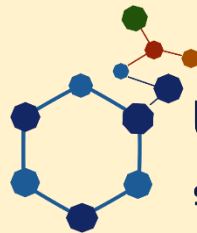


SCI-F.Y.I

e- Newsletter | 2024:Issue-3



UPL UNIVERSITY
OF
SUSTAINABLE TECHNOLOGY

SRICT- Institute of Science & Research
UPL University of Sustainable Technology

Block No. 402, Ankleshwar-Valia Road, Ta: Valia, Dis: Bharuch-393135



January- June- 2024

Vision & Mission



Inspiring young minds to learn, adapt and promote the philosophy of science education and cutting-edge research towards sustainability.



- ✓ To establish a dynamic learning environment that support fundamental science education based on future demands to resolve practical problems.
- ✓ To provide theoretical and practical education to troubleshoot environmental problems and provide sustainable solutions.
- ✓ To inculcate analytical expertise, ethical values and soft skills in students to make them ready for corporate world.
- ✓ To promote strong, effective and mutually beneficial Industry-University collaboration.
- ✓ To facilitate and encourage research through temper of science leading to resolving practical problems and futuristic research.
- ✓ To serve society through innovation and excellence in science.

Message from HOD

I am very much delighted to share that SRICT-ISR is publishing the third issue of e-newsletter "SCI-F.Y.I" of the year 2024. Our SRICT-ISR is doing extremely well with regards to the infrastructure and teaching methods. The teaching staff of our SRICT-ISR comprises a group of successful people with Ph.D. degrees as well as accomplishments in Research and Teaching. The SRICT-ISR encourages the faculty to attend seminars, workshops & conferences.

The SRICT-ISR motivates the faculty to publish papers in reputed Journals, submit project proposals to funding agencies & to enrol for Ph.D. program. The department has well qualified, experienced and dedicated faculty, who is blend of knowledge and experience.

We have a very favourable faculty-to-student ratio, which encourages close contact between students and their faculty mentors. This allows the faculty to give personalised attention to the academic progress of students.

Our courses are designed to provide students the knowledge of Industrial synthetic organic & Applied Chemistry, and also Introduce them to various experimental skills. The subject has become an essential part of the curriculum for Organic Chemistry.

Dr. Nikhil M. Parekh

Head, Department of Chemistry
SRICT-ISR



About SRICT-ISR

The Department of Chemistry was established in the year of 2018 under the SRICT-Institute of Science and Research (SRICT-ISR) on the footsteps of reputed and quality education based institute SRICT. Department of Chemistry started with the post-graduation course (M.Sc.) in organic chemistry. After the successful journey of decades now SRICT is a part of UPL University of Sustainable Technology. Now under the umbrella of UPL University of Sustainable Technology, SRICT and SRICT-ISR both are included.

The chemistry department serves the purpose of imparting knowledge in the core science subject, which is a foundational building block for most engineering disciplines. As such, high tech labs with the latest technological gizmos greet any students and faculty members of the college looking to strengthen their base in this subject. A team of extremely capable teachers and staff members keep the department running in full throttle.

SRICT-ISR has started a new course in B.Sc. (Chemistry), B.Sc. (Microbiology) and M.Sc. (Organic Chemistry) Evening batch also. The curriculum allows a more in-depth understanding and comprehensive knowledge base in a specific subject. With a M.Sc. degree, students can pursue a Ph.D. degree or increase their chances of career development in the basic sciences. SRICT - ISR has highly qualified faculties with good number of publications in reputed journals, good laboratory facilities, and advanced classroom, canteen and transportation facilities. It provides wonderful placement opportunity to all eligible students.





Dr. Trupti R Patel

M. Sc., Ph. D.

Assistant Professor



Dr. Mehul L. Savaliya

M. Sc., Ph. D. Bioenergy

Assistant Professor



Dr. Reena Varma

Ph. D. Chemistry

Assistant Professor



Dr. Sandip De

Ph. D. Chemistry

Assistant Professor



Dr. Suryajitsinh Rathod

M. Sc., Ph. D.

Assistant Professor



Dr. NareshKumar Vala

M. Sc., Ph. D.

Assistant Professor



Dr. Prakash Majee

M. Sc., Ph. D.

Assistant Professor



Dr. Sidhharth Patel

M. Sc., Ph. D.

Assistant Professor



Ms. Soumya Yadav

M. Sc., ICAR-NET

Assistant Professor



Mr. Shivamsinh Kesrola

M. Sc. Chemistry

Assistant Professor on Adhoc



Ms. Nikita Rathod

M. Sc. Chemistry

Assistant Professor on Adhoc



Ms. Namrata Parmar
M. Sc. Chemistry
Assistant Professor on Adhoc



Ms. Manisha Maurya
M. Sc. Chemistry
Assistant Professor on Adhoc



Mr. Dinesh Parmar
ITI Electronics
Laboratory Assistant



Ms. Dipikaben Vasava
M. Sc. Chemistry
Laboratory Assistant



Ms. Isha Mevada
M. Sc. Chemistry
Laboratory Assistant on Adhoc



Ms. Nisha Atodariya
M. Sc. Chemistry
Laboratory Assistant on Adhoc

As the editor, our aim is to cultivate a space where ideas blossom, voices resonate, and stories unfold. This newsletter is more than ink on paper; it's a testament to our collective creativity and intellectual prowess. Each article, every design element, and all the collaborative efforts are threads weaving together the vibrant tapestry of our college experiences.

In this magazine you will find narratives that inspire, artwork that captivates, and opinions that challenge. It's a platform where we celebrate achievements, reflect on challenges, and embrace the myriad hues of our shared journey through academia.

We invite you to immerse yourself in the stories within newsletter, to explore the thoughts and dreams of your peers. Let this magazine be a catalyst for conversations, a catalyst that sparks connections and fosters understanding. Together, let us continue to shape newsletter into a reservoir of ideas, a reflection of our collective intellect, and a source of inspiration for generations to come.

Thank you for being a part of this incredible journey, and We look forward to witnessing the continued growth and creativity that will undoubtedly flow through the pages of magazine.

Ms. Dimpal Panchal & Ms. Drashti Patel (Editors)

Editorial Team



Dr. Naresh Vala

Assistant Professor, SRICT-ISR

Faculty Editor (Designing & Editing)



Dr. Mehul Savaliya

Assistant Professor, SRICT-ISR

Faculty Editor (Designing & Editing)



Ms. Dimpal Panchal

Editors

Students of F.Y. M Sc. Semester-II



Ms. Drashti Patel



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One-to-One Meetings

- ❖ This interactive session was organized to motivate the students to improve their overall academic performance.
- ❖ It helps to maintain appropriate boundaries between students and teachers.
- ❖ Students were also encouraged to participate in various activities in order to sharpen their skills and Work hard for the upcoming university examination, concomitantly.
- ❖ A one-to-one meeting had been organized for the students of B.Sc. (2nd, 4th & 6th semester)& M.Sc. (2nd & 4th semester), with the Dr. Snehal Lokhandwala (Dean, Science and Sustainability) and Dr. Nikhil Parekh (HOD_SRICT-ISR).



