



CHEM

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ISSUE 3

A Newsletter from the Department of
Chemistry, VNIT Nagpur, 2019

DOWN TO CHEMISTRY...

Published on 15th October, 2019

Message from HoD's Desk...



Welcome to the Department of Chemistry, VNIT Nagpur! We, the Department of Chemistry, feel our enthusiasm to publish the third issue of the quarterly newsletter, "**CHEM NEWS.**" I, as a head of the department would like to thank all the faculty members, non-teaching staff and students for their limitless support and sincere efforts for the betterment and development of department. On this occasion, I congratulate all the team members of the editorial board for bringing up the 3rd issue in a better shape.

~Prof. S.S. Umare

Departmental Overview...

Department of Chemistry has started the journey from the beginning of the institute, has been serving to cater the need of engineering students of various branches. The Department started post-graduation program (M.Sc.) in Chemistry for two years duration in the year of 2012. More than fifty Ph.D. degrees have been awarded till 2019. At present thirty students are pursuing their research work to attain their doctoral degree. The highly motivated students, who understand the research dynamics and upgrade their skills, are strengthening the department's back bone. In their curriculum they are encouraged to take part in different projects to supplement theoretical knowledge with practical experience and also allow them to organize Continuous Educational Events like STTP courses, Seminars, and conferences. With all these inputs one finds our students as hardworking, adaptive and efficient in any work environment. We are confident that our current curriculum has enabled overall development of the students to compete with the expectations of the global platform. The curriculum is taught by a distinguished faculty combining academic excellence and research world experience in working different areas of science and technology that includes Organic synthesis, Solid state chemistry, Crystal engineering and Nano-materials, Polymers and elastomeric composites, Inorganic Chemistry, Photo-catalysis and Bioinorganic Catalysis, Biophysical Spectroscopy and Photobiology, Chemical Thermodynamics, Resource Recovery and Environmental remediation, Bio-catalysis and Organic Chemo-Sensor, Electro-analytical Chemistry with complete dedication and commitment. The faculty members of the department have been awarded various research fellowships. They have also authored many books and participated in national and international conference. The publication of their research works in various SCI index journals are the regular activities of the Department. Many R&D projects are being funded by different funding agencies viz. SERB, DST, MHRD, UGC, BRNS, CSIR, etc. Department has well-equipped laboratories with modern instrumental facilities and has been recognized by DST-FIST Sponsored Department since 2017!

FACULTY MEMBERS

DR. SURESH S. UMARE (HOD)
DR. JAYANT D. EKHE
DR. ANUPAMA KUMAR
DR. SUJIT K. GHOSH
DR. RAMANI V. MOTGHARE
DR. CHAYAN DAS
DR. ATUL V. WANKHADE
DR. UMESH R. PRATAP
DR. SANGESH P. ZODAPE
DR. SUSANTA K. NAYAK
DR. S. LAXMI GAYATRI
DR. ABHISHEK BANERJEE
DR. SANDIPAN HALDER

Ph.D. Awarded...

Research scholar **Mr. A. G. Shende** has been awarded the Ph.D. degree under the supervision of **Dr. S. S. Umare** on Sept, 2019. His thesis was entitled as “*Design and Development of Visible Light Active Heterostucture Photocatalyst for Photocatalytic Application.*”

Research scholar **Mr. D. Vidhyasagar** has been awarded the Ph.D. degree under the supervision of **Dr. S. S. Umare** on Sept, 2019. His thesis was entitled as “*Graphitic carbon Nitride Based Photocatalyst for enironmental Remediation and Energy Applications.*”

Research scholar **Mr. Swapnil Warkhade** has been awarded the Ph.D. degree under the supervision of **Dr. Atul Wankhade** on Sept., 2019. His thesis was entitled as “*Designing of nanostructured material for photocatalytic activity and catalytic applications.*”



Recent Publications...

