

FACULTY PROFILE



Name	Dr. Pushpal Ghosh					Date of Birth: 06-11-1978				
Designation	Assistant Professor			Date of holding Present Post			09-10-2013			
Name of the Department and School	Department of Chemistry					School of Chemical Science and Technology				
Contact Details	Email : pushpalghosh27@gmail.com					Mobile: 9407265512				
Additional Responsibility in the university, if any	Placement cell officer of the department ; Teacher-in-charge of the Scanning Electron Microscope (SEM); BET Surface Area Analyzer which are under Sophisticated Instrumentation Centre(SIC)									
Educational Qualifications (UG onwards)	- PhD, Indian Association for the Cultivation of Science, Kolkata (Degree given by Jadavpur University), (Supervisor: Prof. Amitava Patra, FRSC) M. Sc Presidency College, University of Calcutta - B.Sc. (Hon's in Chemistry), Ramkrishna Mission Residential College, Narendrapur, University of Calcutta									
Past Employment	- March 2012 to October 2013-Post Doctoral Research Fellow in European Research Council Project, Ruhr University Bochum, Germany [Mentor: Prof. Anja-Verena Mudring, FRSC] - March 2010 to February 2012- Alexander von Humboldt Fellow, Ruhr University Bochum, Germany [Mentor: Prof. Anja-Verena Mudring, FRSC] - December 2009 to February 2010- Post Doctoral Research Fellow in European Research Council Project, Ruhr University Bochum, Germany [Mentor: Prof. Anja-Verena Mudring, FRSC] - April 2009 to December 2009- SRF Extended by CSIR, Indian Association for the Cultivation of Science, Kolkata (Mentor: Prof. Amitava Patra, FRSC)									
Research Area/Specialization	Optoelectronic Materials on Nanoscale using Green Synthesis, Ionic Liquids, Functional materials									
Awards/ Honors / Fellowship Conferred (With details thereof)	- Alexander von Humboldt Fellowship for Post Doctoral Research in Germany, 2010-2012 - Post Doctoral Fellowship in European Research Council Project in the Ruhr University Bochum, Germany (December 2009 to February 2010 and March 2012 to October 2013) - Travel grant by SERB, Govt. of India for delivering invited lecture in "XVII International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare-Earth", Russia, 2018 - Best Poster Prize in the Rare Earth Processing and Utilization 2014 conducted by Rare Earth Association of India in association with BRNS and Mumbai Chapters of IIM and MRSI - Inventor Award for one of the best three inventions (German patent: DE 102012105782 A1) from Ruhr University Bochum, Germany in 2012 - Senior Research Fellowship (Extended) 2009 by CSIR, India - Best Poster Prize in the 'National Symposium for Materials Research Scholars' 2008 conducted by IIT Bombay - National Eligibility Test (NET) 2004 in Chemical Sciences by CSIR, India - Graduate Aptitude Test for Engineering (GATE) 2004 conducted by IIT "The Governor of West Bengal's Award" as all round student of the school for 1994-1995									
Summary of Publications (Number only)	Research Papers	30	Books		Chapter in Books	01	Seminars/ Conferences Proceedings	04	Projects	05

Research Projects (Completed and Ongoing):

S.No.	Title	Funding Agency	Duration	Sanction order No. & Date	Amount in Rs. Lakh	Completed/ongoing
1.	Energy Efficient Luminescent/Catalytic Nanocomposites via Ionic Liquids	Science and Engineering Research Board (SERB)	3 years (2020-2023)	CRG/2018/003751 Dated: 30.01.2020	Rs. 30,54,832/- (PI)	Ongoing

