

AURUM



Newsletter 2024-25

Department of Chemistry

VIDYA BHAWAN RURAL INSTITUTE

Faculty corner

With immense pride, we present the tenth edition of *AURUM*, our department's newsletter that captures the spirit of inquiry, collaboration, and innovation that defines us. This issue highlights the remarkable achievements of our students, faculty, and staff, showcasing their dedication to advancing knowledge and fostering a vibrant academic community. From innovative research to impactful co-curricular activities, *AURUM* serves as a testament to our collective commitment to excellence in chemistry education.

Academic Co-Curricular Activities

Orientation Program

An orientation program assists students in adjusting to their new surroundings and learning about the organization's values and operations, as well as the type of institution and the range of educational opportunities accessible to them.

An orientation program was organized for PG students of Sem I on 14th December 2024. Students were welcomed by the staff faculties. Dr. Manish Rawal, Department Head, motivated all students and encouraged them to pursue their dreams. He also encouraged the students to set goals for themselves and to work hard to achieve them.

Dr. Saba Khan outlined the college's vision, mission, and the rules and regulations that students must follow. She emphasized the importance of maintaining academic integrity in all academic activities. She introduced the students to the NEP pattern, credit system, syllabus, and grading scheme. She also informed the students about various departmental extracurricular activities, including fresher and farewell parties, lab and industrial tours, and seminars. In addition, she explained the functions of the NSS and Rover Units, the student election process, and the college's diverse sports and cultural events.

Dr. Anju Jain guided the students about the course details and what are the career opportunities in the field of analytical and organic chemistry.

A video on lab safety and team work was screened for the students. The program ended with an icebreaker activity game that emphasized the value of good communication skills.



Student seminars and Internal exams

As a regular initiative within our department, postgraduate students present seminars on various syllabus topics. This practice not only hones their communication and teaching abilities but also fosters a deeper understanding of the subject matter. Additionally, internal assessments are conducted to evaluate their comprehension of the course material. These evaluations serve as a valuable tool for students to monitor their academic progress and effectively prepare for major examinations.

MOU

An MOU was signed between Department of chemistry and IRI (Indian Rubber Institute) on 23rd Dec 2024. The aim is to gain valuable inputs in curriculum designing, industrial training, visits and lectures. Total 17 students Kunal Chobisa, Kalpesh Singh Rao, Anita Chaudhary, Manali Dangi, Jagdish Rebari, Harshvardhan Singh, Harsh Prajapat Bhavishya Purbia, Ankita Kharadi, Khushi Jangid, have enrolled in 6-month training from Jan-june 2025. During this training the students are going to enhance their knowledge in rubber compounding, rubber products manufacturing and testing, Raw material preparation, testing of Raw material, in process material. Design and development of product, QMS.

Lab Visit

The M.Sc. students visited the lab of Polymer Science, VBPC on 13th January 2025 to explore the process of manufacturing rubber sheets from natural rubber latex. Dr. Vikram Singh



provided an in-depth explanation of the various additives used in rubber production, including fillers, activators, anti-degradants, and vulcanizing agents. He demonstrated the multiple stages involved in tyre manufacturing, emphasizing the importance of compounding,

mixing, and processing in creating high-quality rubber products. The session also covered the tyre curing process, illustrating how heat and pressure are applied to achieve the desired properties. The students gained practical experience with equipment such as the DeMattia flexing machine, abrasion tester, and curing press, enhancing their understanding of rubber testing and quality control.

Co-curricular activities

Teachers' Day celebration: Teacher's Day was celebrated with much enthusiasm on September 5th, 2024 by the students of department. This event honors the dedication and hard work of the faculty. The students gave a warm welcome to the lecturers with flowers and "uparna". Fun Games were held for the Lecturers. The celebrations concluded with refreshments, providing an opportunity for students and teachers to relax and enjoy each other's company in a cheerful environment.



Mole Day celebration

The department celebrated the Mole Day on 23rd Oct 2024. Dr. Manish Rawal captivated the students by explaining the intriguing concept behind the celebration of Mole Day, highlighting its significance in the field of chemistry. The event featured presentations by the students that tested the students' understanding of periodic table and Avogadro's number and its applications. Sanjana won the best presentation award, while Payal Menaria and Sundar Kunwar secured the second and third positions, respectively. The celebration provided a fun and educational experience,

fostering a deeper appreciation for chemistry among the students.



