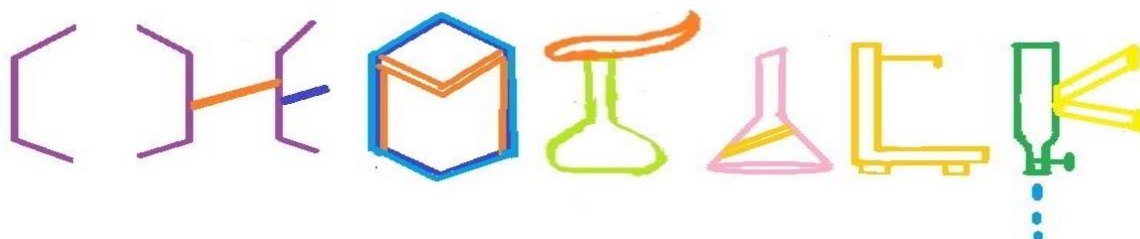


CHEMTALK 2020

A.P.C.Mahalaxmi College For Women

Thoothukudi.

Department of Chemistry



A Students' Magazine

Edition I, Volume VI

04/10/2020



This edition brings an article with interesting facts about Chemistry. Besides this, Chem Innovations and Advanced Organic Chemistry books are also discussed.

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

Editorial

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Publisher :**Department of Chemistry**,
A.P.C.Mahalaxmi College for Women, Thoothukudi.

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DEPARTMENTAL ACTIVITIES

FACULTY DEVELOPMENT PROGRAMME:

On behalf of chemistry association, a Faculty Development Programme on “**INNOVATION & INTELLECTUAL PROPERTY RIGHTS**” on 06.07.2020 was organized. The Resource Person Prof. Dr.T. Parimelazhagan, Department of Botany, Director IPR Cell, Bharathiar University, Coimbatore. 762 participants attended this programme through zoom platform.

WEBINAR:

On behalf of chemistry association, a Webinar “**CORONA CRISIS AND LAW IN INDIA**” on 08.05.2020 was organized at 11.00 a.m to 12.00 p.m through ZOOM meeting. The resource person of this Webinar was the eminent Lawyer S.Sornalatha, MA.,ML. Nearly 50 participants including faculty members and students were actively participated in the Webinar.

On behalf of chemistry association, a webinar on “**PHYTOREMEDIATION TECHNOLOGIES : AN OVERVIEW**” on 11.07.2020 was organized. The Resource Person Prof. Dr.P.Thangavel, Department of Environmental Science, Periyar University, Salem. 967 participants attended this programme through zoom platform.

On behalf of chemistry association, a webinar on “**GENDER BASED VIOLENCE**” on 13.07.2020 was organized. The Resource Person Mr.R.Samuvel Penjamin, Secretary Senior Civil Judge and Mrs.S.Sornalatha, Panel Lawyer, Thoothukudi. 854 participants attended this programme through zoom platform.

SPECIAL DAY PROGRAMME :

On behalf of chemistry association and in connection with INTERNATIONAL FAMILY DAY, an online quiz “**INTERNATIONAL FAMILY DAY**” on 14.05.2020 & 17.05.2020 was organized. 1600 participants from our college and other institutions have participated enthusiastically.

On behalf of chemistry association and in connection with WORLD FOOD SAFETY DAY an online quiz “**WORLD FOOD SAFETY DAY QUIZ-2020**” on 07.06.2020 was conducted. 886 participants from our college and other institutions of India have participated enthusiastically. E-certificate was provided to participants who score more than 40% mark in quiz.

Competition

On behalf of chemistry association, an online competition “COVID-19 DRAWING CONTEST” on 15.05.2020 was conducted. 50 participants from our college and other institutions have participated enthusiastically. Mr. K.Mari Ananthan, artist, judged the drawings and the list of prize winners are:

Cartoon Drawing

I Prize-C.E.Priyadharshini, SDNP Vaishnav College for women, Chromepet, Chennai

II Prize-B.Priyanka, III B. Com.(R), A. P. C. Mahalaxmi College for Women, Thoothukudi

III prize-G.Amirtha, I B. Com(I Batch), A. P. C. Mahalaxmi College for Women, Thoothukudi

Pencil Sketching

I Prize-C.Vijaya Sangeetha, III B. Sc. Physics A.P.C. Mahalaxmi College for Women, Thoothukudi

II Prize-P.Muthu Pathira, I B. Sc. Chemistry A.P. C. Mahalaxmi College for Women, Thoothukudi

III Prize-M.Brintha, III B.A. English, A. P. C. Mahalaxmi College for Women, Thoothukudi

