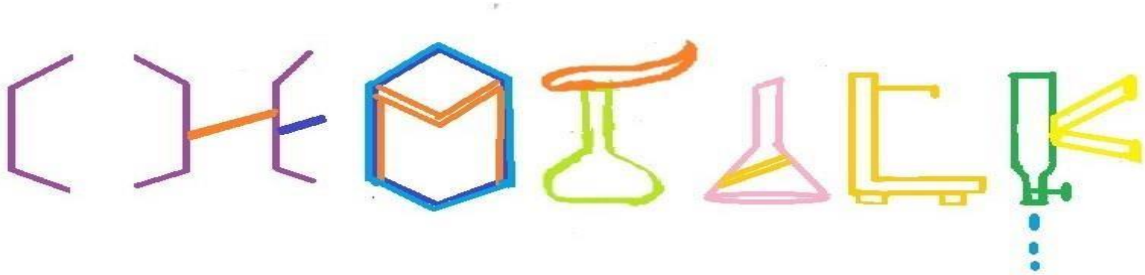
CHEMTALK 2024

A.P.C.Mahalaxmi College For Women

Thoothukudi.

Department of Chemistry



A Students 'Magazine

Edition I, Volume XIII

10/04/2024

This edition brings an article with chem trends,. Besides this, Chem innovation and chemystery also discussed.

PG & Research Department of Chemistry, A.P.C.Mahalaxmi college for Women

From Editor's Desk

Dear Readers,

As our Government has strongly enforced plastic ban, we have also tried to take a step towards environmental protection by publishing a novel method of plastic degradation. To give a new perspective of chemistry to readers, we have introduced chemfiction, i.e. a fictional story on chemistry. We assure that this edition will satisfy the expectation of the readers.

- Editor

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A.P.C.Mahalaxmi College for Women, Thoothukudi.

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DEPARTMENTAL ACTIVITIES

On behalf of PG & Research Department of Chemistry, **Orientation for Freshers & Parents** was conducted on 02.01.2024 for students of III UG & II PG students. Dr. C. Stella Packiam & Mrs. S. Kalaiarasi were oriented the programme. The following instructions were instructed by her. All I UG students interacted with the department staffs effectively. Finally, all parents were taken to visit our college class rooms and campus.

I PG & II PG students of Chemistry were brought to an **industrial visit** to Kalpaka Chemicals PVT Ltd., Thoothukudi on 10.01.2024 by Mrs. S. Kalaiarasi, Asst., Prof., of Chemistry & Ms. P. Gurulakshmi, Asst., Prof., of Chemistry. He spoke about Drug abuse among the students.

A **Guest Lecture** on "Legal Services to the Victims of Drug Abuse and Eradiction of Drug" was arranged by PG & Research Department of Chemistry on 15.02.2024. Adv. K. Renganathan, Senior Panel Advocate, District Legal Services Authority, Thoothukudi was invited as a Chief Guest.

On behalf of the Chemistry association **Parents Teachers Meet** was arranged on 27.02.2024. All UG & PG students of parents met the staff and instructed about college timing, attendance, cell phone and internal exam marks.

In connection with National Science Day **SCI FEST-2024** was celebrated on 26.02.2024 to 28.02.2024. As part of the celebrations, various competitions like Quiz, Poster Making, Dumb Charades, Pencil Drawing and Debate were conducted from 23.02.2024 and 28.02.2024.32 students were benefited through this programme.