S.No.	Title	Funding Agency	Duration	Sanction order No. & Date	Amount in Rs. Lakh	Completed/ongoing
2.	Energy Efficient Optoelectronic Nanomaterials via Green Synthesis	Board of Research in Nuclear Sciences (BRNS)	3 years (2017-2020)	34/14/27/2016-BRNS/34368 Dated: 17.11.2016	Rs. 34,60,900/-	Ongoing
3.	Exceptional Rare-Earth Doped Nanomaterials morphed via Ionic Liquids	Science and Engineering Research Board (SERB)	3 years (2015-2018)	SB/FT/CS-014/ 2014 Dated:29.05.2015	Rs.24,89,000/- (PI)	Completed [Graded in "Very Good" category]
•	New Generation Optical Materials via Green Synthesis: Beyond the Conventional	University Grants Commission (UGC Start-Up Grant)	2 years (2014-2016)	F.30-56/2014(BSR) Dated:06.08.2014	Rs.6,00,000/- (PI)	Completed
•	Spatial distribution of uranium and associated water quality parameters in Sagar and nearby districts of Madhya Pradesh (Bhopal, Damoh and Vidisha)	Board of Research in Nuclear Sciences (BRNS)	3 years (2017-2020)	36(4)14/13/2017-BRNS/36184 Dated:30.11.2017	Rs.27,51,800 (Co Investigator)	Ongoing

PUBLICATIONS :

National Publications (Details of Research Papers):

Year (From 2005 to 2020)	(Name of the author(s), title, name of the journal, vol. no. , page no., Month/year, ISSN and impact factor, if any)
2017	R. K. Sharma, Y. N. Chouryal and P. Ghosh* "Ionic Liquid Based Synthesis of Energy Efficient Nanomaterials" SMC Bulletin 2017; 8, 15-24. ISSN No: 2394-5087 (Invited Feature article and cover page illustration).

International Publications (Details of Research Papers):

Year (From 2020 to 2005)	(Name of the author(s), title, name of the journal, vol. no. , page no., Month/year, ISSN and impact factor, if any)
2020	R. K. Sharma, Y. N. Chouryal, A. I. Slesarev, K. V. Ivanovskikh, I. I. Leonidov, S. Nigam and P. Ghosh*, A closer look at defects and luminescence of nanocrystalline fluorides synthesized via ionic liquids: the case of Ce³⁺-doped BaF₂, New Journal of Chemistry, 2020, 44, 200 (IF 3.069) ISSN No:1369-9261
2019	R. K. Sharma, S. Nigam, Y.N. Chouryal, S. Nema, , S.P. Bera, Y. Bhargav and P. Ghosh* Eu-Doped BaF₂ Nanoparticles for Bioimaging Applications. ACS Appl. Nano Mater. 2019, 2, 927–936. ISSN: 2574-0970 - Y.N. Chouryal, R. K. Sharma, D. Acharjee, T. Ganguly, A. Pandey and P. Ghosh*, Influence of Ionic Liquids and Concentration of Red Phosphorous on Luminescent Cu₃P Nanocrystals, Journal of Chemical Sciences, 2019, 131:93 (Invited article in Special Issue on Materials Chemistry) (IF 1.496) ISSN No: 0973-7103 (Online)
2018	J. K. Singh, R.K. Sharma, P. Ghosh, A. Kumar and M. L. Khan, Imidazolium based Ionic Liquids: A Promising Green Solvent for Water Hyacinth Biomass Deconstruction, Front. Chem., 2018, 6:548 (IF 3.782) ISSN2296-2646 R. K. Sharma, Y. N. Chouryal, J. Saravanakumar, S. Barik and P. Ghosh*, Tuning of Crystal Phase and Morphology of In₂S₃ Nanocrystals and Their Adsorption Based Catalytic and Photocatalytic Applications, Chemistry Select, 2018, 3, 8171 (IF 1.716) ISSN No: 2365-6549
2017	R. K. Sharma, Y. N. Chouryal, S. Chaudhari, J. Saravanakumar, S. R. Dey and P. Ghosh* "Adsorption–Driven Catalytic and Photocatalytic Activity of Phase Tuned In₂S₃ Nanocrystals" ACS Appl. Mater. Interfaces, 2017, 9, 11651-11661 (IF 8.456). ISSN: 1944-8252 This work is highlighted in all the leading Hindi Newspaper of Madhya Pradesh, India on 12th May, 2017. P. Ghosh*, R. K. Sharma, Y.N. Chouryal, A. V. Mudring* "Size of the rare-earth ions: A key factor in phase tuning and morphology control of binary and ternary rare-earth fluoride materials" RSC Adv., 2017, 7, 33467. (IF 3.049). ISSN: 2046-2069. R. K. Sharma, A. V. Mudring* and P. Ghosh* "Recent trends in binary and ternary rare-earth fluoride nanophosphors: How structural and physical properties influence optical behaviour" J. Luminescence, 2017, 189, 44-63 (IF 2.961). ISSN: 0022-2313 - This article belongs to a special issue LUMINET— European Network on Luminescent Materials. [The most downloaded articles from Journal of Luminescence in the last 90 days after publication].
2016	P. Ghosh* and A.V. Mudring* "Phase selective synthesis of quantum cutting nanophosphors and the observation of a spontaneous room temperature phase transition" Nanoscale 2016, 8, 8160-8169. (IF 6.970) ISSN 2040-3372

