

FACULTY PROFILE



Name	Dr. Khashti Ballabh Joshi					Date of Birth: 02-09-1976				
Designation	Assistant Professor				Date of holding Present Post			18-09-2013		
Name of the Department and School	Department of Chemistry					School of Chemical Science and Technology				
Contact Details	Email : kbjoshi77@gmail.com (www.kbjhome.org) http://dhsgsu.irins.org/profile/126620					Mobile:9425849877				
Additional Responsibility in the university, if any	I have worked as course coordinator of various subjects of PG and UG immediately after joining this University. I have done several examination, evaluation and invigilation duties in Dr. HarisinghGour Central University Sagar in each semester , since the day of my joining.									
Educational Qualifications (UG onwards)	Ph.D									
Research Area/Specialization	Organic synthesis, solid and solution phase peptide synthesis, Nanotechnology, Medicinal Chemistry, Chemical Biology, Microscopic techniques									
Awards/ Honors / Fellowship Conferred (With details thereof)	1. National Eligibility Test (NET), CSIR-INDIA 2. Graduate Aptitude Test Examination (GATE) 3. India, Eli Lilly Asia Outstanding Thesis Award 4. Faculty Recharge Fellowship, University Grants Commission, New Delhi 5. Alexander von Humboldt Fellowship 6. UGC-FACULTY RECHARGE PROGRAMME, UGC- Assistant Professor 7. Best paper award - 2017, Socio economic impact of ecological ignorance in development: rising disastrous possibilities (SEIEID-2017) 8. Best poster award, National Symposium on “Horizons of Light in Molecules Material and Daily Life” Dr. HarisinghGour University (A central university) Sagar, M.P. 9. ACS-best poster award in 23rd CRSI National Symposium in Chemistry. 10. Best Research Paper published- Antimicrobial Nanostructures Made from Short Peptides 11. Reviewer Recognition Award-Sensor and Actuators, ELSEVIER 12. 12. Reviewer Recognition Award-Materialia, ELSEVIER									
Summary of Publications (Number only)	Research Papers	42	Books	0	Chapter in Books	02	Seminars/ Conferences Proceedings	0	Projects	06

Research Projects (Completed and Ongoing):

S.No.	Title	Funding Agency	Duration	Sanction order No. & Date	Amount in Rs. Lakh	Completed/ ongoing
1.	Construction of Diatom solar panels for biofuel production(Co-PI)	DST-Nanomission	03 years	Nov. 2016-Dec 2021	74.64 lac	Ongoing
2	Synthesizing value added nucleotide based photoswitchable molecular machine and its plausible photophysical applications	SERB-NPDF	02 years	2017-03-01 to 2019-02-28	19.2 lac	Completed
3	Value Added Peptide Conjugates for Biological and Medicinal Applications	CSIR-EMR-II	03 years	2016-01-01 to 2018-12-31	~23.5 lac	Completed
4	Functionalised DNA Materials: Novel Elements for Nanoarchitectures	UGC	02 Years	2014-07-23 to 2016-07-23	06 lac	Completed
5	Fabrication of nano resonating Microfluidic chamber for biofuel production(Co-PI)	INUP-IIT Bombay	06 Months	2016-04-01 to 2016-12-31	Sponsored	Completed
6	Fabrication and characterization of metabolically engineered diatoms (MED) into Dye Sensitized Solar Cell for oil production without cell lysis(Co-PI)	NCPRE-IIT Bombay	01 year	2017-07-31 to 2018-07-31	Sponsored	Completed

PUBLICATIONS - 2013 onwards:

International Publications(Details of Research Papers- 2013 onwards):