One-to-One Meetings



Parents Meeting



One-to-One Meetings



One-to-One Meeting for slow learner



B.Sc. Semester- VI



Peer Learning Initiative



- ❖ In a collaborative peer learning environment, each student's strengths complement the group and facilitate learning. The ability to learn from peers can begin at an early age in the classroom.
- ❖ Students often fail to identify gaps in their knowledge. But as they learn with their peers, they can identify new processes for answering questions and finding creative, collaborative solutions of each problem.
- ❖ Peer learning encourages diversity and depth of student's knowledge and perspectives.
- ❖ Learning from peers of different backgrounds, perspectives, and ethnicities fosters an environment of mutual respect, gratitude, and advancement.
- ❖ It is the differences among students that enrich the learning environment. Promoting diversity through peer learning is part of culturally-directed instruction.
- ❖ In every semester 3 PLI per subject was conducted.

Glimpse of PLI



Sr. No.	Program	Semester	No. of PLI
1	B.Sc.	2	19
2	B.Sc.	4 & 6	12
3	M.Sc.	2	6

Industrial Visits

Date of Visit	Program	Sem	Name of Industry
06/02/24	B.Sc. (MB)	II	Ganesh Sugar Factory, Vataria
04/03/24	B.Sc. (MB)	II	Jayshree Khodiyar Lab equip. Pvt. Ltd.
04/03/24	B.Sc. (MB)	II	Prabhat Life Science Pvt. Ltd, Ankleshwar
06/02/24	B.Sc. (CHEM)	II	Ganesh Sugar Factory, Vataria
05/03/24	B.Sc. (CHEM)	II	Jayshree Khodiyar Lab equip. Pvt. Ltd.
05/03/24	B.Sc. (CHEM)	II	Prabhat Life Science Pvt. Ltd, Ankleshwar



Industrial Visits

Date of Visit	Program	Sem	Name of Industry
08/02/24	B.Sc.	IV	Vinayak Chemicals, Ankleshwar
19/02/24	B.Sc.	IV	Apex Pharma Chem Pvt. Ltd., Ankleshwar
15/04/24	B.Sc.	IV	Sterlite Organics, Panoli
19/01/24	B.Sc.	VI	AIA Industrial Expo, Ankleshwar
25/01/24	B.Sc.	VI	Jayshree Khodiyar Lab. Equipment, Ankleshwar
15/04/24	M.Sc.	II	Star Oxochem Pvt Ltd., Ankleshwar
19/02/24	M.Sc.	II	Apex Pharma Chem Pvt. Ltd., Ankleshwar



Expert Lectures

Date of Lecture	Title of Lecture	Name of Expert
22/02/24	Applications of Laboratory Instruments in Chemical Analysis	Dr. H. R. Shah, Former Chief Manager in Lab, GNFC Ltd.
22/02/24	Quality in chemical Industries	Dr. Mayur Kapadia, Analytical officer, SRF, Dahej
15/03/24	Basic Reaction Mechanism	Mr. Satyadeo Yadav, Senior Executive, Cadila Healthcare
14/03/24	Basic Instrumental Knowledge	Mr. Aniket Pati, Analytical Scientist, BEIL, Ankleshwar.



UPL UNIVERSITY OF SUSTAINABLE TECHNOLOGY Rotary Ambassador

Expert Talk

Topic: "Awareness about companies culture"
 Delivered to: B.Sc. Sem 2 (Chemistry)
 Delivered by: Mr. Satyadeo Yadav (Senior Executive, Zydus Lifescience Ltd, Ankleshwar.)

www.upluniversity.edu

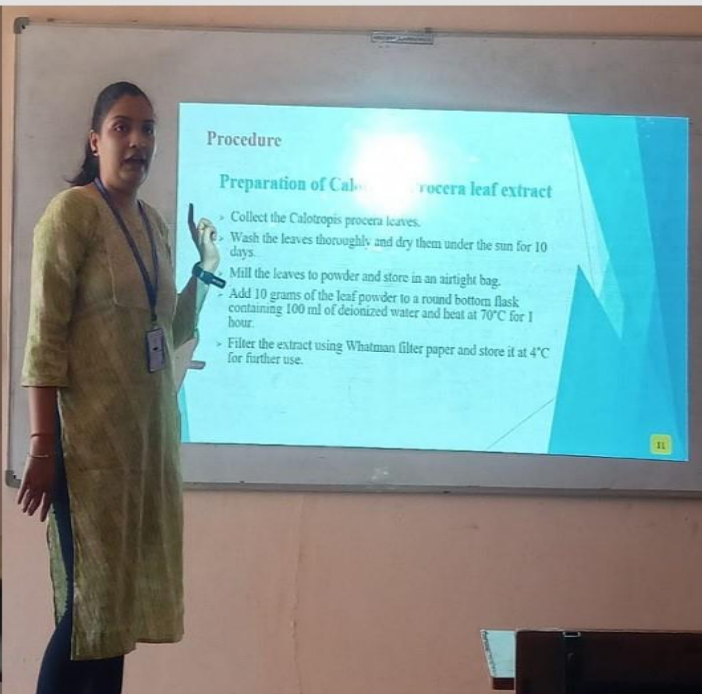
UPL UNIVERSITY OF SUSTAINABLE TECHNOLOGY Rotary Ambassador

Expert Talk

Topic: "Basic Instrumental knowledge"
 Delivered to: B.Sc. Sem 4
 Delivered by: Mr. Aniket Pati (Analytical Scientist, BEIL, Ankleshwar.)

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UDP/IDP Review presentations