2014	S. Tang, C. Lorbeer, X. Wang, P. Ghosh and A. V. Mudring "Highly luminescent salts of lanthanide (III) diethyl-2,2,2-trichloroacetylphosphoramidate with imidazolium counter cations" Inorg. Chem. 2014, 53, 9027-9035. (IF 4.850) ISSN: 1520-510X
2011	P. Ghosh, S. Tang and A.V. Mudring, Efficient quantum cutting in hexagonal NaGdF₄:Eu³⁺nanorods, J. Mat. Chem., 2011, 21, 8640-8644 (IF 6.626) [Selected as "Hot Article"] ISSN:1364-5501
2010	P. Ghosh, A. Kar and A. Patra "Energy Transfer Study between Ce³⁺ and Tb³⁺ ions in Doped and Core-Shell Sodium Yttrium Fluoride Nanocrystals" Nanoscale 2010, 2, 1196-1202. (This paper is published as part of a Nanoscale themed issue on doped nanostructures) (IF 6.970) ISSN 2040-3372 P. Ghosh, A. Kar and A. Patra. "Structural changes and spectroscopic properties of Ce³⁺ ion doped sodium yttrium fluoride nanocrystals: Influences of sonication and temperature" J. Phys. Chem. C 2010, 114, 715-722. (IF4.309) ISSN: 1932-7455 P. Ghosh, A. Kar and A. Patra "Structural and Photoluminescence Properties of Doped and Surface Coated LaPO₄Nanocrystal: Eu³⁺ ion as a Spectroscopic Probe" J. Appl. Phys. 2010,108, 113506 (8 pages). (IF 2.328) ISSN:1089-7550 P. Ghosh, S. Kundu, A. Kar, K. V. Ramanujachary, S. Lofland and A. Patra "Synthesis and characterization of different shaped Sm₂O₃nanocrystals" J. Phys. D: Appl. Phys.2010, 43, 405401 (7pages). (IF 2.829) ISSN: 1361-6463
2009	P. Ghosh, E. De la Rosa, J. Oliva, D.Solis, A. Kar and A. Patra. "Influence of surface coating on the upconversion emission properties of LaPO₄: Yb /Tm core-shell nanorods" J. Appl. Phys. 2009,105, 113532 (5 pages). (IF 2.328) ISSN:1089-7550
2008	P. Ghosh and A. Patra. "Tuning of Crystal Phase and Luminescence Properties of Eu³⁺ Doped Sodium Yttrium Fluoride Nanocrystals".J. Phys. Chem. C 2008, 112, 3223-3231. (IF4.309) ISSN: 1932-7455 P. Ghosh, J. Oliva, E. De la Rosa, K. K. Haldar, D. Solis and A. Patra. "Enhancement of Upconversion Emission of LaPO₄: Er @Yb Core-Shell Nanoparticles / Nanorods" J. Phys.Chem. C 2008, 112, 9650-9658.(IF4.309) ISSN: 1932-7455 P. Ghosh and A. Patra. "Influence of Crystal Phase and Excitation Wavelength on Luminescence Properties of Eu³⁺ Doped Sodium Yttrium Fluoride Nanocrystals".J. Phys. Chem. C 2008, 112, 19283-19292. (IF4.309) ISSN: 1932-7455 P. Ghosh and A. Patra. "Crystal phase, shape and luminescence properties of LaPO₄:Eu³⁺nanocrystals".J. Nanosci. & Nanotech. 