



Dr. Vishwanath Karad
**MIT WORLD PEACE
UNIVERSITY | PUNE**
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

16th Edition July-August

AIChE MIT-WPU Newsletter

Contents

- ✧ Major Contributors
- ✧ SRC 2021
- ✧ Carbon Capture Economics
- ✧ Misunderstood Moeities
- ✧ Know About: – SACHe
- ✧ Molecule of The Month
- ✧ Industrial Updates
- ✧ Science Corner
- ✧ Must Reads
- ✧ Fun Crossword



Baeyer—a chemist who was more of an encyclopedist than a researcher.

—**Richard Willstätter**



Student Chapter Significant Figures

AIChE Student
Chapters in India



AIChE MIT-WPU Student
Chapter Members



Students who have
completed SACHe Level-1
Course



Major Contributors



Born on 26th August 1743 and, most commonly known as the '**Father of Modern Chemistry**', Antoine-Laurent de Lavoisier was an 18th-century chemist who had a large influence on the history of chemistry.

He postulated, the '**Law of Conservation of Mass**'. He did so using a very simple and elegant setup, wherein he carefully measured all reactants, placed them in a sealed jar, that she later checked upon. Lavoisier noticed that the mass remained the same even after the completion of the reaction, and so the law of conservation of mass came into existence.

He also coined the "**Lavoisier Theory**", according to which, the existing postulate that all flammable materials contain '**Phlogiston**', that was released due to combustion was contested. He proved that this so-called phlogiston never existed and helped to form the basis of modern chemistry.

Carbon Capture Economics

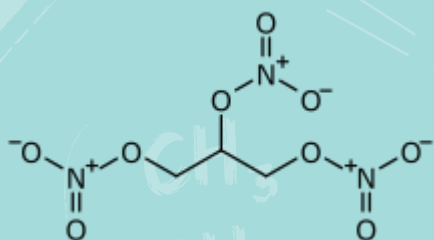
Due to the shortage of fossil fuels and carbon resources, the field of carbon capture economics has been on the rise.

It involves the **proper usage and storage of CO₂** produced in a plant to make new products entirely. It gives double benefits, not only does it help in effective cost cutting, but also provides a step towards green chemistry and sustainable development.

In 2016, **Tuticorin chemicals** had created the world's first fully commercial carbon capture, storage and utilization plant.

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Misunderstood Moieties



Nitroglycerine, is a compound belonging to the class of organic nitrates. These substances are often used for explosives and incendiaries, as they release a lot of Nitrogen gas.

However, a lesser known fact is that Nitroglycerine and its derivatives are **used in medicine**, specifically for the heart disease treatment. It acts as a **Vasodilator**, meaning it dilates the arteries and increases blood flow. It tackles Angina (Reduced blood flow to the heart), artery spasms, pulmonary oedema and hypertension.

SRC 2021



The Student Regional Conference (SRC) 2021 was conducted by the AIChE Student Chapter of Ahmedabad University and was named "**Alchemy**" for the same.

It was a grand three-day conference composed of fun-filled events, fiery competitions, handy workshops and a scintillating cultural night. It held all sorts of galvanic events for the students participation like Panel Discussion, Night of Networking, a Sister Chapter workshop and a CCPS workshop. Our chapter also took part in the Chem-E-Jeopardy, Chem-E-Car and Chem-E-Car poster presentation, along with K12 outreach STEM competition and Chem-E-Safe.

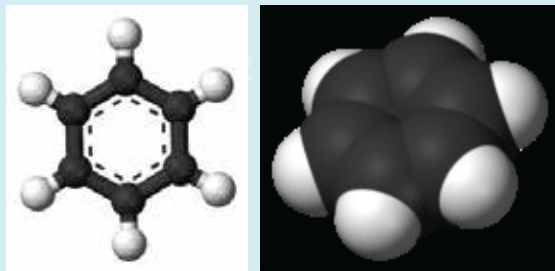
Highlights:

Team AIChE MIT-WPU won the Chem-E-Car competition. Our car covered the furthest distance in the competition which was 17.6 metres. They outshined the competition with their knowledge and hard work and is ready to **represent India** on a global level.

Molecule of the Month

MP: 5.5 °C

BP: 80.1 °C



Benzene is a **non-polar solvent** and naturally found in crude oil and petrochemicals. It is highly **flammable and colourless**. It is obtained by fractional distillation. It is found in almost every non-metallic thing we come across in our daily lives. Examples include paints, polymers, etc. It undergoes almost **every unit process** due to its characteristic Electrophilic and Nucleophilic substitution properties.

Know About- SACHe

Safety And Chemical Engineering Education or SACHe is a certificate program offered by the American Institute of Chemical Engineers (AIChE) and the Center for Chemical Process Safety (CCPS). It's a **three-level program** for the undergraduate students. The engaging and interactive learning process offered by SACHe helps the students to grasp the **fundamentals of process safety**.