MC3209: UDP (Research Project) External Viva Voce Examination

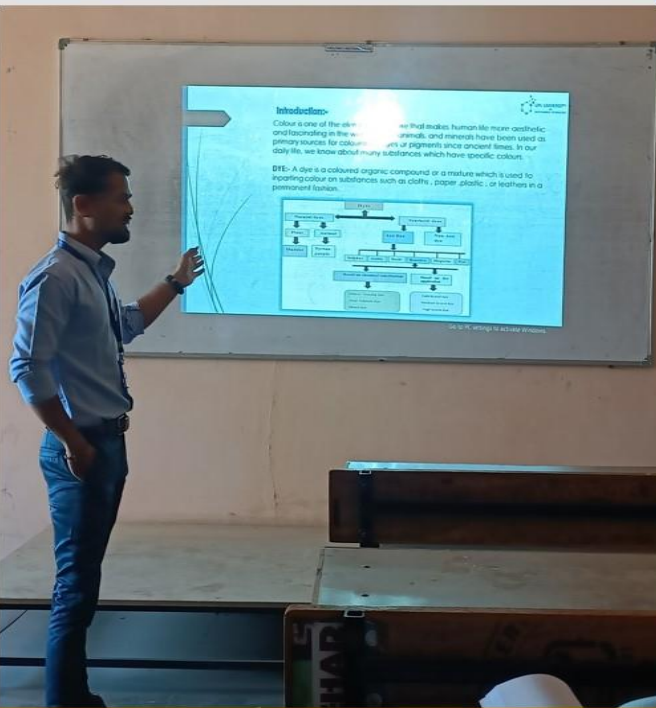
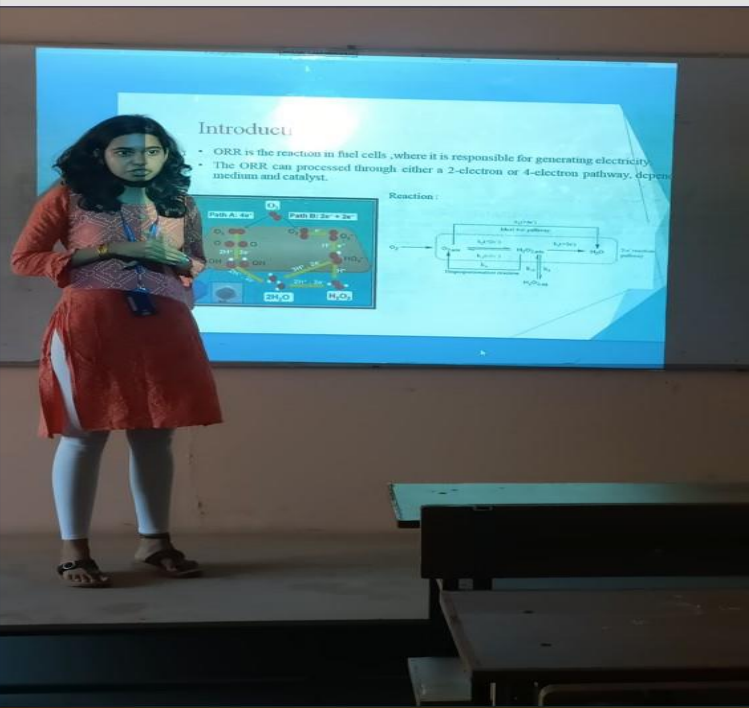
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MC3209: UDP (Research Project) External Viva Voce Examination

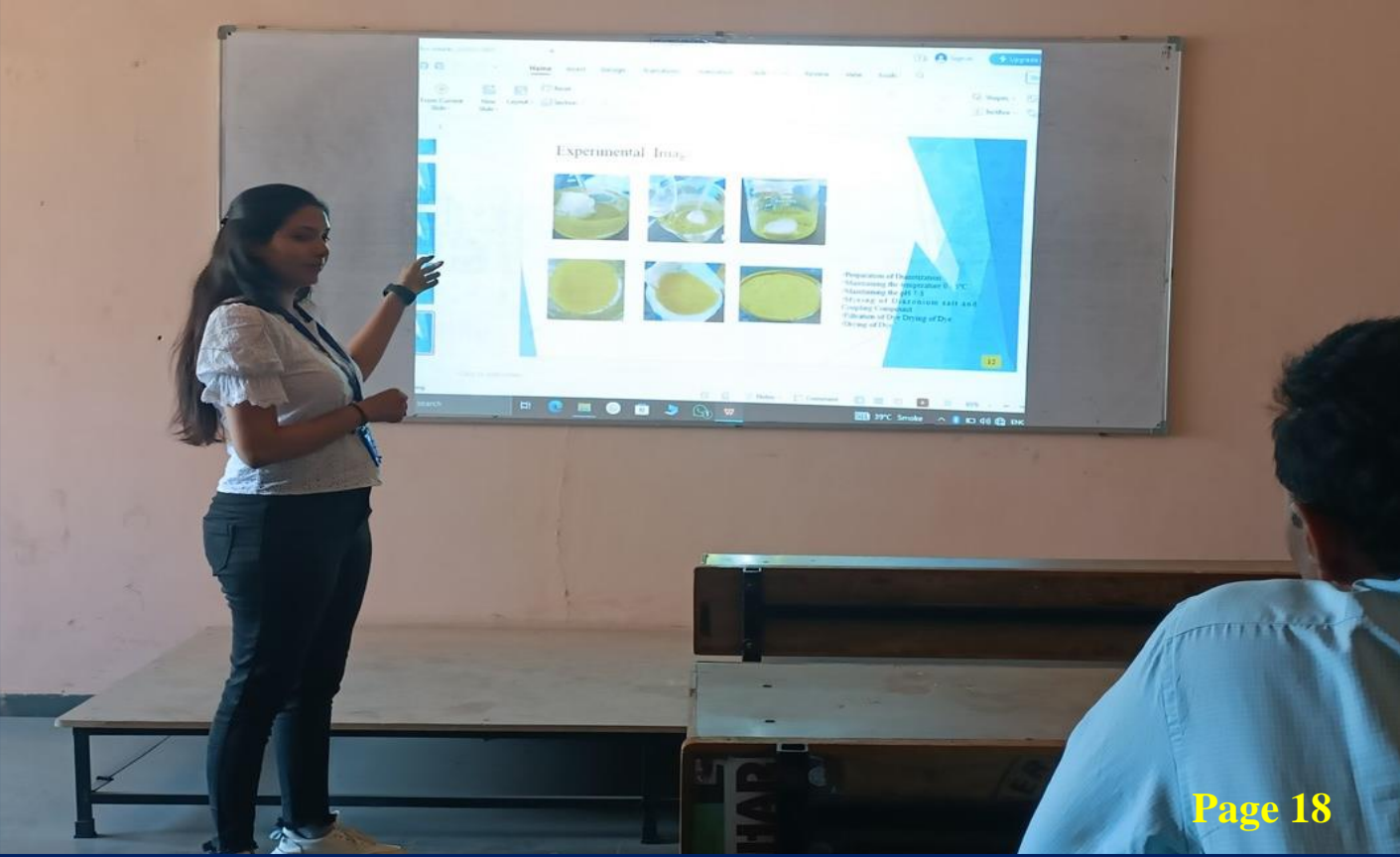
UDP/IDP Review presentations



MC3209: UDP (Research Project) External Viva Voce Examination

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UDP/IDP Review presentations



Apr 29, 2024, 11:04

Page 19

Review-III Presentation of UDP- M. Sc Research Projects

Republic Day Celebration



WINSTINCT-2024

UPL University of Sustainable Technology has successfully organized a series of sports events entitled "WINSTINCT-2024" from February 15th to February 17th, 2024.



WINSTINCT-2024



Science Week

SRICT- Institute of Science & Research (SRICT-ISR) is celebrated Science Week -2024 from 21st -28th February in association with Vigyan Gurjari. On the account of science week 2024 there are plenty of events i.e. SciThoughts, SciTalk, SciReels, SciToon, SciCrackers, SciRoots, SciVoice, SciReflect, SciMiniature, SciPeCharcha etc. are organized.

DAY-1



On 21-02-24, the function has been formally inaugurated by Honorable Provost of the University in august presence of Deans, Registrar, COE, Hods, faculties and a large number of students.