1. “Phenyl-grafted carbon nitride semiconductor for photocatalytic CO₂-reduction and rapid degradation of organic dyes” by Devthade Vidyasagar, Nilesh Manwar, Akanksha Gupta, Sachin G Ghugal, **Suresh S. Umare**, and Rabah Boukherroub, *Catalysis Science and Technology*, **2019**, 9, 822-832.
2. “Silver-loaded biomass (Delonix regia) with anti-bacterial properties as porous carbon composite towards comprehensive water purification” by Mary R. Louis, **Laxmi Gayatri Sorokhaibam**, Sandeep K. Chaudhary, Sunita Bundale, Springer Berlin Heidelberg, September, **2019**.
3. “Development and characterization of graphitic carbon nitride as nonblack filler in natural rubber composites” Naresh D Bansod, Kumarjyoti Roy, **Chayan Das**, Devthade Vidyasagar, Pranut Potiyaraj *J. Appl. Polym. Sci.* **2019**, 136, 48136.
4. “Biopolymer based ion imprinted polymer for remediation of lead from water and other matrices” **Anupama Kumar**, Diksha Hemane, Ranjita S. Das & Deepali Rahangdale, Scopus Indexed Journal of Indian Water Works Association, **2019**, Vol. LI, No. 3, 204-209, July-September.
5. “Computational Modeling for Rational Design of Molecularly Imprinted Polymers (MIPs) for Herbicides in Different Matrices”, Indu Chopra, D. Rahangdale, **Anupama Kumar**, A Review”; Scopus Indexed Indian Journal of Agricultural Sciences; **2019**, 89 1063–70.

Invited Talks...

Entitled “Intermolecular hydrogen Bonding” by **Prof. Arunan Elangannan**, IISC Bangalore on **24th August, 2019**.

Entitled “Quantum Dot Nanotechnology for Nano Bio and Nano Agri Applications” by **Prof. Swadeshmukul Santra**, University of Central Florida on **4th September, 2019**.

Departmental academic audit was arranged on **23rd of August, 2019**. The expert was invited **Prof. C. P. Rao** (IIT Tirupati), **Prof. A. Arunan** (IISC Bangalore), **Dr. R. J. Krupadam** (Principal Scientist, NEERI), **Dr. A. K. Gupta** (Joint Director from DRDO, Gwalior). This audit meeting was arranged to monitor the academic affairs of the department.



International year of Periodic Table...

International Year of Periodic Table was celebrated in the department where huge number of students participated from VNIT and other institutes. The day was enlightened by the **Prof. Arnab Bhattacharya**, TIFR Mumbai by delivering his talk on Periodic Table on **4th September, 2019**.



Installation of Instrument...

An Infrared Spectrometer (ThermoFisher Scientific iS50 Infrared Spectrometer) equipped with Diffused Reflectance (DRIFTS) sampling technique was installed in the work group of **Dr. Abhishek Banerjee**, Department of Chemistry, VNIT. The instrument is equipped for measurement of infrared spectra of samples for solid phase as well as gas samples. Acknowledgement: SERB (Sanction No: ECR/2017/000932).



Welcoming New Ones...

The entire family of the department of Chemistry including faculty, students and non-teaching staff welcomed the M.Sc. 1st year and Ph.D. students on the evening of **13th August, 2019**. At the closing all faculties delivered their remarks wishing *Good Luck* for their future endeavor.



Valuing Teachers...

Students of chemistry Department celebrated 5th Sept **TEACHERS DAY** beautifully with immense zeal thanking them for their efforts and hard work they always put in. Teachers always requires a standing ovation. So, to promote the values and principles of a true teacher, this day was celebrated.



Beyond the Chalk & Talk...

Dr. Mrs. Anupama Kumar represented department in **Inter Departmental tournament** for faculty and staff of VNIT during 15th to 22th July, 2019 organized by Physical education & Sports Section, VNIT. She won women's Singles and received winner trophy in Table Tennis from **Prof. P. M. Padole**, Director, VNIT.

Dr. Mrs. Anupama Kumar Chaired the SESSION on "CHITOSAN APPLICATIONS" on **20th September, 2019** in 8th Indian Chitin and Chitosan Society Symposium.



Highlighting the Chemistry Achievers...

We department of chemistry congratulate The **2019 Nobel Prize in Chemistry winners, John B. Goodenough** Professor of mechanical engineering and materials science at the University of Texas at Austin, **M. Stanley Whittingham** Professor of chemistry and director of both the Institutes for Materials Research and Materials science and Engineering program at Binghamton University and **Akira Yoshino** Professor at Meijo University in Nagoya "For the development of lithium-ion batteries."



Editorial Board

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