2008, 8, 3458-3464. (IF 1.093) ISSN:1533-4880 P. Ghosh, S.Sadhu, T. Sen and A. Patra."Up-conversion emission of BaTiO₃: Ernanocrystals." Bull. Mater. Sci in Special issue 2008, 31, 461-465.(IF 1.264) ISSN:0973-7669
2007	P. Ghosh and A.Patra. "Influence of Surface Coating Physical properties of TiO₂ / Eu³⁺nanocrystals" J. Phys. Chem. C 2007, 111, 7004-7010. (IF4.309) ISSN: 1932-7455 P. Ghosh, K. Priolkar and A. Patra. "Understanding the local structures of Eu and Zr in Eu₂O₃ oxide and coated ZrO₂nanocrystals by EXAFS study" J. Phys. Chem. C 2007, 111, 571-578. (IF4.309) ISSN: 1932-7455 P. S. Chowdhury, P. Ghosh and A. Patra. "Study of photophysical properties of capped CdSnanocrystals" J. Luminescence, 2007, 124, 327-332. (IF2.961) ISSN: 0022-2313
2006	P. Ghosh and A. Patra "Role of surface coating in ZrO₂/Eu³⁺nanocrystals" Langmuir, 2006, 22, 6321-6327. (IF3.683) ISSN: 0743-7463 P. Ghosh, S. Sadhu and A. Patra."Preparation and photoluminescence properties of Y₂SiO₅: Eu³⁺nanocrystals" Phys. Chem. Chem. Phys. 2006, 8, 3342-3348. (This paper is published as part of themed issue on Nanoscience& Nanotechnology) (IF 3.567) ISSN 1463-9084
2005	A. Patra, P. Ghosh, P. S. Chowdhury, Márcio A. R. C. Alencar, W. Lozano B., N.Rakov, and G. S. Maciel. "Red to blue tunableupconversion in Tm³⁺ - doped ZrO₂nanocrystals" J. Phys. Chem. B, 2005, 109, 10142-10146. (IF2.923) ISSN: 1520-5207 P. Ghosh and A. Patra. "Understanding the influence of nano-environment on luminescence of rare-earth ions" Pramana, 2005, 65, 901-907.(IF 1.185) ISSN: 0973-7111
Chapters in Books	
Year	(with author(s), title of chapter, title of the book with author name, name of publisher, year of Publication, ISBN)
2011	P. Ghosh, C. Lorbeer and A. V. Mudring "Nanofluorides for environmentally benign lighting and energy conversion in solar cells" in: D. J. Nelson and C. N. Brammer (Eds.) Fluorine-related Nanoscience with Energy Applications (ACS Symposium Series, Vol.1064), 2011, Chapter 6, pp 87–99. ISBN13: 9780841226104 eISBN: 9780841226111
National Seminar/Conference/Workshops (Attended)	
Year (From 2013 to 2020)	(with topic, date and venue)