Science Week

DAY-2

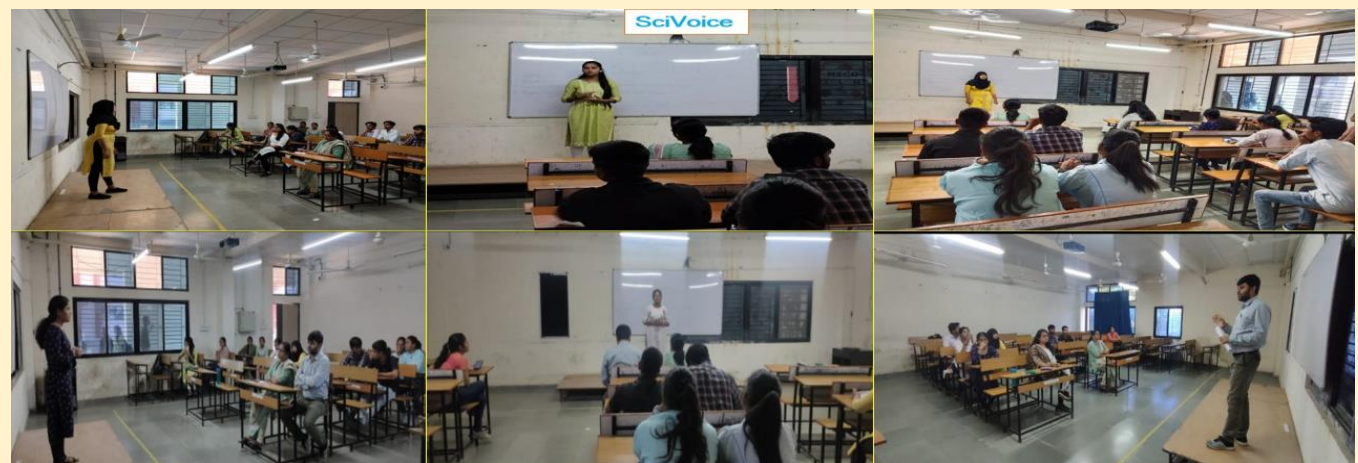
The major events executed on 22-02-2024 are SciTalk, SciReels & SciToon.



Science Week

DAY-3

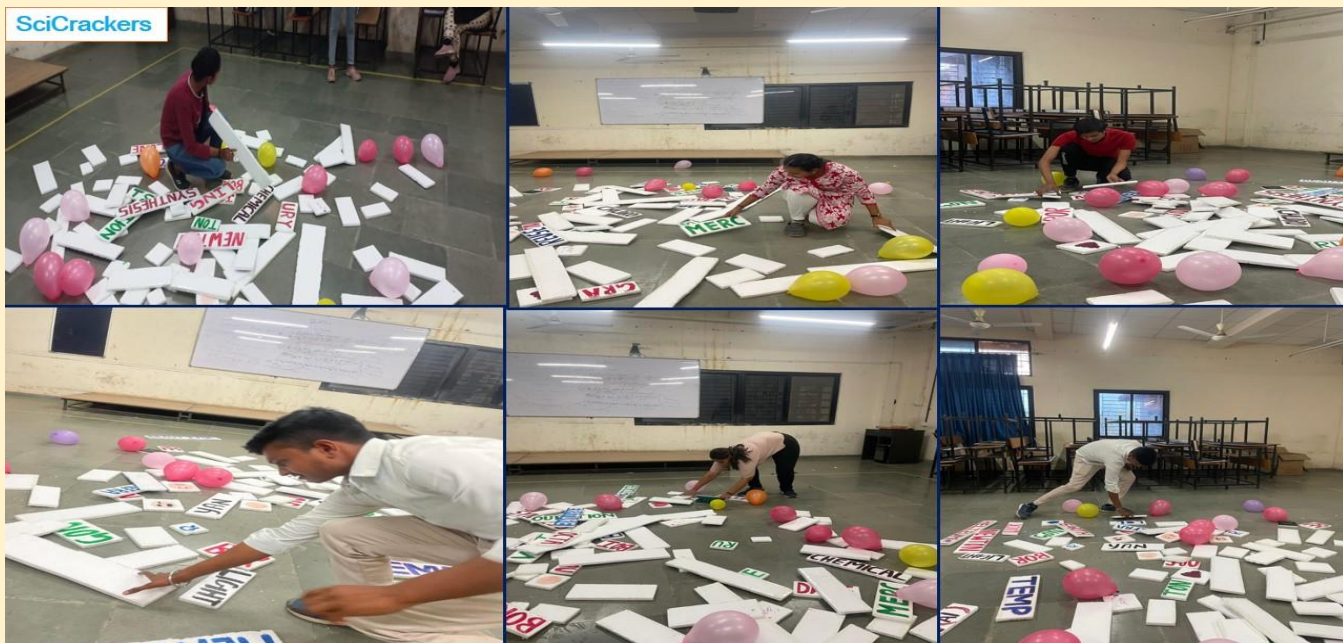
The major events executed on 23-02-2024 are SciRoots & SciVoice. The Honorable Collector of Bharuch District- Shri Tushar Sumera Sir (IAS) also visited the ongoing celebrations of the Science Week



Science Week

DAY-4

The major event executed on 26-02-2024 is SciCrackers. Students really enjoyed challenging brain with mental exercises to stimulate brain cells and engage communication among them for enhancing memory, concentration, attention span, cognitive skills and flexible thinking. Here are some glimpses.



DAY-5



Science Week

DAY-6

The major events executed on 28-02-2024 are SciPeCharcha & Valedictory function. A panel discussion on SciPeCharcha has been initiated by Dr. Snehal Lokhandwala, honorable Dean, Science & Sustainability. Dr. Niraj Kumar Singh, Scientist-D & Joint Director, Gujarat Biotechnology Research Centre, Department of Science Technology Government of Gujarat, Gandhinagar have been invited as a Chief Guest & panelist. The other panelists- Mr. Kamal Naik (HR Expert), Mr. Pravindan Gadhvi (Unit Head - UPL Jhagadia), Mr. Shailesh Shah (Entrepreneur) and Ms. Dhara Trivedi (Principal-Advait Vidyaniketan, Bharuch) have presented their deliberations on SciPeCharcha.



REVAFEST 2024





Shining Star of SRICT-ISR received Gold Medals for Scoring 10 SPI



Abhyutthan 2024

Students of SRICT-ISR felicitated with Cash-Prize



Farewell



Farewell function

SRICT- Institute of Science & Research
Department of Chemistry
UPL University of Sustainable Technology, Ankleshwar



M. Sc. Chemistry, Graduates class of 2022-2024



Farewell function

SRICT- Institute of Science & Research
Department of Chemistry
UPL University of Sustainable Technology, Ankleshwar



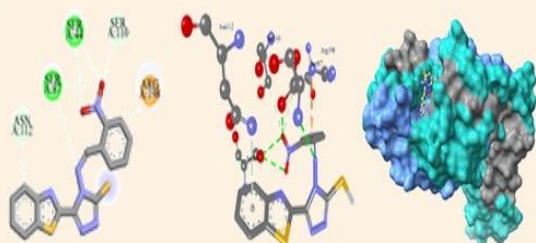
B. Sc. Chemistry, Graduates class of 2021-2024



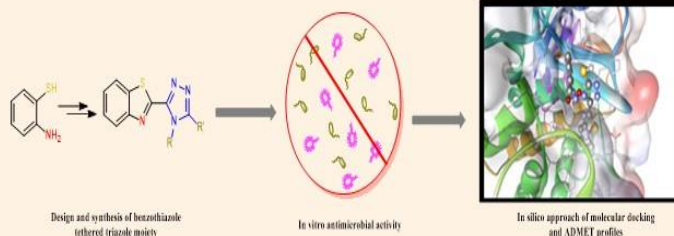
Faculty Achievement



SRICT- Institute of Science & Research
UPL University of Sustainable Technology, Ankleshwar



Dr. Mehulkumar L. Savaliya, Assistant Professor, Department of Chemistry & Dr. Snehal R. Lokhandwala, Dean, Science & Sustainability have published a research paper entitle "Synthesis and Evaluation of NH₂ and SH linker Free Benzothiazole- Triazole Compounds: Insights into Antimicrobial efficacy" in Russian Journal of Bioorganic Chemistry, Springer.