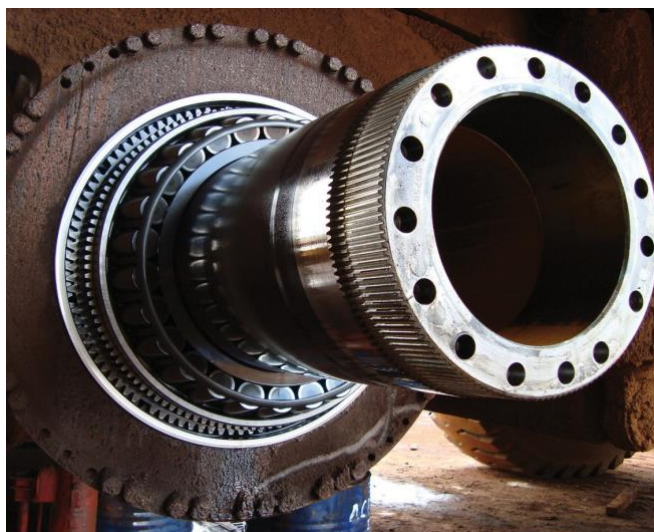
On behalf of chemistry association, an online quiz “CHEM QUIZ” on 15.06.2020 & 16.06.2020 was conducted.527 participants from our college and other institutions have participated enthusiastically.

On behalf of Chemistry association, an online E-poster competition on 14.06.2020 & 17.06.2020 was organized.100 responses (Logo design) & 170 responses (Best E-Poster & Best comments) were received. Participants from our college and other institutions have participated enthusiastically.

CHEM INNOVATION

-B.Sahila Babu(I M. Sc. Chemistry)

SOLID STATE BATTERIES:



Solid-state batteries were already envisioned in the 19th century by pioneer chemist Michael Faraday. However, their development never became a reality until quite recently. Now, important industries from a variety of sectors such as Bosch, Dyson, Toyota, and Intel are investing billions of dollars in this technology. John Goodenough, co-inventor of the now omnipresent lithium-ion batteries, recently unveiled a battery that uses glass as the electrolyte—proving that solid-state batteries are closer to market than ever. Compared to lithium-ion batteries that power our smartphones, tablets, and laptops, solid-state batteries are lighter, allow higher energy storage, and perform well at high temperatures. Moreover, unlike the electrolytes used in lithium-ion technology, solid-state electrolytes are not flammable, which could potentially avoid spontaneous fires and explosions, like the flames that darkened the launch of Samsung Galaxy Note 7 a few years back.

However, the new technology is still very expensive. As for many other applications, polymers may be the best and most economical solution. French transportation company Bolloré is already fabricating and commercializing polymer-based solid-state batteries, which they use mostly for network connected sensors.

NOBLE LAUREATE -2020

Syed Subahani (II B. Sc., Chemistry)

The Royal Swedish Academy of Sciences has awarded the Nobel Prize for Chemistry 2020 with 10 million Swedish Kronor. The prize money will be equally shared between Emmanuelle Charpentier and Jennifer A. Doudna. The Royal Swedish Academy of Sciences was found in 1739. It is an independent organisation with the aim to promote the sciences and strengthen their influence in society. They were awarded for CRIPSR.

EMMANUELLE CHARPENTIER:



Emmanuelle Charpentier was born on 11 December 1968 in Juvisy-sur-Orge, France. She studied biochemistry, microbiology and genetics at the Pierre and Marie Curie University. She is a graduate from Pasteur Institute and awarded a research doctorate. She is known for CRISPR. She is a French professor and researcher in microbiology, genetics and biochemistry. Since 2015, she is the director at the Max Planck Institute for Infection Biology in Berlin, Germany. She is also the founder of an independent research institute, the Max Planck Unit for the Science of Pathogens.

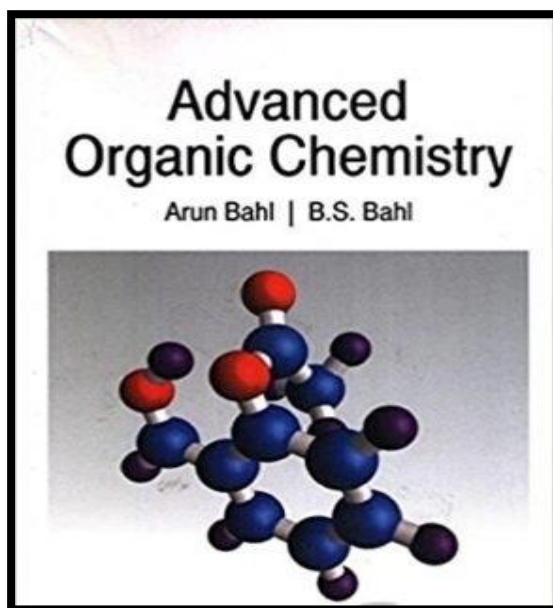
JENNIFER DOUDNA:



Jennifer Doudna was born on February 19, 1964, in Washington, D.C., U.S. She holds a BA Degree from Pomona College, a PhD from Harvard University and post-Doc from the University of Colorado Boulder. She is known for first X-ray based structure of catalytic RNA, RNA interference and CRISPR. She is an American biochemist and is a Li Ka Shing Chancellor Chair Professor at the University of California, Berkeley.

