Proc.* 1393, 2011, pp. 219-220; doi:http://dx.doi.org/10.1063/1.3653688.
19. Synthesis and Luminescent Properties of Li-doped ZnS Nanostructures by Chemical Precipitation Method, Geeta Rani and **P. D. Sahare**, *AIP Conf. Proc.*, 2011, 1393, pp. 253.
20. Effect of Surface Defects on Green Luminescence from ZnO Nanoparticles, Surender Kumar & **P. D. Sahare**, *AIP Conf. Proc.* 1393, 159 (2011); doi: 10.1063/1.3653658.
21. Synthesis and Luminescence Properties of Nanocrystalline LiF:Mg,Cu,P Phosphor, **P.D. Sahare**, J.S. Bakare, S.D. Dhole, N.B. Ingale, A.A. Rupasov *J. Lum.* 130 (2010) 258
22. Nanocrystalline MgB₄O₇: Dy for high dose measurement of gamma radiation, S P Lochab, A Pandey, **P D Sahare**, R S Chauhan, Numan Salah, Ranju Ranjan, *phys. stat. solidi (a)*, 2007, 204, 2416.
23. Effect of high-energy ⁷Li²⁺ ions on the TL behavior of LiF: Mg,Cu,P detectors, Numan Salah, S P Lochab, D Kanjilal, **P D Sahare** and V E Aleynikov, *Radiat. Measur.*, 2007, 42, 1294.
24. TL and PL in BaSr(SO₄)₂:Eu mixed sulphate, Numan Salah, **P D Sahare**, Pratik Kumar, *phys. stat. solidi (a)*, 2006, 203, 898.
25. K₃Na(SO₄)₂ :Eu nanoparticles for high dose of ionizing radiation, **P D Sahare**, Ranju Ranjan, Numan Salah and S P Lochab, *J. Phys. D: Appl. Phys.*, 2007, 40, 759.
26. The influence of high-energy ⁷Li ions on the TL response and glow curve structure of nanocrystalline CaSO₄:Dy, Numan Salah and **P D Sahare**, *J. Phys. D: Appl. Phys.*, 2006, 39, 2684.
27. Thermoluminescence and photoluminescence characteristics of nanocrystalline LiNaSO₄ :Eu phosphor, A Pandey, **P D Sahare**, J S Bakare, S P Lochab, F Singh and D Kanjilal, *J. Phys. D: Appl. Phys.*, 2003, 36, 2400.
28. Thermoluminescence and photoluminescence study of Ba_{0.97}Ca_{0.03}SO₄ : Eu, S P Lochab, **P D Sahare**, R S Chauhan, Numan Salah and A Pandey, *J. Phys. D: Appl. Phys.*, 2006, 39, 1786.
29. Thermoluminescence and photoluminescence study of nanocrystalline Ba_{0.97}Ca_{0.03}SO₄ : Eu, S P Lochab, **P D Sahare**, R S Chauhan, Numan Salah, Ranju Ranjan and A Pandey, *J. Phys. D: Appl. Phys.*, 2007, 40 1343.
30. Thermoluminescence and photoluminescence of LiNaSO₄:Eu irradiated with 24 and 48MeV ⁷Li ion beam, Numan Salah, **P D Sahare**, Awadhesh Prasad, *J. Lum.*, 2006, 121, 497
31. Thermoluminescence of Ba_{0.97}Ca_{0.03}SO₄:Eu irradiated with 48 MeV ⁷Li ion beam, S P Lochab, Numan Salah, **P D Sahare**, R S Chauhan and Ranju Ranjan, *NIMB*, 2007, 254, 231.
32. Thermoluminescence of nanocrystalline LiF:Mg, Cu, P, Numan Salah, **P D Sahare**, A A Rupasov, *J. Lum.*, 2007, 124, 357
33. TL and PL studies on CaSO₄: Dy nanoparticles, Numan Salah, **P D Sahare**, S P Lochab, Pratik Kumar, *Radiat. Measur.*, 2006, 41, 40

34. TL, PL and energy transfer in $K_2Ca_2(SO_4)_3: Eu^{2+}, Ce^{3+}$, Numan Salah and **P D Sahare**, Radiat. Measur., 2006, 41, 665.
35. A novel optical sensor for ammonia using a laser grade dye—Stilbene 3, **P D Sahare** and A. Pattanaik, J. Phys. D: Appl. Phys., 2007, 40, 7166
36. Fluorescence quenching of 3-methyl 7-hydroxyl Coumarin in presence of acetone, Vijay Kumar Sharma, D. Mohan and **P D Sahare**, Spectrochim. Acta: A, 2007, 66, 111.
37. Energy transfer studies in binary dye solution mixtures: Acriflavine + Rhodamine 6G and Acriflavine + Rhodamine B, **P D Sahare**, Vijay K. Sharma, D. Mohan and A.A. Rupasov, Spectrochimica Acta: A, doi:10.1016/j.saa.2007.07.003, available online from 10 July 2007.