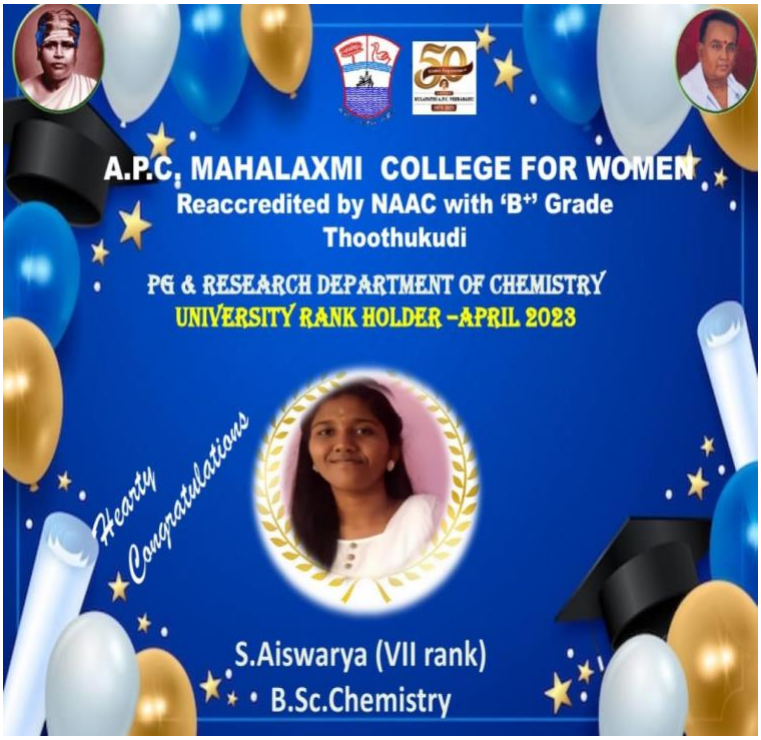
A **Guest Lecture** on "Stress Management Programme" was arranged by PG & Research Department of Chemistry on 15.03.2024. Dr. N. Rathna, Assistant Professor of Physics was invited as a Chief Guest. She spoke about to relive from all type of stress to students.

A **Guest Lecture** on "Health Awareness Programme" was arranged by PG & Research Department of Chemistry on 16.03.2024. Dr. M. Pushpagavalli, Assistant Professor of Tamil was invited as a Chief Guest.

On behalf of the Chemistry association, **Community service** was arranged on 18.03.2024 in RC Middle and High School. Plastic awareness, Dengu fever, Fundamentals of Chemistry and Cleaning activity were done by II UG & II PG students which created awareness among all students.

A one day Workshop on Green Techniques in Chemical Analysis was arranged on 26.03.2024. Dr. S. Murugan, HOD of Chemistry (Rtd.,), South Travancore Hindu College, Nagercoil was invited as a chief guest. He instructed about how to handle the chemicals micro level to approach green method.

University Rank Holder -APRIL 2023



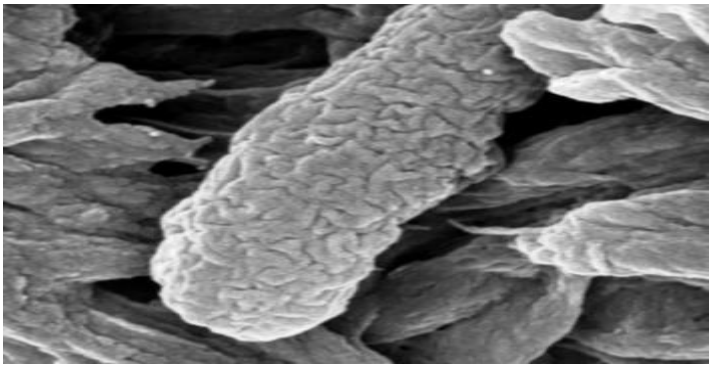
Did you Know

S.Santhiya (II B. Sc., Chemistry)

Chem Innovation

M.Santhiya (II B. Sc., Chemistry)

Nanoscavengers for water purification



WHO and UNICEF have set a 2030 target for everyone to have access to a safe drinking-water supply and new water-purifying "nanoscavengers" developed by researchers at Stanford University could help achieve this goal. There are various nanoparticles that boast different waterpurifying properties. Silver nanoparticles act as an antibiotic, titanium dioxide nanoparticles trap heavy metals and pollutants, while others capture salt. Engineers call these kinds of particles nanoscavengers.The main problem has been reclaiming the nanoscavengers from the water once they have performed their clean up duties. Some approaches that are already in use commercially involve giving the nanoscavengers a core of iron oxide to make them magnetic, meaning they can then be removed using magnets. The downside of this method is that it isn't possible to remove all the nanoscavengers because iron oxide isn't absolutely responsive to magnetism.To overcome this problem, the Stanford team developed a new type of nanoscavenger that sees the iron oxide core replaced with a synthetic core. This new core is a disk made up of magnetic outer layers sandwiched either side of a titanium center. This composition makes the new nanoscavengers nonmagnetic in their natural state, so they aren't attracted to each other or other magnetic materials.However, when the synthetic core is exposed to a strong magnetic field, the magnetism of the two opposing fields align so they not only become magnetic, but the magnetic effect is compounded to make them ultra responsive to magnetismmagnetism.