	Oral presentations: • P. Ghosh and A. Patra "Role of crystal phase and excitation wavelength on luminescence properties of rare-earth doped nanocrystals." Oral Presentation in National Conference on Luminescence and its Applications on 19th-21st February, 2009. • P. Ghosh and A. Patra "Synthesis, characterization and understanding the local structure of Eu₂O₃ coated and doped ZrO₂ nanocrystal" Oral Presentation in International Conference on 'Structure and Dynamics: from Micro to Macro' University of Calcutta, December, 2006. • P. Ghosh and A. Patra "Rare-earth doped nanomaterials and its luminescence property" Oral Presentation in the Materials Research Society of India (Kolkata Chapter) on 2006 at Bengal Engineering and Science University, Shibpur, Howrah, West Bengal. Poster presentations: • R. K. Sharma, Y. N. Chouryal and P. Ghosh "Role of Secondary Nucleation on Structural and Optical Properties of Rare-Earth Doped Nanoparticles Morphed via Ionic Liquids" <i>DAE-BRNS 7th Interdisciplinary Symposium on Materials Chemistry, December 4-8, 2018, Mumbai, India</i> • R. K. Sharma and P. Ghosh "Optoelectronic Nano Materials via Ionic Liquid Based Green Synthesis" 23rd CRSI National Symposium in Chemistry (CRSI-NSC-23) conducted by IISER Bhopal on July 13-15, 2018. • P. Ghosh "Ionic Liquid Based Synthesis of Quantum Cutting NaGdF₄ Nanocrystals and Their Spontaneous Phase Transition" 6th Interdisciplinary Symposium on Materials Chemistry (ISMC) conducted by Chemistry Division, Bhabha Atomic Research Centre on December-06-10, 2016 (BARC). • R. K. Sharma, Y. N. Chouryal and P. Ghosh "Ionic Liquid Based Synthesis of Indium Sulphide Nanoparticles and their Photocatalytic Application" <i>DAE-BRNS 6th Interdisciplinary Symposium on Materials Chemistry, December 6-10, 2016, Mumbai, India.</i> • P. Ghosh "Quantum Cutting Nanomaterials for Energy Efficient Lighting from Ionic Liquids" 18th National Symposium in Chemistry (CRSI-2016) held from February 5th -7th 2016 organized by Institute of Nano Science and Technology (INST) and Panjab University. • P. Ghosh and R.K. Sharma "Energy Efficient Lighting Nanomaterials via Ionic Liquids" 5th Interdisciplinary Symposium on Materials Chemistry (ISMC) conducted by Chemistry Division, Bhabha Atomic Research Centre on December-09-13, 2014. (BARC) • P. Ghosh and R.K. Sharma "Facile Preparation of Quantum Cutting Hexagonal NaGdF₄:Eu³⁺ Nanoparticles from Ionic Liquids". Rare Earth Processing and Utilization (REPUT-2014) conducted by Rare Earth Association of India (REAL) in association with IIM, Mumbai Chapter, MRSI, Mumbai Chapter and BRNS, Mumbai on May-2 & 3, 2014. <u>The poster won 2nd prize in the competition.</u> • P. Ghosh and A.V. Mudring "Facile preparation of quantum cutting hexagonal NaGdF₄:Eu³⁺ nanoparticles from ionic liquid". Network Meeting of the Alexander von Humboldt Foundation, Freiberg (Saxony), Germany, 23-25 November, 2010. • P. Ghosh A. Kar and A. Patra "Role of crystal phase on luminescence properties of Eu³⁺ doped sodium yttrium fluoride nanocrystals." poster presentation in the NANO MISSION-DST 2009 organized by S. N. Bose National Centre for Basic Science on 12-14th March, 2009. • P. Ghosh A. Kar and A. Patra "Role of crystal phase on luminescence properties of Eu³⁺ doped sodium yttrium fluoride nanocrystals." poster presentation in the 'Materials Research Society of India Annual General meeting' (MRSI AGM-2009) on 10-12th February, 2009. • P. Ghosh and A. Patra "Role of crystal phase on luminescence properties of Eu³⁺ doped sodium yttrium fluoride nanocrystals." Awarded 3rd prize for poster presentation in the 'National Symposium for Materials Research Scholars' (MR 08) conducted by IIT Bombay as the institute was celebrating their Golden Jubilee celebration on 17-18th May, 2008. <u>The poster won 3rd Best prize in the competition.</u>
International Seminar/Conference/Workshops (Attended)	
Year (From 2013 to 2020)	(with topic, date and venue)
	• Attended EUCHEM 2010 on Ionic Liquids, Bamberg, Germany, 2010
National Seminar/Conference/Workshops (Organised)	
Year (From 2013 to 2020)	(with topic, date and venue)
	• As Co-Convener to organize DST-PURSE sponsored Workshop on Advance Imaging and Microscopy, 2019 • Information Session by Mrs. Subhadha Choudhury, Head, DAAD (German Academic Exchange Service) information centre, 2017