Education Department, Govt. of Gujarat
Knowledge Consortium of Gujarat

Certi. No.: WEB/2023-24/6823



Online Webinar
Certificate of Participation

This is to certify that Mr./Ms./Mrs. **Dr. Mehulkumar Laljibhai Savaliya** has attended online webinar on "Human Rights" dated 20/06/2024, under the initiative FEERTH organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat.

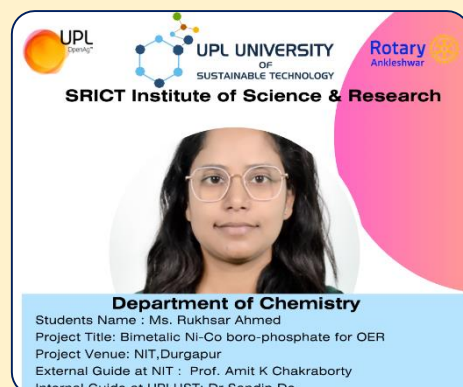
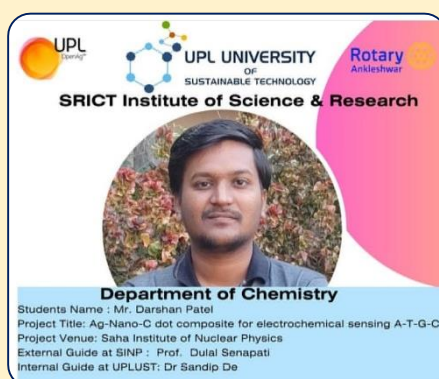
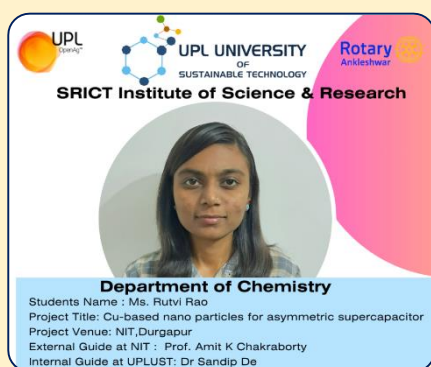
Dr. Mahesh Patel
OSD, KCG

Prof. A.U. Patel
Advisor, KCG

Shri Gurav Dinesh Ramesh, IAS
CEO, KCG

Faculty Achievement

Dr. Sandip Kumar De of SRICT-ISR has successfully facilitated collaborations with Prof. Dulal Senapati from the Saha Institute of Nuclear Physics for research in electrochemical biosensors, and with Prof. Amit K. Chakraborty from NIT Durgapur for extended collaboration in hybrid capacitor and electrochemical water splitting research. As part of this initiative, three master's students were sent to SINP and NIT Durgapur for their dissertations. Their projects have been completed, and ongoing efforts are focused on device fabrication for both biosensors and energy storage applications.



Dr. Mehulkumar L. Savaliya has attended a **GEMI Sponsored One Day Training Program on Solid Waste Management**, organized by UPL University of Sustainable Technology, Ankleshwar on 30th January 2024.

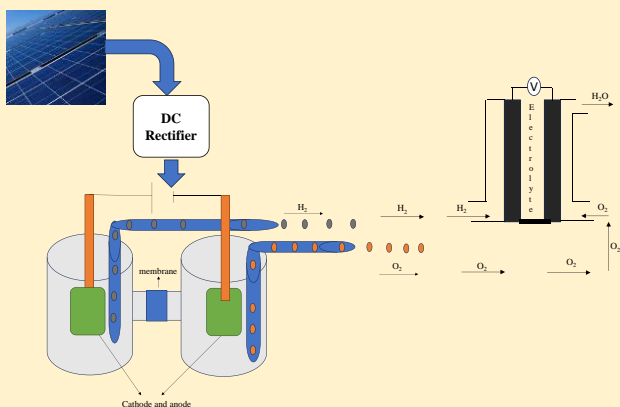


Dr. Mehulkumar L. Savaliya has attended “Vigyan Yatra “a series of conferences on “A Travel of Scientific Indian Minds towards Vikshit Bharat” Jointly organized by Department of Physics, Saurashtra University, Rajkot, Vigyan Gurjari and GUJCOST, Gandhinagar under Gujarat Vigyan Sammelan (GVS) - 2024, during 4th -15th March, 2024.



A green hydrogen project utilizing wastewater has been submitted to MNRE. The research team comprises experts from Chemical Engineering (**Dr. Alok Gautam**), Electrical Engineering (**Dr. Saurab Chaubey**), and SRICT-ISR (**Dr. Sandip Kumar De**). The project budget is estimated at 1 crore, which, if selected, will be sponsored jointly by MNRE and ETL. We extend our sincere thanks to our **R&D Dean, Dean (Science & Sustainability), Provost, President, and ETL** for their invaluable support and guidance.

Status of the Project: Under Revision



IIP Series

www.iipseries.org

Iterative International Publishers

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Paisley Circle, Novi, Michigan-48377, USA

ISO 9001:2015 certified, registered as Publisher with imprint IIP under Raja RamMohun Roy National Agency, Ministry of Education, Government of India and also under Bowker ISBN Agency, USA

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Certificate of Recognition

awarded to

Dr. Mehulkumar L. Savaliya

Assistant Professor
Department of Chemistry
SRICT- Institute of Science & Research
UPL University of Sustainable Technology
Block No- 402, Ankleshwar- Valia road
Vataria-393135, Gujarat, India



in recognition of an outstanding contribution as an **Editor** for the edited book titled **Futuristic Trends in Chemical Material Sciences & Nano Technology Volume 3 Book 22, IIP Series**
E-ISBN: 978-93-5747-708-6
Publication Date : 30-April-2024

Nanjesh Bannur
Director, IIP Series



Call for Book Chapters/Research Papers for Edited Book

To be published with ISBN under IIP International Publishers, USA & India

Futuristic Trends in

Chemical, Material Sciences & Nano Technology



Series Editors



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Assistant Professor,
Department of Chemical Engineering
Mewar University,
Rajkot, Rajasthan, India.