Farewell Program

The farewell party for the college students was a bittersweet occasion, filled with nostalgia and excitement for the future. On 8th January 2025 the juniors organized a wonderful afternoon filled with cultural performances to honor their seniors. The graduating students took a trip down memory lane, sharing treasured moments of friendship, personal growth, and significant experiences. Various fun games were arranged for the seniors, adding a playful and engaging touch to their farewell celebration. The event concluded with warm wishes for success and happiness as the students embarked on their next chapter in life.



Fresher Party: Every student eagerly looks forward to the "Fresher's Party," one of the most exciting and memorable events of their college journey. On January 8th, 2025, the festivities instigated with the traditional lamp lighting ceremony, accompanied by the faculty seeking

the blessings of Goddess Saraswati. Dr. Manish Rawal, the Head of the Department, warmly welcomed the freshers and offered words of encouragement. For the freshers, Mr. and Miss Fresher contest was held, consisting of three exciting rounds that tested their confidence, talent, and personality. Mr. Tarun Joshi was selected as Mr. Fresher and Miss Khushi Jangid was selected as Miss Fresher. The event was seamlessly hosted by Hiral Jain and Anita Chaudhary from Semester III, who kept the energy high and the audience engaged throughout.



The day was filled with remarkable solo and group performances by both seniors and juniors, creating unforgettable memories and setting the tone for an exciting journey ahead in college life.

Essay writing competition

IQAC and Chemistry Department conducted an essay writing competition on the topic "Ban on single use plastic" on 30th Nov 2024 in Chemistry Lab. The objective of this competition was to raise awareness among students about the harmful effects of plastic and to ban single use plastic. Kalpesh Singh Rao (M.Sc. sem I) stood first, Jagdish Rebari (M.Sc. sem I) and Sunder Kunwar (III yr) were second and Mansi Nagda (Sem IV) secured third position.



Blood Donation Program

On 14th Nov. 2024, the Chemistry Department, NSS Unit, in collaboration with the Red Cross Society, Udaipur District, organized a blood donation camp.



The camp aimed to contribute to the community, help save lives, and promote voluntary blood donation. A total of 50 donors registered for the camp. After medical screening, 15 donors were selected to donate blood.

Games

Kalpesh Rachiyata, M.Sc. Sem IV student secured 3rd position in intercollegiate badminton tournament held on 18th - 19th Sept 2024.

Aakash Meena M.Sc. Sem II student won gold medal in 9 km Marathon- Run to support Mental Health 2.0 held on 10th Oct 2024 organised by Vidya Bhawan Society.



Faculty Achievements

IPR workshop

Dr. Rehana Khanam and **Dr. Anju Jain** attended One Day Workshop on Intellectual Property Rights (IPR) Awareness organized by IPR cell (Research and Development Cell) Government Meera Girls College, Udaipur (Raj.) sponsored by Department of Science and Technology, Government of Rajasthan held on 15th January, 2025.

Dr. Anju Jain

Award: Appreciation letter for placing students in different companies by the CEO of Vidya Bhawan society.

FDP Attended

1. One week National level faculty development program on “The art of Research” held from 6th to 13th January, 2025 By IOT Academy.

2. One day National Level FDP on “AI Enabled Teaching and Learning in HEI’S” held on 19th June 2024. by IOT Academy.

Poster Presentation: Presentation on “Kinetics of oxidation of proline by pyridinium bromochromate in aqua acetic acid medium” in 2nd international conference on “Innovation in Chemistry: Green synthesis and Drug design” jointly organized by BN university Udaipur and JRNR Vidyapeeth Deemed to be University. (23-24th June 2025)

Dr. Saba Khan

Award: Appreciation Certificate for outstanding Teacher in field of Education, by Indian Rubber Institute-Rajasthan Branch. 24th August 2024.

FDP Attended

1. One Week online FDP on “Machine Learning Meets Chemistry: accelerating Drug discovery by AI” organized by RBVRR women’s College and QSTATIX Pvt Ltd (27th Aug - 2nd Sept 2024).

2. One week FDP organized by (UGC-MMTTC/GAD-MMTTC), SGTB Khalsa College, University of Delhi in collaboration with Indian Cancer Society, Delhi (11th -18th Feb 2025)

Other Achievement

Presided over the paper presentation and online poster presentation sessions in 2nd International conference on “Innovation in Chemistry: Green synthesis and Drug design” jointly organized by BN university Udaipur and JRNR Vidyapeeth Deemed to be University. (23-24th June 2025)

Dr. Rehana Khanam

Patents: 1. IOT based screw press sludge dewatering machine for water based screw press sludge dewatering machine for water treatment using at mega328P (Design No.- 427936-001)

2. IOT based sustainable organic fertilizer (Design No.- 430594-001)

Awards: 1. Excellence Teaching Award, in International Conference on “Global

innovations and Challenges: Integrative approaches for environment sustainability” JDB Govt. College, Kota.