	- As Organizing Secretary to organize “Science Fair and National Science Day-2016” from 26.02.2016 to 04.03.2016 on the theme “Make in India: S&T Driven Innovation”. Managed to get funding (Rs. 100,000/-) from Madhya Pradesh Council of Science and Technology along with Rs. 100,000/ from University to organize the event successfully - As Joint Secretary to organize National symposium on “Horizons of light in molecules, materials and daily life” to celebrate the International Year of Light-2015 declared by UNESCO, 2015 - Organized “National Science Day-2015” on the theme “Science for Nation Building”, 2015 - Organized “National Science Day-2014” on the theme “Fostering Scientific Temper”, 2014 Managed to get funding (Rs. 50,000/-) from Madhya Pradesh Council of Science and Technology along with Rs. 10,000/ from University to organize the event successfully
International Seminar/Conference/Workshops (Organised)	
Year (From 2013 to 2020)	(with topic, date and venue)
	As Co-Convenor to organize “International Conference on Interface of Physical, Chemical and Biological Sciences, 2017
Research Papers in Proceedings (National Seminar/Conference/Workshops)	
Year (From 2013 to 2020)	(with title of the paper, Title of the proceedings vol., name of the publisher, Year, page nos.)
2015	P. Ghosh “Recent Trends in Rare-Earth Doped Nanophosphors” Proceedings of DAE-BRNS 3rd National Workshop on Materials Chemistry (Optical Materials) [NWMC-2015 (OPT-MAT)] at Bhabha Atomic Research Centre, Mumbai on November 20-21, 2015, Page No 86.
2009	P. Ghosh, and A. Patra, “Role of crystal phase on the luminescence properties of rare-earth doped nanomaterials.” National Conference on Luminescence and its Applications (NCLA-2009) at Kolkata, India, February, 2009.
Research Papers in Proceedings (International Seminar/Conference/Workshops)	
Year (From 2013 to 2020)	(with title of the paper, Title of the proceedings vol., name of the publisher, Year, page nos.)
2018	P. Ghosh “Smart Materials via Ionic Liquids” Proceedings of <i>DAE-BRNS 7th Interdisciplinary Symposium on Materials Chemistry, December 4-8, 2018, SL-4, 108-109 Mumbai, India (ISBN No. 81-88513-88-1).</i> R. K. Sharma, Y. N. Chouryal and P. Ghosh “Role of Secondary Nucleation on Structural and Optical Properties of Rare-Earth Doped Nanoparticles Morphed via Ionic Liquids” Proceedings of <i>DAE-BRNS 7th Interdisciplinary Symposium on Materials Chemistry, December 4-8, 2018, C-173, 186, Mumbai, India (ISBN No. 81-88513-88-1).</i>
2016	P. Ghosh “Ionic Liquid Based Synthesis of Quantum Cutting NaGdF₄ Nanocrystals and their Spontaneous Phase Transition” Proceedings of <i>DAE-BRNS 6th Interdisciplinary Symposium on Materials Chemistry, December 6-10, 2016, C-153, Mumbai, India (page No-284-286) (ISBN No. 81-88513-76-8).</i>
2014	R. K. Sharma, Y. N. Chouryal and P. Ghosh “Ionic Liquid Based Synthesis of Indium Sulphide Nanoparticles and their Photocatalytic Application” ” Proceedings of <i>DAE-BRNS 6th Interdisciplinary Symposium on Materials Chemistry, December 6-10, 2016, H-108, Mumbai, India (page No-457-459) (ISBN No. 81-88513-76-8).</i>
No. of Patents Filed (with date, title and other details)	
Year (From 2013 to 2020)	
2019	R. K. Sharma, and P. Ghosh “Luminescent Nanocomposites of Rare-Earth Doped Fluorides and Graphene Oxide Using Ionic Liquid and Method of Preparation Thereof” Indian Patent Application No: 20192102574 (Filed on 27th June, 2019).
No. of Patents Awarded (with title and other details)	
Year (From 2013 to 2020)	
2014	A. V. Mudring, J. Cybinska, P. Campbell, C. Lorbeer, D. Pitz, N. V. Prondzinskii and P. Ghosh, “Phosphor composite material and method of manufacturing the same” German Patent No: DE 102012105782 A1. [Published online on 02.01.2014. Link: http://www.google.com/patents/DE102012105782A1?cl=en]. This invention won the award of one of the best three inventions from Ruhr University Bochum in 2012. The competition was conducted by Ruhr University Bochum and rubitec GmbH (http://www.rubitec.de/archiv/09092013-preise-im-erfinderwettbewerb.html).

