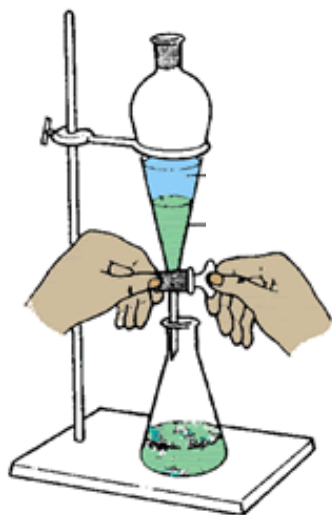
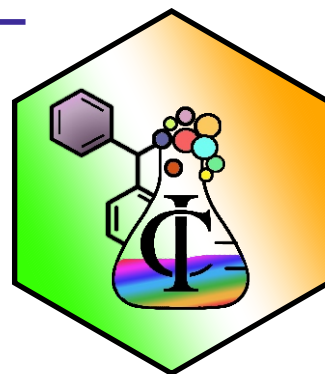


# THE FINAL WORD



The official e-newsletter  
of  
Industrial Chemistry (IC) Department,  
ISTAR, CVM University,  
Vallabh Vidyanagar, Anand, Gujarat

E-Mail : [headic@istar.edu.com](mailto:headic@istar.edu.com)  
Visit us on : <http://istar.edu.in/IC/index.htm>



Edited by: Department of Industrial Chemistry  
Prepared and Designed by: Ankit Tivari (20IC10)  
Shree Jaradi (21IC82)  
Zeel Patel (21IC99)

**NOVEMBER - 2021**

**M. Sc. Industrial Chemistry**

**Industrial Chemistry Department**

# GYANGANGA 2021

A 3 DAYS WORKSHOP ON FUNCTIONING OF CHEMICAL INDUSTRY

Industrial Chemistry department of ISTAR is aiming to bridge down the gaps between academia and industry. As a part of this, department is organizing the expert talks and workshops with the valuable help of highly experienced industry experts in their domain. In this context Department of Industrial Chemistry has organized three days workshop, 'GYANGANGA 2021' at IC department on 26,27 and 28 November 2021. Industry experts from different department i.e. Production, Quality Assurance & Quality Control, Research & Development, Entrepreneurship development and skill development will enlighten the students for their future prospects.

**Mr. Jayen Barochia:**

Technical Director, Shiv Hydro met. Founder, Digi blades Technologies LLP., Rajkot

**TOPIC:** Entrepreneurship development



**Mr. Sanjay Rahurkar :** Sr.Manager HR Lupin Ltd

**Mr. Urvesh Majmudar:** HR Manager Lupin Ltd Vadodara

**TOPIC:** Skill Development



**Industrial Chemistry Department**



**Mr. Samir Shah :** Sr. Manager Quality Assurance Lupin Ltd. Vadodara

**TOPIC:** Quality Assurance and Quality Control



**Dr. Deepak Mishra:** Sr. Manager, Performance material research Aditya Birla Chemicals, Pune

**TOPIC:** Research and Development



# INDUSTRIAL VISIT

**CBCC GLOBAL RESEARCH LLP - Ahmedabad.**

53 Students from the 3<sup>rd</sup> semester took part in industrial visit which was held on 22<sup>nd</sup> Nov. 2021.



**AETHER INDUSTRIES LIMITED- Surat.**

One more industrial visit held on 24<sup>th</sup> Nov. 2021 in which 53 students visited Aether Industries Limited Surat.



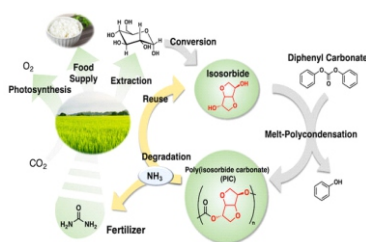
## Plants From Plastics:

Transforming Bio-Based Polymers Into Fertilizer.

### Summary

New environmentally friendly process, plastics produced using biomass (bioplastics) are chemically recycled back into fertilizers.

### Full story



Poly (isosorbide carbonate), or "PIC," a type of bio-based polycarbonate that has garnered much attention as an alternative to petroleum-based polycarbonates. PIC is produced using a non-toxic material derived from glucose called isosorbide (ISB) as a monomer. The interesting part is that the carbonate links that join the ISB units can be severed using ammonia ( $\text{NH}_3$ ) in a process known as 'ammonolysis'. The process produces urea, a nitrogen-rich molecule that is widely used as a fertilizer.

Although they managed to produce urea in this way, the degradation of PIC was not complete even after 24 hours, with many ISB derivatives still present. Therefore, the researchers tried increasing the temperature and found that complete degradation could be achieved in about six hours at  $90^\circ\text{C}$ ! Dr. Aoki highlights the benefits of this approach, this procedure is operationally simple and environmentally friendly from the viewpoint of chemical recycling."



Finally, as a proof-of-concept that all PIC degradation products can be directly used as a fertilizer, the team conducted plant growth experiments with *Arabidopsis thaliana*, a model organism. They found that plants treated with all PIC degradation products grew better than plants treated with just urea.

-Swapnil Patel (21IC91)



## Sweet Words from Family

It is my pleasure that I got a chance to express my words for industrial chemistry department. Studying in industrial chemistry department is like getting all fruits on the same tree. As I am working in Production department, it benefits me that I have knowledge of both chemistry and industrial chemistry. It is like you are playing a role of an all-rounder role on your team, A chemist and A chemical engineer.

When i am working in production department I have to think about the chemical reactions that are happening, the parameters that effects the Quality and Yield of the product and on the same role I also have to perform certain operations like Distillation, Filtration, Drying etc. As I have studied in Industrial chemistry department it helped me to settle in that environment.



Thanks and regards

**Himanshu Suthar (2017-19)**

**Production Officer- Lupin Ltd, Dabhasa.**