

Annual Report -2021-22

Department of Chemistry

The department of chemistry is committed to fostering a work place culture for which it strives hard to cultivate a safe and fair environment for students. Ours is the biggest department in the college with nine faculty members for UG and one for PG catering to the needs of students while teaching in the classroom and performing practicals in the laboratory. The Department runs Post Graduation course (M.Sc.) with specialization in Organic Chemistry and Polymer Chemistry as an elective paper. 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, conductivity meter, pH meter, flame photometer, UV Visible Spectrophotometer, centrifuge machine and digital balance etc are available in the laboratory. The research output of the department continues to be creditable. The faculty members published good number of research papers in reputed national and international journals.

Departmental Activities

1. Joy of Giving:

‘Let there be pleasure in giving others pleasure

Sheer happiness, beyond all, one might measure

It is in giving that we received only then eternal peace is achieved’.

Soaking in spirit of Sharing is caring, Shivaji Science College Nagpur organized Joy of Giving activity on **10/3/22** where all the staff members of Department of Chemistry as well as students participated in the event. Stationary items such as books, pen, rubber, scale and Biscuits were donated to the poor needy children of the slum area (Chunabhatti Nagpur). The students also visited to the house of underprivileged families and donated toys to their kids. Students learnt the value of giving and truly celebrated the Joy of sharing. The students were delighted to see the happiness of on face of the poor Children.

2. Workshop on “Eco-Friendly Colours”

Department of Chemistry, SSES Amt’s Science College, Congress Nagar ,Nagpur, organized hands on workshop on “Eco-friendly Colours” in collaboration with Arranya Environment organization on 16/03/2022. Mr.Raj Madankar, NGO, Arranya Environment organization was the Chief guest of function and Ms. Anushree Tendolkar, Director of Arranya Environment organization gave information about their organization and narrated about the toxicity of metal salts and their hazardous effect on skin. To create awareness among people to opt for organic

colours, as synthetic colours increases environment pollution & causes severe allergic reaction on human being. They synthesized variety of colours from natural sources such as flowers of Hibiscus, Rose, Marigold, Beet root, spinach, turmeric powder etc. Dr.G.R.Avachar head Department of Mathematics was presided over the function. The programme was carried out successfully under the valuable guidance of Principal, Prof. M.P.Dhore. Prof R.U.Khope, Head of Department helped in making the programme a grand success. The program was conveyed by Dr.V.R.Kinhikar. All the staff members Dr.P.S.Utale, Dr.R.D.Urkude, Dr.R.A.Deshmukh, Dr.P.N.Deshmukh, Dr.S.Dhote and non-teaching staff members were prominently present on this occasion. All the students participated with zeal and enjoyed the event.

3. Inter Collegiate Seminar Competition 2022

The Department of Chemistry organized an Inter-collegiate seminar competition on 1st April 2022. Total 13 students from various colleges under the R.T.M.N.U participated in this competition. Two judges from different colleges were invited to judge seminar delivered by our student participants. On the basis of the results submitted by the jury, top 3 students were selected as winners. The first, second, and Third winner got cash prizes of 1000/-, 700/-, and 500 rupees, respectively along with certificates. At the beginning of the Inaugural program of seminar competition Prof. R.U. Khope, Head Dept of Chemistry, Shivaji Science College Nagpur presented the Introductory speech, President of the Seminar Competition Principal Dr. M.P. Dhore, encouraged the students to participate in such type of events. The Chief Guest and Judges of Seminar Competition, **Prof. M. G. Dhonde** from Mohota Science College Nagpur and **Prof. S. Mondal** from S.K. Porwal College, Kamptee also address the students for involvement in the competition and boost their confidence. At the end of the seminar competition, the judges declared the name of three winners. **1st position** was bagged by **Miss. Nimisha Koche** of Hislop College, Nagpur. Her topic seminar was stereochemistry.