2013	1.	Mishra, N. K.; Joshi, K. B. ; Verma, S. "Inhibition of human and bovine insulin fibril formation by peptide conjugates" <i>Mol. Pharmaceutics</i> , 10 (10), 3903, 2013. (IF : 4.396)
2014	2.	Joshi, K. B. ; Singh P. "L-Proline induced self-assembly of indolicidin derived palindromic tripeptide" <i>Tetrahedron Lett</i> , 55, 3534, 2014. (IF :2.259)
2015	3.	Mishra, N. K.; Joshi, K. B. ; Verma, S. "Modulating peptide amphiphile morphology by gold nanocolloids" <i>J. Colloid. Inter. Sci.</i> , 455, 145, 2015. (IF :6.361)
	4.	Mishra N. K.; Kumar V. and Joshi K. B. "Fabrication of Gold Nanoparticles on Biotin -di-Tryptophan Scaffold for Plausible Biomedical Applications" <i>RSC Adv</i> , 5, 64387, 2015. (IF :3.049)
	5.	5. Mishra N. K.; Kumar V. and Joshi K. B. "Thermoplasmonic effect of silver nanoparticles modulates peptide amphiphile fiber into nanowreath like assembly, <i>Nanoscale</i> , 7, 20238, 2015.(IF :6.979)
2016	6.	Kumar V.; Krishna, K. V.; Khanna, S. and Joshi K. B. , "Aggregation propensity of amyloidogenic and elastomeric dipeptides constituents", <i>Tetrahedron</i> , 72, 5369, 2016. (IF :2.379)
	7.	Kumar, V.; Gupta, S.; Rathod, S.; Vinayak, V. and Joshi, K.B. "Biomimetic Fabrication of Biotinylated Peptide Nanostructures upon Diatom Scaffold; A Plausible Model for Sustainable Energy, <i>RSC Adv</i> , 6, 73692, 2016. (IF :3.049)
	8.	Gautam S.; Kashyap M.; Gupta S.; Kumar V.; Schoefs B.; Gordon R.; Jeffries C.; Joshi K. B. and Vinayak V. "Metabolic engineering of TiO ₂ nanoparticles in Nitzschia palea to form diatom nanotubes: an ingredient for solar cells to produce electricity and biofuel" <i>RSC Advances</i> , 6, 97276, 2016. (IF :3.049)
2017	9.	Kumar, V.; Mishra N. K.; Gupta, S. and Joshi, K. B. "Short Peptide Amphiphile Cage Facilitate Engineering of Gold Nanoparticles Under the Laser Field" <i>ChemistrySelect</i> , 2, 211, 2017. (IF :1.716)
	10.	Kumar, V.; Gupta, S.; Mishra N.K.; Singh R.; Yadav S. K. and Joshi, K. B. " Laser induced fabrication of gold nanoparticles on Shellac driven peptide nanostructures " <i>Mater. Res. Exp.</i> , 4 , 035036, 2017. (IF :1.449)
	11.	Gupta, S.; Kumar, V. and Joshi, K. B. "Solvent mediated photo-induced morphological transformation of AgNPs-peptide hybrids in water-EtOH binary solvent mixture" <i>J. Mol. Liq.</i> , 236, 266, 2017. (IF : 4.396)
	12.	Singh R.; Gupta, S.; Kumar, V.; Joshi, K. B. "Hierarchical self assembly of diproline peptide into dumbbells and copper ions-promoted robust disc" <i>ChemNanoMat</i> , 3, 620, 2017. (IF :3.379)
2018	13.	Gupta S.; Kashyap M.; Kumar V.; Jain P.; Vinayak, V. and Joshi K. B. "Peptide mediated facile fabrication of silver nanoparticles over living diatom surface and its application" <i>J. Mol. Liq.</i> , 249, 600, 2018. (IF : 4.561)
	14.	Gupta S.; Kumar A. and Joshi K. B. "Elucidation of photo-induced electron transfer in water-methanol binary solvent system via short peptide-amino acid pairs" <i>J. Photochem. Photobiol. A- Chemistry</i> , 356, 556, , 2018. (IF : 3.261)