2. Best Teacher Award by The Royal Science Forum, Salem, India, January 2025

3. Appreciation letter for placing students in different companies by the CEO of Vidya Bhawan society.

FDP/workshop attended:

1. Online Seven Days FDP and Workshop on “An Innovative Practice for Data Analysis Using SPSS and Uses of AI Tools in Research” from 11th-17th Nov., 2024, Organized by Microbiologist Society, India. Reg. No. MAH/4814/SAT

2. Online One Week Faculty Development Programme on “Outcome Based Education: Paradigms Shift in Higher Education” Organized by Sangam University, Bhilwara and Association of Indian Universities (Academic and Administrative Development Centre) AIU-SU-AADC from 14th to 18th Oct, 2024.

3. Online One Week Faculty Development Programme on “Empowering Research: Tools and Techniques for Effective Research Development” Organized by Sangam University, Bhilwara and Association of Indian Universities (Academic and Administrative Development Centre) 10th -15th February, 2025.

4. Online One Week FDP/Workshop on “Research Methodology and AI Integration: Redefining Academic Research Excellence” Organized by Inspira Research Association, Jaipur, Rajasthan in association with Khandesh College Education Society’s College of Engineering & Management, Jalgaon, Maharashtra & Shree Tagore College, Kuchaman City, Rajasthan 26th May-1st June, 2025.

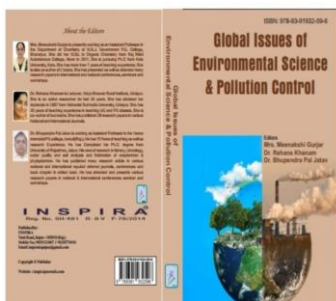
Chapter Published:

1. Environmental pollution By Chemicals Edited by: Mukta Ojha, Archana Gajraj and Bhanwar Lal Ganani for the Chapter-3 entitled Water Pollution, P.No.-12-23

AUTHORED BY: Rehana Khanam.

Publisher: MGM Publishing House, ISBN -978-81-965336-7-0 (2024).

Book Edited: 1. Global issues of environmental Science and pollution control. ISBN: 97893-91932-59-6. Publisher: INSPIRA



2. New trends in Environmental Education Publisher: MGM Publishing House, ISBN -978-81-981913-1-1 (2025)

3. Conference Proceedings: International Conference on Latest Advancement in Commerce, Management, Science & Educational Research (LACMSER-VIRTUAL August, 2024) Publisher: INSPIRA, ISBN: 978-93-91932-65-7

Papers Published

1. Application of Nanoparticles in Biomedical Field: An Overview Exploresearch Vol.02, No.01, January-March, 2025, 25-35 [ISSN: 3048-815X Online]

2. Degradation of Dyes Present in Textile Waste Water by Biological Treatment: An Overview Exploresearch Vol.02, No.01, January-March, 2025, 36-51 [ISSN: 3048-815X Online]

Paper presentation

1. Oral Presentation on Analytical application of 3-hydroxy-3-p-tolyl-1-p- nitrophenyltriazene in spectrophotometric determination of zirconium (IV) in International conference on India's Internal Security Artificial Intelligence & Future Perspectives Organized by Rajasthan Police Academy, Jaipur, BORDERMAN: Institute of Border Security Studies, New Delhi and Nirwan University, Jaipur Powered by INSPIRA Research Association-IRA, Jaipur, Raj, India on 26th -27th July, 2024

2. Oral Presentation on Impact of Chemicals on Environment in the International Conference on "Global innovations and challenges: integrative approaches for environmental sustainability." 12th-14th Nov. by Janki Devi Bajaj Govt. Girls College, Kota, Vital Biotech, Kota and Agriculture Forum for Technical Education of Farming Society C.NO. AFTEFS/JDB/24/32

3. Oral presentation on Analytical application of 3-hydroxy-3-o-tolyl-1-o-carboxyphenyltriazene as spectrophotometric Reagent for zirconium (IV) in International conference on "Sustainable Practices, Innovations & Emerging Trends in Global Current Scenario: Multidisciplinary Research and Technological Issues" Organized by Vedic Kanya PG Mahavidyalaya, Raja Park, Jaipur, Raj, and INSPIRA Research Association Jaipur on 20th - 21st December, 2024.