The **Second prize** was bagged by **Miss Shubhangi Amrute**, Tai Golwalkat Mahavidyalaya Ramtek and the **Third winner** was **Mr. Akshay B. Bhatkulkar** from Shivaji Science College, Nagpur who delivered the seminar on nucleophilic substitution reactions. Dr. M.P. Dhore, Principal Shivaji Science College, Nagpur, Dr. R.U. Khope, Head, Dept. of Chemistry, Shivaji Science College, Nagpur, the organisers Prof J.K. Gunjate and Dr. P.N. Deshmukh all the staff members of Chemistry Department, and non-teaching staff members were prominently present on this occasion.

4. Guest Lecture

A guest lecture was organised for post graduate students of chemistry on 28/04/2022. Dr. N.N. Karde Professor Department of Chemistry delivered the talk on Stereochemistry. At the beginning he was welcomed by Principal Dr. M.P.Dhore by floral bouquet. The session was very interactive and ended with enormous discussion with students. The resource person had unflinching commitment and ardent passion towards teaching. He discussed about numerical on Stereochemistry and he motivated students to do and improve their carrier opportunities.

5. **“International Ozone Day”**

The Department of Chemistry, S.S.E.S Amti's Science College Congress Nagar, Nagpur, organized a Guest Lecture of Dr. Anupama Kumar, Associate Professor, Department of Chemistry, VNIT, Nagpur, MS (India) on **“Sustainability through Molecular imprinting-Idea, Concept & execution”** on virtual mode platform, at 12.00 noon, on 16.09.2021 to celebrate International Ozone day. Objectives of conducting guest lecture was to preserve and protect the environment and also aware the student about depletion of ozone layer and their consequences on environment. In the beginning Dr. V.R. Kinhikar welcomed the online audience and the Guest Speaker. The speaker mainly focused on measures to minimize depletion of ozone layer by using biorefinary. She also highlighted the concept of molecular imprinting for sustainable development. After the presentation, a question and answer session was conducted, where the speaker addressed the queries of students and faculty members. The session ended with vote of thanks to the Prof. M. P. Dhore, Principal, SSES Science College, Nagpur for sparing the time from their busy schedule. Dr. R U Khope ,Head of department of chemistry expressed the gratitude towards the Principal for making the event a grand success.. The programme was conveyed by Dr.Yogita Meshram and Dr. V.R. Kinhikar. All the staff members and around 128 students had witnessed the event with great fervor.

6. **Sapling Distribution**

To increase social responsibility and awareness among non teaching staff towards environmental issues like deforestation , erosion of soil, desertification and enhancing the beauty and balance of environment, **“Sapling Distribution Programme”** was organized by Department of Chemistry. The plantation activity was perceived as the need to keep balance in our environment. Department of Chemistry distributed various saplings of medicinal value to the non teaching staff of the college. The program was initiated by Dr. R.U.Khope ,HOD of Chemistry and nicely coordinated by Dr. Reshal Deshmukh. More than fifty fruit bearing plants of medicinal value were distributed among the non teaching staff and students. Dr. Yogita Meshram rendered the vote of thanks..

Staff Achievements:

The faculty members of the department have noteworthy accomplishments to their credit. All the staff members are actively engaged in research work. They published their papers in the journals of national and international repute.

Prof. Rashmi Urkude received “Best Researcher Award” for year 2019-20, instituted by Shivaji Science College, Nagpur at the hands of Hon'ble Vice Chancellor Dr. Subhash Chaudhari.

Hon'ble Dr. K. V. Kale Vice Chancellor, Raigad University, Hon'ble Hemant Kalmegh and Dr. Kalpana Pande and Principal Dr. M. P. Dhore were present on this occasion.

Dr. Vrushali R. Kinhikar a faculty member of our department received Best Women Researcher Award Instituted by JIEMR-Elsevier SSRN.

All the staff members of the department attended online, offline Conferences and Workshops organized by various Colleges.

Alumni of the Department are holding key positions in the industry and academic institutions.

Copyright: Dr S. S. Dhote a faculty member of our department received two copyrights for preparing interactive android app useful for monuments in museum and G -mapping useful for conservation of endangered plant species.

Patent :

Dr. Vrushali R. Kinhikar, Dr. R. U. Khope, received patent on "Fluid Catalytic Cracking (FCC) process for manufacturing of propylene and ethylene".