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PhD Postdoctoral researcher
CATRIN-RCPTM
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Olomouc Czech Republic



Dr. Mehulkumar L. Savaliya
Assistant Professor
SRICT-ISR- Department of Chemistry
UPL University of Sustainable Technology,
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Dr. Dinesh Kumar Chelike
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DOI Prefix: 10.58532

Important dates:

Paper submission portal opens from 12th June 2023
Last date for chapter submission: within 31st July 2023
Review status notification: within 31st July 2023
(Parallel Process)
Last date for resubmission/extended submission: 20th August
2023
Final Acceptance Notification: within 2nd September 2023
Last date for registration: within 14th October 2023

IIP Series
www.iipseries.org

Dr. Mehulkumar L. Savaliya has served as an **editor** for a book entitled **“Futuristic Trends in Chemical, Material Science & Nano technology”** Iterative International Publishers (IIP), edited book series ID- IIPV3EBS06_G115 Novi, Michigan, USA & Chikmagalur, Karnataka, India. (Editor ID- IIPER1655362396).

Dr. Mehulkumar L. Savaliya has presented a Poster & Oral entitled **Hierarchically porous MTSA accessorized with Si species for concurrent esterification and transesterification of inedible oil: An insight into exploitation of side derivatives**, in **An international conference on Advancement in Chemical & Biological Research: Breaking Boundaries & Shaping the Future (ACBBBF 2024)**, Tarsadia Institute of Chemical Science, Uka Tarsadia University, Bardoli, Surat, In Association with Association of Chemistry Teachers, Mumbai during 08th - 10th February, 2024.

UKA TARSADIA UNIVERSITY, BARDOLI

An International Conference on
**Advancement in Chemical & Biological Research: Breaking Boundaries
and Shaping the Future**
In association with
Association of Chemistry Teachers, India (Mumbai)
(February 8-10; 2024)

CERTIFICATE

This is to certify that,Mehul Savaliya..... participated/
presented oral / poster in this scientific event held at Tarsadia Institute of
Chemical Science, Uka Tarsadia University, Bardoli during February 8-10; 2024.

Sponsored by

GOVERNMENT OF GUJARAT
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
GOVERNMENT OF GUJARAT

Dr. Sandip Kumar De from the Department of Chemistry at **SRICT-ISR, UUST** has co-authored a research article with **Dr. Dulal Senapati** from the **Saha Institute of Nuclear Physics**. Their article is featured on the front cover of **ACS Applied Nanomaterials (Impact Factor 5.3)**.



ACS Applied Nano Materials

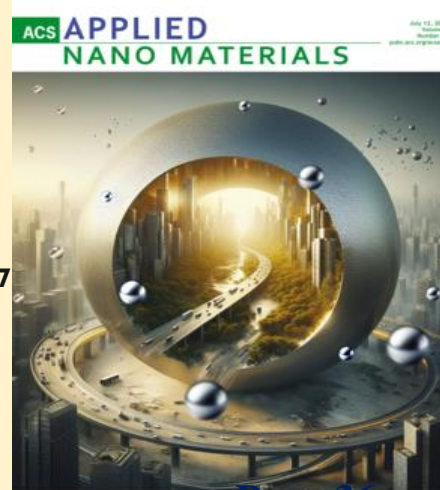
Cite this: *ACS Appl. Nano Mater.* 2024, 7, 13, 14889–14897

<https://doi.org/10.1021/acsnm.4c00233>

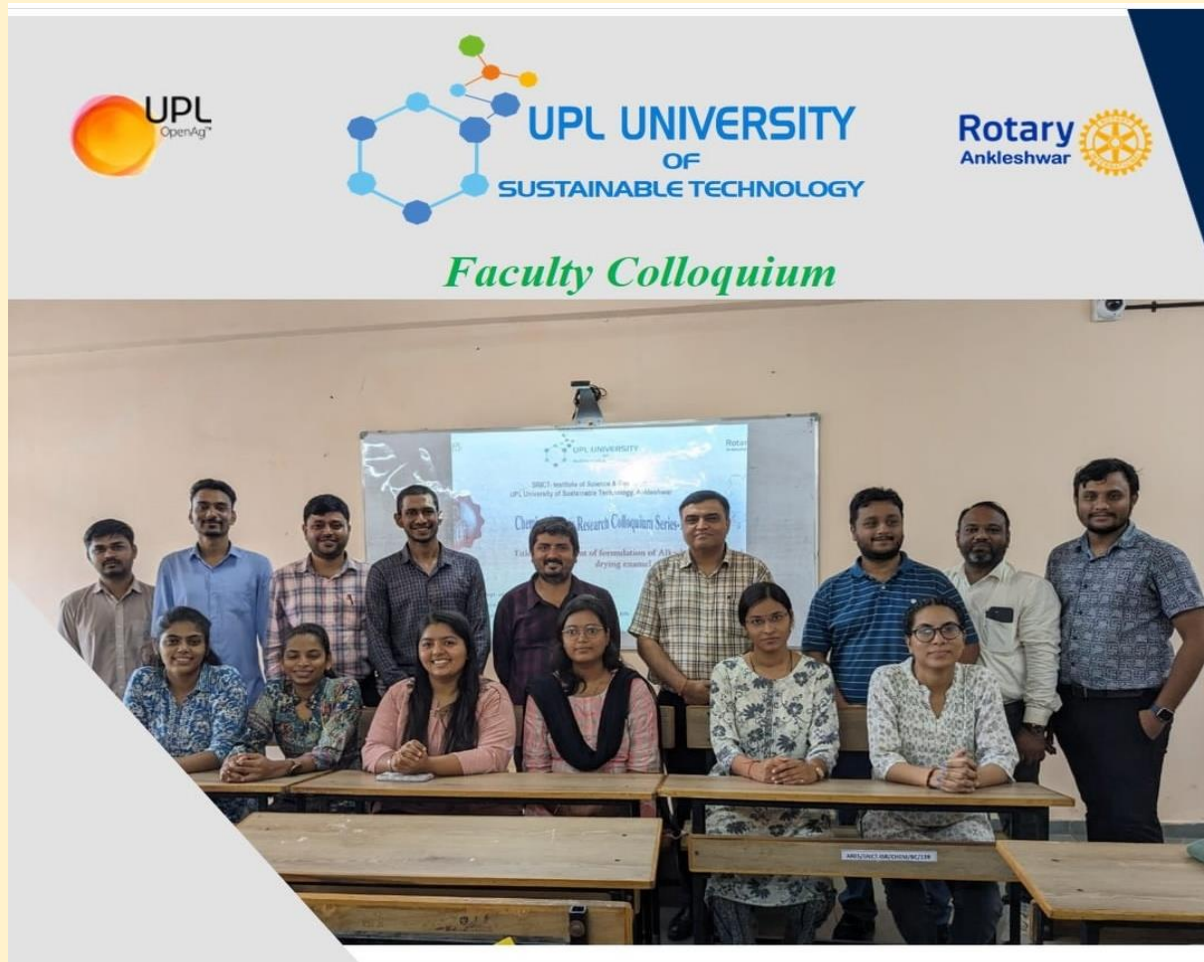
Published April 4, 2024

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Dr. Sandip Kumar De, from the Department of Chemistry at SRICT-ISR, has successfully organized 04 **faculty colloquium**. The speakers included **Dr. Prakash Majee, Dr. Mehul Savaliya, Dr. Parag Kariya, and Dr. Reena Verma**. We are pleased to announce that the program was well-attended by master's and PhD students, faculty members, and staff. This initiative aims to foster future collaborations among our faculty members.