These courses are completely free and students can avail it by registering on the official AIChE website. The certificates thus received, **enhances your resume**.

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Industrial Updates



- ✧ Kemira is going to build a alkenyl succinic anhydride sizing agent plant in China.
- ✧ Italy's NextChem and Johnson Matthey are teaming up to license a waste-to-methanol technology.
- ✧ Siemens launched the world's first recyclable wind-turbine blades.
- ✧ The ACC's Chemical Activity Barometer fell for the first time in months.



- ✧ Chevron and Bunge are teaming up to make renewable fuels feedstocks.
- ✧ India will be the leader in hydrocracking unit capacity additions by 2025.
- ✧ Linde is going to supply the gas for one of Pheonix's new semiconductor facilities.
- ✧ Phillips 66 donated \$1 million to the American Red Cross for hurrican relief.
- ✧ Exxon is putting ClearSign's new emission reducing project on hold.

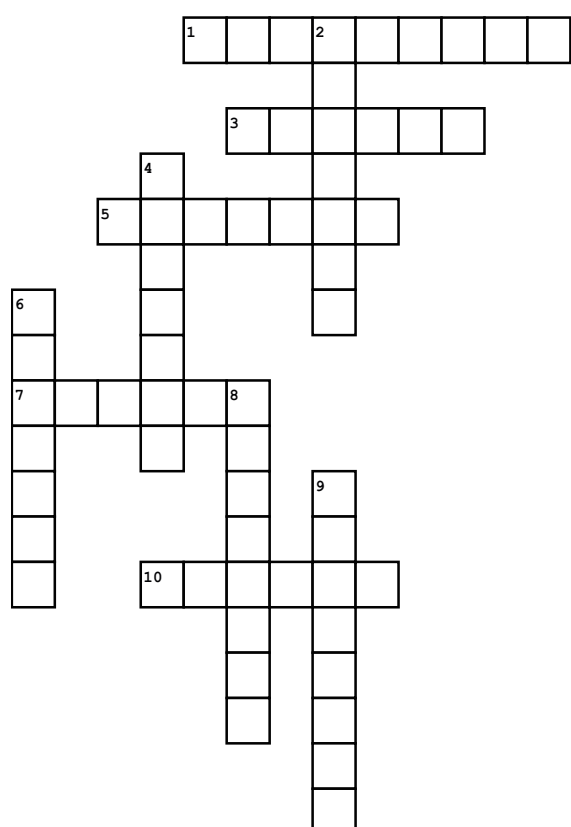
Science Corner



1. The average human body carries **10 times** more bacteria than human cell.
2. When Helium is cooled to almost absolute zero, it becomes a liquid and starts running up the glass container , **against gravity**.
3. When liquid sodium potassium alloy is exposed to water vapour in vacuum, electrons from alloy diffuse in water and **water layer turns golden**.

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Crossword



Across

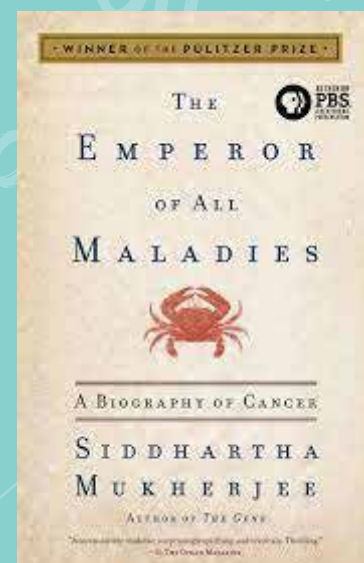
1. Fluid's resistance to flow.
3. _____ Number indicates the anti-knock properties of fuel.
5. Noble gas in Period 4 of periodic table.
7. The Heaviest Known metal.
10. Yellow non-metal, used in vulcanization of rubber

Down

2. In Electrolysis, reduction takes place at _____.
4. _____ Lattice refers to the 14 different types of unit cells of a crystal structure.
6. Purest form of Iron is.
8. Associated colloids are also known as.
9. The lightest Halogen.

The answers for the crossword can be mailed (picture/document) to crosswords.738@gmail.com. The winner will be announced in the next edition.

Must Reads



"The Emperor of All Maladies"

Add this book to your must reads! Written by Indian born-American Physicist and an oncologist, **Siddharth Mukherjee**, this book is a **new age biography on cancer**.

The author has perceived cancer as an entity within the sound pages of this book, and takes all readers on an interesting journey about this mysterious disease. Portrayed like a living personality, "The Emperor of All Maladies" exhibits cancer's other side, filled with emotions just like a movie.

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Useful Links

- www.aiche.org
- www.aiche.org/academy
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