Biodata

Name	Dr. Rajendra P Panmand 
Designation	Scientist B
Educational qualification	M.Sc from University of Pune, Pune. Ph.D from University of Pune, Pune.
Research area	Nano-composites (Glass and polymer), Glass ceramics/electro ceramics for the advanced applications for Photonic devices/Electronics, optical glasses, Supercapacitors, thermoelectric materials, Magneto-optical Faraday rotation. Photocatalyst for solar hydrogen production/storage and Radiation based devices, Microwave materials.
Recognised Awards/Honors/Fellow	• Young Associate of Maharashtra Academy of Science
Projects	Ongoing: 1. Development of Polybutadiene/ ceramic composite substrates and Substrate Integrated Waveguides (SIW) for microwave and millimetre wave circuit applications (TH/SP/068). Total budget outlay: **Rs. 411.371 Lakhs.**
Publications/Patents (**Past 5 years**)	1. Growth of Bi_2Te_3 quantum dots/rods in glass: a unique highly stable nanosystem with novel functionality for high performance magneto optical devices, **R. P. Panmand**, G Kumar, SM Mahajan, N Shroff, B. B. Kale,* SW Gosavi, Physical Chemistry Chemical Physics (2012) 14, 16236-16242. 2. Functionality of bismuth sulfide quantum dots/wires-glass nanocomposite as an optical current sensor with enhanced Verdet constant, **Rajendra P Panmand**, Ganapathy Kumar, Satish M Mahajan, Milind V Kulkarni, DP Amalnerkar, Bharat B Kale, Suresh W Gosavi, Journal of Applied Physics 109, 033101 (2011). 3. Synthesis and characterization of Bi_2S_3 nanocrystals in glass matrix. **Rajendra P. Panmand**, Ujjwala V. Kawade, Milind V. Kulkarni, Sanjay K. Apte, Bharat B. Kale, Suresh W. Gosavi; Materials Science and Engineering B; (2010) 168 161–163. 4. Unique perforated graphene derived from Bougainvillea flowers for high-power supercapacitors: a green approach" **Rajendra P Panmand**, Purnima Patil, Yogesh Sethi, Sunil R Kadam, Milind V Kulkarni, Suresh W Gosavi, NR Munirathnam, Bharat B Kale, Nanoscale, 2017,9, 4801-

	4809. 5. Novel and stable $Mn^{2+}@Bi_2S_3$ quantum dots–glass system with giant magneto optical Faraday rotations, **Rajendra P. Panmand**, Ganapathy Kumar, Satish M. Mahajan, Milind V. Kulkarni, Bharat B. Kale and Suresh. W. Gosavi, J. Mater. Chem. C, (2013), 1, 1203-1210. 6. Surface Modified $Li_4Ti_5O_{12}$ by Paper Templated Approach for Enhanced Interfacial Li+ Charge Transfer in Li-Ion Batteries, U. V. Kawade, Rajendra P. Panmand, Sunil R. Kadam, Bharat B. Kale, *RSC Advances*, 2018, 8, 38391-38399. 7. "Hierarchical $CdMoO_4$ nanowire–graphene composite for photocatalytic hydrogen generation under natural sunlight" Sunil R. Kadam, **Rajendra P. Panmand**, Shashikant Tekale, Supriya Khore, Chiaki Terashima, Suresh W. Gosavi, Akira Fujishima and Bharat B. Kale, RSC Adv., 2018, 8, 13764–13771. 8. "Perforated N-doped monoclinic $ZnWO_4$ nanorods for efficient photocatalytic hydrogen generation and RhB degradation under natural sunlight" Yogesh A Sethi, CS Praveen, **Rajendra P Panmand**, Anuradha Ambalkar, Aniruddha K Kulkarni, Suresh W Gosavi, Milind V Kulkarni, Bharat B Kale, Catal. Sci. Technol., 2018, 8, 2909-2919. 9. "Mesoporous cadmium bismuth niobate ($CdBi_2Nb_2O_9$) nanospheres for hydrogen generation under visible light" Aniruddha K Kulkarni, Yogesh A Sethi, **Rajendra P Panmand**, Latesh K Nikam, Jin-Ook Baeg, NR Munirathnam, Anil V Ghule, Bharat B Kale, Journal of Energy Chemistry, 2017, 26, 433–439. 10. "Nanostructured CdS sensitized $CdWO_4$ nanorods for hydrogen generation from hydrogen sulfide and dye degradation under sunlight" Yogesh A Sethi, **Rajendra P Panmand**, Sunil R Kadam, Aniruddha K Kulkarni, Sanjay K Apte, Sonali D Naik, N Munirathnam, Milind V Kulkarni, Bharat B Kale Journal of Colloid and Interface Science, 487, 504-512. 11. "Nanostructured N-doped orthorhombic Nb_2O_5 as an efficient stable photocatalyst for hydrogen generation under visible light" Aniruddha K Kulkarni, CS Praveen, Yogesh A Sethi, **Rajendra P Panmand,** Sudhir S Arbuj, Sonali D Naik, Anil V Ghule, Bharat B Kale, Dalton Trans., 2017,46, 14859-14868. 12. "Growth study of hierarchical $Ag_3PO_4/LaCO_3OH$ heterostructures and their efficient photocatalytic activity for RhB degradation" Virendrakumar G. Deonikar, Santosh S. Patil, Mohaseen S. Tamboli, Jalindar D. Ambekar, Milind V. Kulkarni, **Rajendra P. Panmand**, Govind G. Umarji, Manish D. Shinde, Sunit B. Rane, Nagegownivari R. Munirathnam, Deepak R. Patil * and Bharat B. Kale, Phys.