Invited Lectures delivered (<i>Outside University</i>) with title, date and place:	
Year (From 2013 to 2020)	
	• Humboldt Kolleg on "Food, Livelihood, Opportunity and Wood (Flow) ", 2020 at Raichak, WB • National Conference on "New Dimensions in Chemistry and Chemistry Education & National Convention of Chemistry Teachers" conducted by Sant Gadge Baba Amravati University, 2019 • DAE-BRNS 5th National Workshop on Materials Chemistry (Nano & Composite Materials), 2019 Manipal University Jaipur, Rajasthan • 7th DAE-BRNS Interdisciplinary Symposium on Materials Chemistry conducted by Chemistry Division, Bhabha Atomic Research Centre (BARC), 2018, Mumbai, India • XVII International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare Earth and Transition Metal Ions (IFS-2018), Russia, 2018 • Humboldt Kolleg on "Climate Change and Energy Options & 2nd Regional Network Meeting of Asian Alumni of the International Climate Protection Fellowship Programme" 2018 at Aurangabad • National Seminar on "Conservation of Energy, Economy and Environment: Future Strategies" conducted by Govt. P.G. (Autonomous College), Datia, Madhya Pradesh, 2017 • International Conference on Frontiers in Chemical Science conducted by Central University of Jharkhand, Ranchi, 2017 • 6th Interdisciplinary Symposium on Materials Chemistry conducted by Chemistry Division, Bhabha Atomic Research Centre, 2016 • 3rd DAE-BRNS National Workshop for Materials Chemistry organized by Society for Materials Chemistry, India & Chemistry Division, Bhabha Atomic Research Centre, 2015
No. of Ph.D. Awarded:	01
No. of Ph.D. Scholars working:	02
No. of Foreign Visits :	02
Year (From 2013 to 2020)	Name of the country, Date, Place, Purpose of visit, duration, etc.
2013	• Ruhr University Bochum, Germany (December 2009 to October 2013), Doing Post Doctoral Research in Alexander von Humboldt Fellowship and in European Research Council Project (ERC)
2018	• Ural Federal State University, Yekaterinburg, Russia. Give an Invited Lecture at XVII International Feofilov Symposium on Spectroscopy of Crystals Doped with Rare Earth and Transition Metal Ions (IFS-2018), Russia, 2018
Memberships in Academic Bodies:	
• Life member: Alexander von Humboldt Foundation	• Life member: Society for Materials Chemistry" (SMC)
• Life member: Chemical Research Society of India (CRSI)	• Life member: Indian Association for the Cultivation of Science, Kolkata, India
• Life member: Birsingha Vidyasagar Memorial Rural Library Birsingha, Midnapore (West), West Bengal	
Other Academic Achievements :	
(i) Reviewer of the Journal(s) (With details of the journal(s) and duration)	
• Various Journals of American Chemical Society, • Various Journals of American Chemical Society, Wiley Online Library, Elsevier etc.	
(ii) Membership of the Board of Studies/School Board / Academic Council/ Executive Council (Within/ outside the university)	
• Different committees of Department and University • Placement Cell Officer of the Department of Chemistry • Teacher-in-charge of the Scanning Electron Microscope (SEM); BET Surface Area Analyzer which are under Sophisticated Instrumentation Centre(SIC)	