Faculty Colloquium



“Faculty Colloquium”



SRICT- Institute of Science & Research
UPL University of Sustainable Technology, Ankleshwar



Faculty Colloquium

Title: Hierarchically porous MTSA accessorized with Si species for concurrent esterification and transesterification of inedible oil: An insight into exploitation of side derivatives

Speaker:

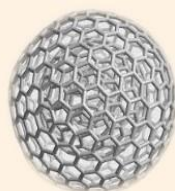
Dr. Mehulkumar L. Savaliya

Assistant Professor, Dept. of Chemistry

SRICT- Institute of Science & Research

UPL University of Sustainable Technology

Ankleshwar



Date: 04. 05. 2024

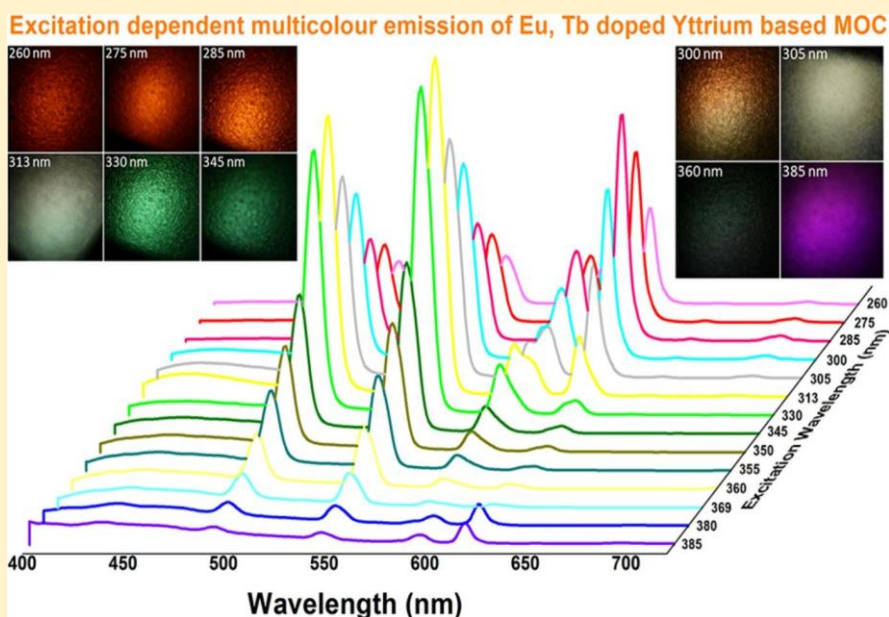
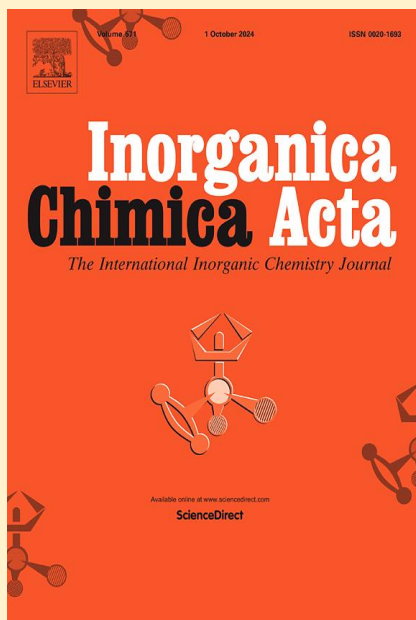
Time: 10.30 - 11.30 am



Chemical Science Research Colloquium Series-2024



Dr. Prakash Majee from the Department of Chemistry at **SRICT-ISR, UUST** has published two research articles with **Dr. Sudip Kumar Mondal** from Visva-Bharati and **Dr. Partha Mahata** from Jadavpur University. Their articles are published on *Inorganica Chimica Acta* (Impact Factor 2.7).



Inorganica Chimica Acta, Volume-571, Page-122224

Mr. Shivamsinh Kesrola attended two days Workshop at **Marwadi University, Rajkot**



Student Achievement

SRICT ISR Student Achievements



Ms. Mansi Bhatt, B.Sc. SEM II, Microbiology, participated in the Youth Parliament event organized by the Government of Gujarat at Gandhinagar on 9th of April. She has been awarded a certificate for her outstanding contribution to the event.



SRICT ISR Student Achievements



Ritika Tomar, B.Sc. Chemistry Semester 2 and Gracy Bhargav, B.Sc. Microbiology Semester 2 have participated in "ALL INDIAN SHREE NANDLAL GADIYA MEMORIAL DEBATE 2024 " Held on 1 March 2024 at Mewar University Chhitoegad Rajasthan. Topic was CASTE CENSUS IS IN NATIONAL INTEREST, there were 2 groups one for Hindi and one for English Ritika and Gracy represented UPL UNIVERSITY OF SASTANBLE TECHNOLOGY in English debate.





The Future of Medicine: Exploring the Potential of Nanobots

As the field of medicine continues to evolve, technological advancements are opening new avenues for diagnosis, treatment, and patient care. Among these innovations, nanobots-tiny robots on the nanometer scale-are emerging as a transformative tool in healthcare. These microscopic machines promise to revolutionize how we approach various medical challenges, from targeted drug delivery to disease diagnosis and beyond.



What Are Nanobots?

Nanobots, or nanorobots, are engineered devices designed to perform tasks at the nanoscale, typically measuring between 1 and 100 nanometers. To put this into perspective, a nanometer is one-billionth of a meter, making these robots smaller than cells and even some viruses. Their small size allows them to interact with biological systems in unique ways, making them ideal candidates for medical applications.

Applications of Nanobots in Medicine

One of the most promising applications of nanobots in medicine is targeted drug delivery. Traditional drug delivery methods often lead to systemic side effects, as medications affect both healthy and diseased cells. Nanobots can be engineered to deliver drugs directly to specific cells or tissues, minimizing side effects and enhancing therapeutic efficacy.

For example, in cancer treatment, nanobots can be designed to seek out cancer cells while leaving healthy cells unharmed. By attaching chemotherapy drugs to the nanobots, physicians can ensure that high concentrations of medication are delivered directly to tumors, improving outcomes and reducing toxicity.

Nanobots can play a crucial role in early disease detection and continuous health monitoring. Their ability to navigate through the bloodstream and detect biomarkers associated with various diseases allows for the potential development of advanced diagnostic tools. For instance, researchers are exploring the use of nanobots to identify specific cancer biomarkers or infectious agents. By providing real-time data on a patient's health status, these devices could facilitate timely interventions and personalized treatment plans.

The Road Ahead

As research and development in nanotechnology continue to advance, the potential for nanobots in medical applications appears limitless. Collaborations between engineers, biologists, and medical professionals will be essential in translating theoretical concepts into practical, clinically viable solutions.