EAGLE'S VIEW

- P. Saranya Devi (I M. Sc. Chemistry)

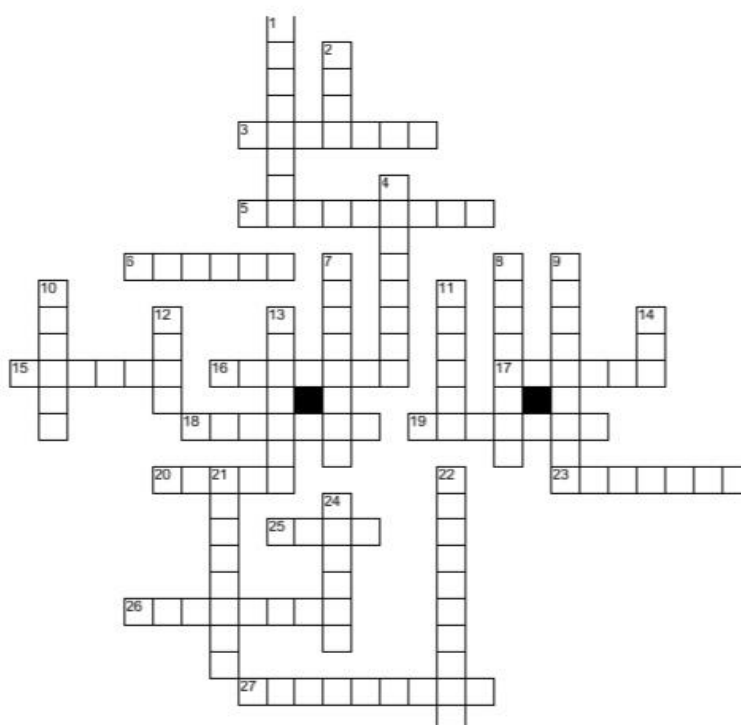


Advance organic chemistry

- The Advance organic chemistry has been written for B.sc (Hons) and M.sc students. It has been a national best-seller for more than 30 years. A lot of things have changed since them. We have also changed with energy edition so that 30 years.
- The language of this book is simple explanations clear, and presentations very systematic. Concept that usually confuse the students are explained in a step by step manner.
- Our commitment to quality is total. Table of contents introduction structure of organic molecules organic reaction mechanism, organic reaction mechanism isomerism and stereo Chemistry spectroscopy Alkanes cycloalkanes petroleum, petrochemicals and Alternative fuels Alkenes and Dienes Alkynes alkyl Halides organometallic compounds Alcohols polyhydric Alcohols, polyhydric alcohol and Epoxides, Thiols and Thioethers, Aldehyde methylene compounds, Lipids cyanide compounds Derivatives of carbonic Acids Nitroalkanes, Diazoalkanes and Azides much more.

CHEMYSTERY

- G. Citra Selvi(I M. Sc. Chemistry)



Across

3. My atomic Number is 92.

Down

1. I am the lightest of the Halogens.

5. My address is Group 2, Period 2.
6. I am the only element on the periodic table that is happy with just two electrons in my valence shell.
15. Of the four ferromagnetic elements on the periodic table, three are found side-by-side in the transition metals. I am the heaviest of these three.
16. I am the metal that is solid at room temperature but melts in your hand.
17. I make up about 20% of the air you breath.
18. I am the Period 4 element found in milk, bones and chalk.
19. I am the heaviest metalloid in Period 4.
20. I am the Noble Gas in Period 5.
23. I am the only metal that is liquid at room temperature.
25. I am the Transition Metal found in most breakfast cereals and in your blood.
26. I am the Transition Metal in Group 6, Period 6.
27. I am an alkaline earth metal that burns with a brilliant white flame.
2. I have only two energy levels and do not react.
4. I am the Transition Metal with 78 electrons.
7. I am the third most abundant element and the most abundant metal in the Earth's crust.
8. I am not a metal, but I hang out with some very reactive metals on the left side of the periodic table.
9. I am the Lanthanide used to make super strong magnets.
10. I am an alkali metal most often found hanging with my buddy chlorine.
11. I am a yellow nonmetal often associated with the smell of rotting eggs.
12. I am the Transition Metal with 79 electrons
13. I am one of the metalloids and I am used not only in microchips, but also in glass.
14. I am the heaviest metal in Period 5.
21. I make up almost 80% of the Earth's atmosphere.
22. I have five valence electrons and three energy levels.
24. I am the Halogen in Period 5.

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 G.Citra Selvi (I M. Sc.).The correct answers are 1.Blue, 2.Carbon, 3.Oxygen, 4.Hydrogen, 5.Helium, 6.Dryice, 7.Zinc, 8.Silver, 9.December 1949, 10.Potassium