	15.	Kumar, V.; Singh R. and Joshi, K. B. "Biotin-avidin interaction triggers conversion of triskelion peptide nanotori into nanochains" <i>New J. Chem.</i> , 42, 3452-3458, 2018. (IF : 3.069)
	16.	Kumar V.; Singh R.; Thakur, S. Joshi, K. B. and Vinayak, V. 2018, " Doping of magnetite nanoparticles facilitates clean harvesting of diatom oil as biofuel for sustainable energy,, <i>Mater. Res. Express</i> , 5, 045503, 2018. (IF : 1.449)
	17.	Gautam. S.; Kashyap M.; Kumar, V.; Shukla P.; Joshi K. B. ; Vinayak, V. "Fast Fourier infrared spectroscopy to characterize the biochemical composition in diatoms" <i>J. Biosci.</i> , Sep;43(4):717, 2018. (IF : 1.419)
	18.	Singh R.; Mishra N.K.; Kumar, V.; Vinayak, V. and Joshi, K. B. "Transition metal ions mediated tyrosine based short peptide amphiphile nanostructures inhibit bacterial growth" <i>ChemBioChem</i> , 19, 1630 –1637, 2018. Classified as a Very Important Paper (VIP) and highlighted in ChemistryViews.org https://www.chemistryviews.org/details/ezone/11078699/Antimicrobial_Nanostructures_Made_from_Short_Peptides.html. (IF : 2.593)
	19.	Gupta S.;Singh R.; Kumar, V.; Shukla P. and Joshi, K. B. "Ornamentation of Triskelion Peptide Nanotori to Produce Gold Nanoparticle (AuNP)-Embedded Peptide Nanobangles" <i>Chem. Asian J.</i> , 13, 3285, 2018. (IF : 3.698)
2019	20.	Kumar, K. Singh H.; Vanita, V. Singh R.; Joshi, K. B. ; Bhargava, G.; Kumar, S. Singh P. "Coronene diimide-based self-assembled (fibre-to-disc) fluorescent aggregates for visualization of latent fingerprints" <i>Sensors and Actuators B: Chemical</i> , 283 651, 2019. (IF : 4.396)
	21.	Singh R.; Suryavanshi V.; Vinayak, V. and Joshi, K. B. "Gold-Ions-Mediated Diproline Peptide Nanocarpets and Their Inhibition of Bacterial Growth" <i>ChemistrySelect</i> , 4(19), 5810-5816, 2019. (IF : 1.716)
	22.	Khan M. J.; Singh R.; Joshi K. B. ; Vinayak V. "TiO ₂ doped polydimethylsiloxane (PDMS) and Luffa cylindrica based photocatalytic nanosponge to absorb and desorb oil in diatom solar panels" <i>RSC Advances</i> , 9, 22410, 2019. (IF : 3.049)
	23.	N. Gour, V. Kshtriya, S. Gupta, B. Koshti, R. Singh, D. Patel, K. B. Joshi , Synthesis and Aggregation Studies of a Pyridothiazole-Based AIEE Probe and Its Application in Sensing Amyloid Fibrillation, <i>ACS Applied Bio Materials</i> , 2, 4442-4455, 2019. (IF : yet to come)
	24.	Gour N.; Kshtriya V.S.; Gupta, S.; Koshti B.; Singh R.; Patel D.; and Joshi K. B. " Pyridothiazole based AIEgen for sensitive detection and monitoring of amyloid fibrillation" <i>ACS Applied Biomaterials</i> , doi.org/10.1021/acsabm.9b00627, 2019. (IF : yet to come)
2020	25.	R. Singh, N. K. Mishra, P. Gupta and K. B. Joshi , Self-assembly of sequence shuffled short peptide amphiphile triggered by metal ions into terraced nanodome like structures, <i>Chem. Asian J.</i> , 15, 531- 539, 2020. (IF : 3.698)
	26.	2. R. Singh, M J. Khan, J. Rane, A. Gajbiye, V. Vinayak, K. B. Joshi , Biofabrication of Diatom Surface by Tyrosine-Metal Complexes: Smart Microcontainers to Inhibit Bacterial Growth, <i>ChemistrySelect</i> , 5, 3091-3097, 2020. (IF : 1.716)