The journey towards widespread adoption of nanobots in medicine will require rigorous testing and regulatory approvals to ensure safety and efficacy. However, the potential benefits—ranging from improved patient outcomes to reduced healthcare costs—make this an exciting field to watch.

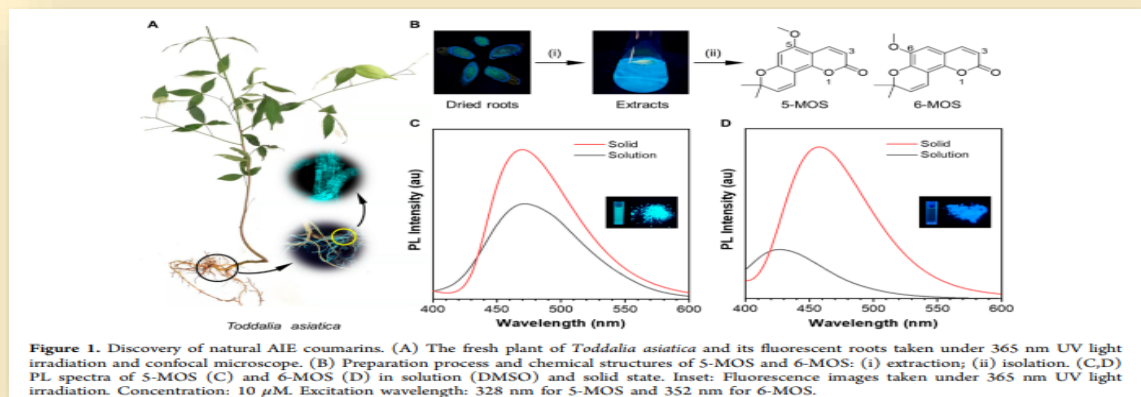
Conclusion

Nanobots represent a frontier in medical technology that could transform healthcare as we know it. With their ability to deliver targeted therapies, enhance diagnostic capabilities, assist in surgeries, and promote tissue regeneration, these tiny robots hold immense promise for the future of medicine. As we navigate the challenges and ethical considerations associated with their use, it is essential to embrace the potential of nanobots and the innovative solutions they can bring to patients around the world.

--- **Dr Naresh Vala**

Orange climbers make fluorescent blue molecules

Two coumarin compounds with nearly identical structures but contrary fluorescent properties have been isolated from the orange climber plant. One may find use in biomedical imaging due to its unconventional behaviour when aggregated in solutions. Many traditional fluorescent molecules do not emit light when in solid forms. But aggregation-induced emission (AIE) luminogens show the opposite phenomenon, glowing brightly even in an aggregate state. While many synthetic versions of these have been developed and found use in theranostics and luminescent sensors, they tend to be toxic to the environment, have poor biocompatibility, and are difficult to make. Inspired by the blue fluorescence displayed by the roots of the orange climber plant (also known as *Toddalia asiatica* or *Zanthoxylum asiaticum*), researchers from China isolated two isomeric compounds that are the first natural coumarins discovered to be AIE-active. The scientists found that one of the coumarins, 6-methoxyseselin, displays AIE through the typical mechanism of restriction of intramolecular motion caused by its rigid structure and the presence of multiple hydrogen bonds between molecules. But this mechanism does not explain AIE in the other isomer. Further analysis revealed that 5-methoxyseselin glows brightly in dilute solutions or crystal states but shows a quenching effect in protic solvents like water. The researchers believe this unexpected phenomenon is due to an unconventional electron energy transfer between the solvent and aggregates.



A fluorescent compound isolated from the roots of the orange climber plant could help in cell imaging

The coumarin compounds are isolated from the roots of the orange climber

Both coumarins were tested for live-cell imaging applications. While each displayed good biocompatibility and low cytotoxicity, due to its unique water-sensitive fluorescence, 5-methoxyseselin provided wash-free mitochondria staining with minimal background signal. The researchers theorized that the compound disaggregates inside cells and interacts with cellular proteins to switch fluorescence back on, providing a fast and powerful tool for visualizing mitochondria in live cells.

Dr. Mehul L. Savaliya

Story Source:

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“My Memorable Journey at SRICT-ISR”

My two years at SRICT-ISR have been truly memorable. The well-structured schedule strikes a perfect balance between academics and personal time, allowing us to excel without feeling overwhelmed. The supportive faculty are always available to help, creating a collaborative environment.

SRICT-ISR offers numerous opportunities for personal growth, encouraging us to explore our interests in both academics and extracurricular activities. Overall, my experience has been enriching, and I am grateful for the growth and memories I've gained.

**Wankhede Sagar**

M.Sc. Chemistry
Reliance Industries Ltd

**My Journey at UPL University of Sustainable Technology**

Choosing to pursue my M.Sc. at UPL University of Sustainable Technology was a challenging decision, but every moment here confirms I made the right choice. The unwavering support and guidance from my teachers have been instrumental in my success.

UPL excels in academics, sports, tech fests, exhibitions, and extracurricular activities, with a commendable SSIP cell that fosters entrepreneurship. I am especially grateful to the faculty in my SRICT-ISR department for their dedication to shaping us into skilled professionals.

Thanks to the knowledge and experiences I've gained at UPL, I am confident in reaching new heights in my career. I'm proud to say I truly “made the right decision at the right time.”

**Piyush Patel**

M.Sc. Chemistry
Lupin Ltd



Club Activities

Library Club Activities



B.Sc. Chemistry SEM- II STUDENTS

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SRICT- Institute of Science & Research
UPL University of Sustainable Technology, Ankleshwar



The students of M. Sc Chemistry, Semester-IV (R) has participated in a Orientation Training on *Chemical Abstracts Service (CAS)*, organized by SRICT- Institute of Science & Research, Department of Chemistry, UPL University of Sustainable Technology, Ankleshwar on 15th April, 2024. Students leaned about most comprehensive scientific abstracting service in English. It provides a complete bibliographic reference to the original publication and a non-critical summary of its content. It has provided with the most comprehensive repository of research in chemistry and related sciences for over 100 years.



B.Sc. Students of SRICT-ISR participated in Tree Plantation program by NSS





M.SC. (REGULAR) SEM. I WINTER-23



Ahir Rinkal
SPI:9.67



Kuman Komal
SPI:9.56



Divya Sharma
SPI:9.44



Nisha Vasava
SPI:9.44



Pooja Khare
SPI:9.33



Vijay Yadav
SPI:9.33



Aswal Priya Venkariya
SPI:9.22



Disha Dobariya
SPI:9.22



Sahil
SPI:9.11



Ayushi Mehta
SPI:9.11



Payal Panchal
SPI:8.78



Harsh Pandey
SPI:8.78



Verik Patel
SPI:8.67



Somdeep Sasmal
SPI:8.67



Ankit Chaturvedi
SPI:8.56



Dhvani Katholia
SPI:8.56



Priyanka Rana
SPI:8.56



Rushi Surti
SPI:8.56



Deep Naikwadi
SPI:8.44

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