4. Oral presentation on "Azadirachta Indica as a non-conventional corrosion inhibitor for brass in nitric acid medium" in 2nd international conference on "Innovation in Chemistry: Green synthesis and Drug design" jointly organized by BN university Udaipur and JRN R Vidyapeeth Deemed to be University. (23rd-24th June 2025)

5. Oral Presentation on Spectrometric Determination of Thorium (IV) with 3-Hydroxy-3-p-tolyl-1-o-carboxyphenyltriazene in International Conference on Multidisciplinary & Current Educational Research (ICMCER) Organized by IPS Academy Indore, M.P., India in collaboration with INSPIRA Research Association-IRA, Jaipur, Rajasthan, India on 21st-22nd April, 2025.

6. Poster Presentation on Green Synthesis and Catalytic Application of Silver Nanoparticles Using Pomegranate Peel Extract in International Conference on Innovation in Chemistry: Green synthesis and Drug Design Jointly Organized by Department of Chemistry, Janardan Rai Nagar Rajasthan Vidyapeeth, Deemed to be University and BN University, Udaipur, Rajasthan, on 23 -24rd June, 2025.

Other Achievement

Adjudicator- Dr. Rehana Khanam contributed as Adjudicator in International Conference on "Newer Horizons of Chemical Sciences in 21st Century" on 27-28 September, 2024 held at Pacific Academy of Higher Education and Research University, Rajasthan, India.

Dr. Daksha Sharma

FDP attended

Online One Week Faculty Development Programme on "Outcome Based Education: Paradigms Shift in Higher Education"

Organized by Sangam University, Bhilwara and Association of Indian Universities (Academic and Administrative Development Centre) AIU-SU-AADC from 14th to 18th October, 2024.

Paper published “Using of a photocatalyst for removal of methyl violet dye from textile effluents” in Asian Dyer. 21(6), Vol 29-33. 2025. ISSN 0972-9488.

Dr. Manish Rawal

Award

Appreciation Certificate for outstanding Teacher in field of Education, by Indian Rubber Institute-Rajasthan Branch. 24th August 2024.

Paper Published

Polyaniline, Chitosan and Metal Oxide based Nanocomposites: Synthesis, characterization, and their Water Remediation Applications in “Journal of Molecular Structure (2025): 142157.

Ragini Gandharva:

FDP attended

One week FDP on “AI in Academia: Connecting practices with research methodology” organized by U.S. Ostwal P G College, (18th Nov-23rd Nov 2024)

Paper Presentation

Oral presentation on synthesis and characterization of pectin- titanium oxide composite and its applications for removal of dyes in 2nd international conference on “Innovation in Chemistry: green synthesis and drug design” jointly organized by BN University Udaipur and JRN R Vidyapeeth Deemed to be University. (23-24th June 2025)

Other Achievement

Committee member in 2nd international conference on “Innovation in Chemistry: green synthesis and drug design” jointly organized by BN University Udaipur and JRN R Vidyapeeth Deemed to be University. (23rd-24th June 2025)

Dr. Bharatraj Rathore

Paper Published

Polyaniline, Chitosan and Metal Oxide based Nanocomposites: Synthesis, characterization, and their Water Remediation Applications in

“Journal of Molecular Structure” (2025): 142157.

Results

In the academic session 2023-24, in the UG, Roshan Joshi stood first with 80.75% Mayank Kumawat Ankit Janwa stood second with 80.18%, Manish Kumar Meena stood third securing 79.05% in Bio batch.

Hadmat Singh Ranawat secured 67.85% bagging the 1st position and Chandani Chauhan at second position with 65.97%. Tanvi Rajawat stood third with 65.92% in Maths Batch.

In M.Sc. Final (Batch 2022-24) the first position was secured by Neha Menariya with 8.42 CGPA(81.16%) and 2nd position by Mansi Nagda with 7.67 CGPA (76.33%).

In M.Sc. previous Sem II (Batch 2023-25) Akshit Vijayvargiya secured first position with 72.5%(7.0 SGPA) while Harish Kumar stood second with 70% (7.1 SGPA.)

Recruitments

Neha Menariya and **Ritik Joshi** as research trainee, PI industries Ltd.

Mansi Nagda, as Production Employee, Production Department, Sun Pharmaceuticals, Dahej Plant Gujarat.

Tej Prakash, as Chemist, in Rajasthan Barytes, Ambaji, Gujarat

Student

Achievements:

Pavan Solanki successfully completed one-month online internship in “Research training” from 18th Nov to 18th Dec 2024 from MSME technology development Centre (PPDC)





BATCH 2022-24