	Chem. Chem. Phys., 2017, 19, 20541. 13. "Architecture of 2D MoS_2 nanosheets and 3D $CdMoS_4$ marigold flowers: Consequence of annealing on field emission performance"Sunil R Kadam, Sachin R Suryawanshi, **Rajendra P Panmand**, Vivek R Mate, Mahendra A More, Dattatray J Late, Bharat B Kale, Microporous and Mesoporous Materials, 2016, 225, 573-579. 14. "In situ fabrication of highly crystalline CdS decorated Bi_2S_3 nanowires (nano-heterostructure) for visible light photocatalyst application" **Rajendra P Panmand**, Yogesh A Sethi, Rajashree S Deokar, Datta J Late, Haribhau M Gholap, Jin-Ook Baeg, Bharat B Kale, RSC Adv., 2016,6, 23508-23517. 15. Preparation and magneto-optical properties of stable bismuth phosphate nanoparticles in phosphate glass, Jalindar D Ambekar, **Rajendra P Panmand**, Ravindra S Sonawane, Sanjay K Apte, Dilip G Hundiwale, Bharat B Kale, RSC Advance, 2015, 5, 48112-48117. 16. A stable Bi_2S_3 quantum dot–glass nanosystem: size tuneable photocatalytic hydrogen production under solar light, Sunil R Kadam, **Rajendra P Panmand**, Ravindra S Sonawane, Suresh W Gosavi, Bharat B Kale, RSC Advances, 2015, 5, 58485-58490 **17.** Enhanced hydrogen production under a visible light source and dye degradation under natural sunlight using nanostructured doped zinc orthotitanates, Latesh Nikam, **Rajendra Panmand**, Sunil Kadam, Sonali Naik and Bharat Kale, New J. Chem., 2015,39, 3821-3834**.** 18. Nanostructured 2D MoS_2 honeycomb and hierarchical 3D $CdMoS_4$ marigold nanoflowers for hydrogen production under solar light, Sunil R Kadam, Dattatray J Late, **Rajendra P Panmand,** Milind V Kulkarni, Latesh K Nikam, Suresh W Gosavi, Chan J Park, Bharat B Kale J. Mater. Chem. A, 2015,3, 21233-21243. 19. Self-assembled hierarchical nanostructures of Bi2WO6 for hydrogen production and dye degradation under solar light, **R. P. Panmand**, YA Sethi, SR Kadam, MS Tamboli, LK Nikam, JD Ambekar, CJ Park, B. B. Kale, CrystEngComm 17 (1), 107-115, 2015.