

DEPARTMENT OF CHEMISTRY

(Session 2022-2023)

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The department of chemistry is known for its academic ambience. Ours is the biggest department in the college with ten faculty members teaching UG and PG students. The faculty members strive hard for the all round development of students. Keeping the horizontal and vertical growth of an industry and society in mind, Department of Chemistry started M.Sc. course from 2005 with specialization in organic Chemistry and Polymer Chemistry as elective papers.

The department recognized as a centre for higher learning by R.T.M. Nagpur University, Nagpur and eight students are pursuing Ph.D. under the able guidance of our teachers. The department has four well-equipped laboratories for conducting usual practicals and research activities. In order to ensure accuracy in the research pursuit, major instruments like spectrophotometer, conductometer, pH meter, flame photometer, UV Visible Spectrophotometer, centrifuge machine and digital balance etc are available in the laboratory. The research output is quite substantial. The faculty members published research papers in reputed national and international journals.

Department of Chemistry has organized various activities during the session 2022-2023

1. One day state level workshop on topic '**Beneficial Effects of Radiation Technology and Indian Nuclear Energy Programme**' organized by the Department under the sponsorship of Indian Association for Radiation Protection (Bhabha Atomic Research Centre), Mumbai as a part of centenary celebration of RTM Nagpur University on 5th November 2022. Workshop was inaugurated at the hands of Dr. S. Murali, Secretary, IARP and dais was shared by Dr. V. Natarajan, Sanjay Patil and Tejram Meena, Scientists of Bhabha Atomic Research Centre, Mumbai. Introductory remarks was given by Dr. Rashmi Urkude. In presidential speech Dr. R. U. Khope, Head, Department of Chemistry emphasized on beneficial effects of radiation for welfare of mankind.

2. **Teacher's Day:** PG Department of Chemistry was organized Teacher's Day on 5th September 2022. Programme was conducted by Ms.Sonali Jogi, Mr.Amey Dhore, Ms. Manisha Sharma and Mr,Vishal Kharchawal. Principal Dr.M.P.Dhore adviced the students to inculcate exquisite moral values among themselves for betterment of their life.

3. **World Ozone Day:** On the occasion of World Ozone Day a guest lecture of Dr.K.V.George Sr. Principal Scientist and Head Air Pollution Control Division NEERI,was organized on 16th September 2022 for UG and PG students.

4. **Workshop** on Eco-Friendly Holi Colours was organized on 1st March, 2023, to raise awareness of adversed effects of conventional colours. Through this workshop, college students awared about to celebrate Holi in a safe, eco-friendly, and sustainable way. Eco-friendly colours will be supplied to various NMC schools, old age homes, and the common people in slum areas as a part of workshop.

5. **Workshop:** Beyond only maintaining physical health, cosmetics can help us to feel better, look better and have higher self-esteem. Being significant tools for social expression, they can also aid in expressing personal styles. So on 21st March 2023, Department was organized Inter-University one day workshop on "**Cosmetics and Allied Products**". A chief guest Dr. Ketki Misal had given hands on training to manufacture variety of cosmetics like hand wash, hand sanitizer , herbal hair oil shampoo and phenyl in practical sessions.

6. World Water Day:-

World water day was celebrated on 25/03/2023 to raise the awareness about the fress water and importance of water in human life. On this day advanced water testing kits were distributed to the students of Gondwana and RTMNU University, Nagpur.

7. Launching of Chem Clean Concentrate Floor Cleaner

Chem Clean Floor Cleaner Concentrate is a solution made in the Department of Chemistry by Sarang Dhote, an Assistant Professor. It is composed of various chemicals such as Pine oil, Emulsifier, Stabilizer, Demineralised Water, Colour, and Perfume. When 1 litre of the concentrate is diluted, it can make around 40

litres of floor cleaner. This product comes in 8 different fragrances, including Sandalwood, Rise, Jasmine, and Lemon.

As part of the outreach program, diluted Chem Clean Floor Cleaner is distributed free of cost to NMC school Dattatray Nagar. The Department of Chemistry plans to distribute this product to other NMC schools, hospitals, and slum areas under the Swachh Bharat Scheme. The Chem Clean Floor Cleaner is available to college staff and students at a price of 30, and the empty bottles will be refilled with the diluted floor cleaner at a discounted rate as part of the recycling and reuse scheme to reduce plastic pollution.

Overall, Chem Clean Floor Cleaner Concentrate seems like an innovative and cost-effective solution for floor cleaning, with a focus on sustainability and environmental friendliness. Its distribution to various institutions and communities is a commendable effort towards promoting hygiene and cleanliness in society.

VISITS:

1) The students of certificate course in environmental analysis visited to Central Ground Water Board (CGWB), Nagpur on 20th Feb 2023. The main objective of visit was to provide a scientific platform to exchange the knowledge about the recent advancement in water analysis technique. With an aim to go beyond academics, such kind of visit helped the student to imbibe scientific approach among them. An interactive visit was successfully organized by Dr Yogita Meshram and Dr Sarang Dhote. A special gratitude was expressed towards Dr N Varadraj, Director, CGWB, Nagpur by Dr R. U. Khope Head Department of Chemistry.

2) To develop a scientific attitude, portray the growth of science and technology and applications in industry a visit to Raman Science Centre was planned on 11/03/2023. Twenty five students along with three teaching faculties and two supporting staff were participated in the visit.

3) Thirty five students of post graduate department were participated in 'One Week One Lab' event organized by NEERI at Nagpur on 11/04/2023. They attended lectures on environmental pollution issue and experienced hands-on science experiments during the visit.

Student Achievements:

1. Mr. Vishal Kharchawal bagged best debater award by Lovely Professional University Punjab, best student award by microbiologist Society of India and Rashtriya Samaj Seva Ratna award by the hands of Cabinet Minister Hon.Shri.Nitin Gadkari. He secured first prize in Inter University National Debate competition Ubhdav Pantnagar University Uttarakhand, first prize in state level debate competition organised by R. A College Washim Maharashtra, first prize in state level debate competition organized by Shri Shivaji Kala Vanijya Vigyan Mahavidyalay Chandrapur, first prize in Inter Collegiate Debate Competition organized by Shrimati Usha Ben Chandrakant Thakar womens College Nagpur , second prize in intra Collegiate Debate competition organized by Shri Shivaji Science College Nagpur and third prize in Inter Collegiate Debate Competition organized by Vasanttrao Naik Shasakiy Kala Samajik Vigyan Sansthan Nagpur .
2. Ms.Sonali Jogi and Mr.Ameya Dhore secured second position in quiz competition 'CHEM-MYSTERY' organized by Hislop College.Nagpur.

Teacher Achievement:

1. Best Researcher Award was bestowed to Dr V.R.Kinhikar by the college.
2. Best paper award was received to Dr. S.J.Kene by a virtual conference on innovations in science, hybrid materials, and vibration analysis (IC-ISHVA2022).
3. Two copyrights in the field software and app development received to Dr. Sarang S. Dhote by Govt. of Kenya.