Chapters in Books - 2013 onwards	
1	27. Vinayak V.; Joshi K. B. ; Gordon, R.; Schoefs, B. Diatom Nanotechnology D. Losic, (Ed.) London- Royal Society of Chemistry , Book Chapter Title: Nanoengineering the diatom surface for plausible applications. 978-3-319-2-0333-1
2	28. Vinayak, V.; Joshi K. B. and Sharma P. M. Book: Diatoms: Fundamentals & Applications Ed.: J. Seckbach& R. Gordon. Beverly, MA, USA, Wiley- Scrivener. Chapter Title: Diafuel © (diatom biofuel) vs Electric vehicles a basic comparison: A high potential renewable energy source to make India energy independent. 13: 978-1119370215/10: 1119370213
National Seminar/Conference/Workshops (Attended- 2013 onwards)	
	1. Construction and Morphological evolution of Biomolecules" during national symposium on frontiers in modern biology (The Indian Science congress association, Sagar chapter) held on March 24-25, 2014 in Dr. HarisinghGour University(A central university)-Sagar M.P
	2. Peptide conjugates of natural products for the advanced nanotechnological applications National Seminar on Socio economic impact of ecological ignorance in development: rising disastrous possibilities (SEIEID-2017), Kumaun University Nanital- G.PG College Dwarahat
	3. Workshop titled INSIDE RAMAN-organised by RENISHAW at the Institute of Chemical Technology, Mumbai between 8th and 9th October 2013.
	4. Workshop on Nuclear Magnetic Resonance Spectroscopy and its Applications in Physics, Chemistry and Biology held on 16th February 2014 in Dr. HarisinghGour University (A central university)-Sagar M.P.
	5. Presented a Poster in 18th National Symposium in Chemistry held from Feb 5-7, 2016, organized by Institute of Nanoscience and Technology and Punjab University, Chandigarh India
	6. Workshop on "Scope of Medical Biotechnology" organized by department of Biotechnology held on Jan 21-22, 2016 in Dr. HarisinghGour University (A central university)-Sagar M.P.
	7. National Seminar on Socio economic impact of ecological ignorance in development: rising disastrous possibilities (SEIEID-2017) held on May 06-07, 2017 in Govt. Post graduate college Dwarahat (Uttarakhand). Paper title was: Peptide conjugates of natural products for the advanced nanotechnological applications.
	8. Attended a science academic lecture workshop on "Scope of Medical Biotechnology" organized by department of Biotechnology held on Jan 21-22, 2016 in Dr. HarisinghGour University (A central university)-Sagar M.P.
	9. Successfully completed the UGC sponsored Interdisciplinary Refresher Course on "Instrumental Analytical Methods and Interpretation" with Grade "A" held on Nov 30, 2015- Dec 20,2016 in Human Resource and Development Centre (HRDC), Dr. HarisinghGour University (A central university)-Sagar M.P.
	10. Successfully completed The UGC sponsored 53rd Orientation programme with Grade "A" held on 18th Dec 2014- 14th Jan 2015 in UGC academic staff college, Dr. HarisinghGour University (A central university)-Sagar M.P.
International Seminar/Conference/Workshops (Attended- 2013 onwards)	
	11. Peptide based Unique Nanoarchitectures for Nanotechnological Applications International Conference Humboldt Colloquium "Germany and India – Partners in Education and Research, Bangalore- INDIA
	12. Seminar in the national symposium on frontiers in modern biology (The Indian Science congress association, Sagar chapter) held on March 24-25, 2014 in Dr. HarisinghGourUniversity(A central university)-Sagar M.P.
	13. Ordered self-assembly of glycine-rich and sequence shuffled peptides , 3rdNational Organic Symposium Trust (NOST), India, GNDU-INDIA.
	14. Received best poster award in 23rd CRSI National Symposium in Chemistry, July 13-15, 2018, IISER BHOPAL. Poster title was: Antimicrobial short peptide amphiphile(sPA) nanostructures.
	15. The participation in Alexander von Humboldt Kolleg held at the Institute of Himalayan Bioresource Technology (IHBT), India, 24 March, 2006, and presented a poster titled "Ordered peptide assemblies: Contrasting growth of fibers and filaments".
	16. National Conference on Evolving Trends in Biotechnology "Photolabile Molecular Beacons a DNA Probes for Advanced Biological Applications" during the (ISCA These-Science and Technology for Human Development) held on March 28-30, 2015 in Dr. HarisinghGour University (A central university)-Sagar M.P.
	17. 18 th National Symposium in Chemistry organized by Institute of Nanoscience and Technology and Punjab University, held from Feb 5-7, 2016, Chandigarh India
National Seminar/Conference/Workshops (Organised- 2013 onwards)	
1	1. Contributed as additional Secretary in science fair and national science day celebration 2016 held on Feb 26
2	2. Make in India: S&T Driven Innovation Science Fair and National Science Day Celebration
3	3. Successfully organized three day workshop in "Advance Imaging and Microscopy" in Dr. HarisinghGour University (A central university)
International Seminar/Conference/Workshops (Organised- 2013 onwards)	
1	4. Successfully organised (as an Organizing Secretary) a National Symposium on "Horizons of Light in Molecules Material and Daily Life" held on Dec 18
2	5. Worked as Organizing Secretary on one day national seminar on the theme of "Science for nation Building" on the occasion of National Science Day celebration held on Feb 28, 2015 in Dr. HarisinghGour University (A central university)
3	6. Successfully organised (as an Organizing Secretary) a National Symposium on "Horizons of Light in Molecules Material and Daily Life" held on Dec 18
No. of Patents Filed (with date, title and other details- 2013 onwards)	