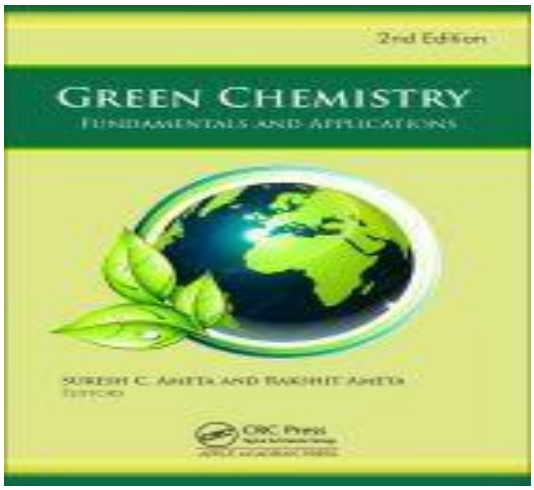
S.Suba (I M. Sc., Chemistry)

Green Chemistry, 2nd edition

Fundamentals and Applications

Editors: Suresh C. Ameta, PhD

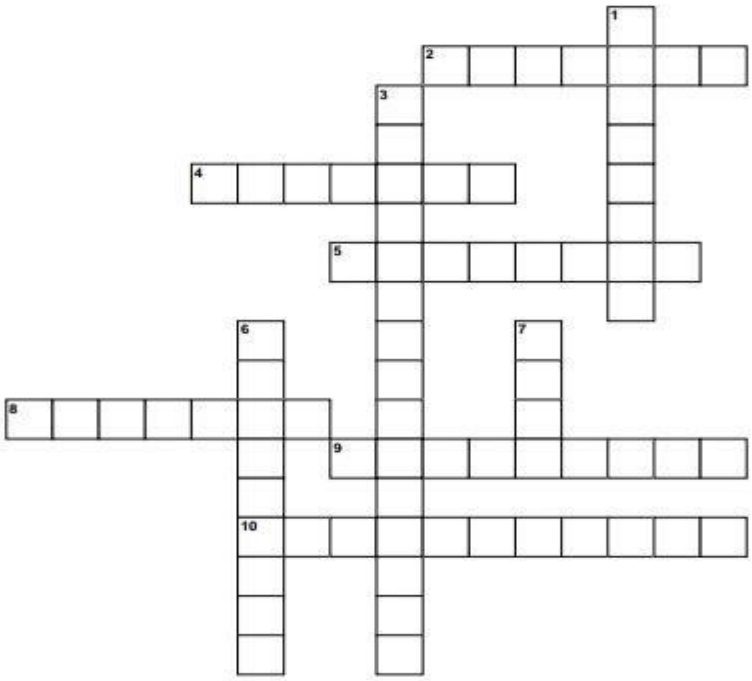
Rakshit Ameta, PhD



"The importance of becoming a 'green society' is now well established within and outside the scientific commu book is suited to advanced chemistry majors and practitioners; it has numerous detailed illustrations of organic transformations and emphasizes specific green processes and techniques, and ways specific reactions ecofriendly. The topics range from well-established industrial methods (e.g., sonochemistry and microwave-ass chemistry) but not yet commonly employed. Overall, this interesting read highlights the rapid progress of green This second edition of the well-received Green Chemistry: Fundamentals and Applications addresses a diverse topics in green chemistry, highlighting the potential and scope of green chemistry for clean and sustainable dev Covering the basics, the book discusses the benefits of environmentally friendly chemical practices and their us The book has been updated with new research, advances, and timely references.

CHEMYSTERY

-S.Subha lakshmi (II M. Sc. Chemistry)



Across

[2] A substance made up of only one type of atom

[4] A substance made as a result of a chemical reaction

[5] A substance made when two or more elements are chemically bonded together

[8] When some elements or compounds are mixed together but do not react together

[9] Chemicals that can catch fire easily

[10] The abbreviations used in balanced symbol equations to show if reactants and products are solid, liquid, gas or dissolved in water (5,6)

Down

[1] A substance we start with before a chemical reaction takes place

[3] the mixture made by adding a soluble substance to water

[6] Chemicals that can cause severe skin burns and eye damage

[7] The smallest part of an element that can still be recognized as that element

Please send your answers to chemtalk123@gmail.com. Cash award Rs.100 will be given to puzzle solver. The winner of the previous Chemystery puzzle is S.Subbu Shanmugapriyadharshini (II M.Sc.).The Correct answers are 1.Liming 2.Global 3.Corrosion 4.Sacrificial 5.Pollutants 6.Galvanization 7.Rusting 8.Acidification 9.Deposition 10.Scrubbing 11.Green house 12.Nitrogen