	1. Diafuel©: 2018 Trademark application no 3778882. Trade Marks Journal No: 1846 , 23/04/2018, Class 4 (published) Under Project: "Construction of diatoms solar panels for bio-fuel production". DST NANOMISSION, Authors/Applicants : : Vandana Vinayak; Richard Gordon; Khashti Ballabh Joshi; Benoît Schoefs	
No. of Patents Awarded (with title and other details- 2013 onwards)		
	1. Diafuel©: 2018 Trademark application no 3778882. Trade Marks Journal No: 1846 , 23/04/2018, Class 4 (published) Under Project: "Construction of diatoms solar panels for bio-fuel production". DST NANOMISSION, Authors/Applicants : : Vandana Vinayak; Richard Gordon; Khashti Ballabh Joshi; Benoît Schoefs	
Invited Lectures delivered(Outside University) with title, date and place- 2013 onwards: Selected only		
	1. Delivered a lecture (invited speaker) in National Seminars on "Plants Microbes and Environment: Interaction Challenges and Remedies" held on Feb 20-21, 2016 in Dr. HarisinghGour University (A central university)-Sagar M.P. 2. Delivered a lecture (invited speaker) in the Indian Science Congress Association-Sagar Chapter(DST)- National Conference on "Evolving Trends in Biotechnology" held on March 28-30, 2015 in Dr. HarisinghGour University (A central university)-Sagar M.P.	
	3. Delivered a lecture (invited speaker) in International Conference Humboldt Colloquium "Germany and India – Partners in Education and Research" Talk: "Peptide based Unique Nanoarchitectures for Nanotechnological Applications" held on 23-25 November, 2017, at Hotel The leela palace, Bengaluru, India.	
	4. Invited speaker in International Conference National Organic Symposium Trust (NOST), Organic Chemistry Conference (OCC), "Creating Unique Nanoarchitectures by Using Simple Short Peptides-Conjugates" held on August 24-27, 2017, at Indian Institute of Science Education and Research Bhopal (IISER Bhopal) 5. Delivered a talk titled "Advances in Peptide Nanotechnology for Energy and Medicinal Applications" on teacher training program on 7th March 2020 in ADINA Institute of Pharmaceutical Sciences, Sagar, M.P. 6. Delivered a talk titled "Emerging trends in Peptides Nanotechnology for Multifarious Applications" on 8th international conference 2020 held between 27-28 February 2020 in Swami Vivekananda University Sagar M.P.	
No. of Ph.D. Awarded:	1. Mr. Vikas Kumar, Title of the thesis: Synthesis And Evolution Of Bio-Inspired Novel Chemical Entities For Advanced Biological Applications(Postdoc in Stellenbosch university, Claude Leon Fellowship)	
M.Phil/PG Disertation	Awarded : 02(Avin Rathore and Jagdish Rane)	Ongoing :03
No. of Ph.D. Scholars working:	1. Mr. Ramesh Singh (UGC- SRF-PhD Scholar) 2. Mr. KhusbooKesharwani(M.P. SET/GATE Ph D Scholar)	
No. of Foreign Visits : 01		
	Germany, as Humboldt Postdoctoral Fellow. 15 March 2009-31 Dec. 2012	
Memberships in Academic Bodies:		
	• Alexander von Humboldt Foundation-Germany-Life time member	•
Other Academic Achievements :		
	(i) Reviewer of the Journal(s) (With details of the journal(s) and duration)	
	• Advanced Functional Materials, Wiley, Impact Factor (2019 Journal Citation Reports): 15.621	
	• ChemComm, RSC, Impact Factor (2019 Journal Citation Reports): 6.164	
	• Elsevier, Sensor and Actuator B Chemical, etc.	