



IPI-DTU

ANNUAL REPORT

2024-25



**DELHI TECHNOLOGICAL
UNIVERSITY**

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ABOUT IPI

The Indian Plastics Institute (IPI) is a technical professional organization that was officially launched on May 6, 1985. Significantly, IPI took over from the **Plastic and Rubber Institute, London (PRI)**, establishing itself as a prominent body in the field.

Today, IPI has grown into a robust professional body, bringing together **industrialists, plastic technologists, academics, economists, and students**. Its influence extends across India with **14 chapters**, and it boasts international reach through two overseas association partnerships with Sri Lanka and Nepal.



ABOUT IPI-DTU

IPI DTU is a leading society that works to connect the industrial world with academia. We're all about promoting **sustainability and a circular economy** through scientific and industrial research. We do this by interacting with folks from Public Sector Undertakings (PSUs), various think tanks, industries, corporations, and research institutes. We also jump into **nationwide competitions, tackling industry-defined problems with a focus on sustainable solutions.**

We really push for strong community ties between industry and academia. This means we're often at business and industrial conventions, and we get **hands-on experience** through **industry visits**. Plus, we share solid research on hot topics like chemistry, material science, new renewable energies, and climate change.



OBJECTIVE

VISION

To be a pioneering student society in our commitment to sustainability and the circular economy. We envision empowering students with the expertise, abilities, and industry ties necessary to become the next generation of leaders and innovators driving sustainable development and industrial research.

MISSION

We aim to build a dynamic bridge between industry and academia, fostering collaboration that advances sustainability and the circular economy. We do this by engaging in scientific and industrial research, providing students with practical, hands-on experience, and igniting innovation through impactful interactions and competitive challenges.



INDIA ENERGY WEEK 2025

IPI-DTU Chapter participated in India Energy Week 2025, a premier platform dedicated to **advancing sustainable** and **clean energy initiatives**. The event served as a significant forum to showcase India's vision, technological innovations, and strategic roadmaps for the energy sector.

Representing **Delhi Technological University** (formerly DCE), our delegation had the distinct privilege of attending this prestigious event courtesy of **Indian Oil Corporation Ltd. (IOCL)**, who generously **sponsored our delegate passes**. This invaluable opportunity allowed us to actively engage with top industry leaders, policy-makers, and innovators shaping the future of clean energy.

KEY DISCUSSIONS:

- Policy frameworks and investment roadmaps for **clean energy**
- Industry-led initiatives for clean energy adoption and long-term **sustainability**
- The role of technological innovation, **infrastructure** development, and cross-sector collaboration
- Strategies to build a **self-sufficient, resilient, and secure energy ecosystem**

A highlight of the event was the experience of witnessing the next-generation **hydrogen-powered bus**, marking a milestone in India's clean mobility revolution. A key takeaway was the strong commitment of **major oil and gas firms to net-zero goals**, highlighting the need for collective action toward a greener tomorrow.



INTERNATIONAL SOLAR ALLIANCE 2024

The International Solar Alliance (ISA) is a collaborative platform focused on increasing solar energy deployment for energy access, security, and transition in its member countries. The ISA was jointly launched by India and France. The seventh session of the ISA Assembly was held in New Delhi from **3-6th November, 2024**.

KEY TAKEAWAYS

- We explored Ecozen, a hub of green innovations, delved into the **Cultural Corridor**.
- Engaged in insightful discussions on **solar solutions** and sustainability.

These encounters allowed us to connect with global leaders, gaining invaluable insights into **sustainable practices** that shape our future and provided us with opportunities to learn from pioneers in **clean energy**, deepen our understanding of renewable technologies, and discover the transformative potential of green solutions. This experience not only broadened our perspectives but also strengthened our commitment to a sustainable future.



INDIA MOBILE CONGRESS

2024

The **IPI-DTU delegation** attended the prestigious **Indian Mobile Congress 2024** at Pragati Maidan, New Delhi, to explore India's digital transformation. As the nation's largest digital tech exhibition, the event brought together industry leaders, policymakers, and innovators to showcase cutting-edge advances in 5G, AI, IoT, and smart infrastructure.

The event underscored **India's digital transformation leadership**, with special emphasis on:

- 1) **Digital Public Infrastructure** for growth that is inclusive
- 2) **6G Roadmap** leading India to a global leadership position
- 3) **Industry 4.0** applications to revolutionise manufacturing

IMC 2024 showcased:

- New business opportunities in **5 G-enabled services** and **AI-driven automation**
- **Cost savings** possibility through IoT adoption
- Increasing relevance of **ESG-compliant** digital solutions

The IPI-DTU delegation engaged with industry leaders from **Qualcomm, Jio, and DoT**, gaining firsthand insight into emerging technologies and real-world applications. The experience underscored the importance of tech adoption for maintaining a competitive edge in India's rapidly evolving digital economy.



FLAGSHIP SERIES

Polygenesis I, II and III

ABOUT POLYGENESIS

At the Indian Plastics Institute (IPI), we are committed to fostering meaningful collaboration between **academia** and **industry** through a variety of impactful events. One of our flagship initiatives is the **Polygenesis series**, where we invite distinguished professionals to share their insights and experiences.

Past speakers have included esteemed personalities such as **Mr. Dinesh Chopra**, Chairman of the ICC Industry-Academia Committee; **Mr. Ashish Rastogi**, CEO of ASSA Group; and **Dr. Anant Narayan Bhatt**, Senior Scientist at DRDO's Institute of Nuclear Medicine and Allied Sciences. In addition to guest lectures, we regularly organize industrial visits, technical seminars, hands-on **workshops**, and actively participate in major **expos, fairs, and hackathons**.

These events not only contribute to professional and personal growth but also emphasize **innovation**, **sustainability**, and **interdisciplinary learning** in the fields of chemical and material sciences. Our aim is to continually **bridge the gap between academic learning and industry expectations**, empowering the next generation of professionals.

POLYGENESIS-I

Mr. Dinesh Chopra, Chairman of Industry-Academia Committee of the Indian Chemical Council was the first speaker of flagship series -Polygenesis. He is Currently working as A Director at Viney Corporation Limited and also advises multinational / Indian companies for transformational business growth strategies.



He has previously worked with:



- Neochem Technologies
- D R Enterprises
- Honeywell International
- BASF India Ltd
- Engelhard Corporation,USA
- Julian Organosys Ltd
- ICI-Speciality Chemicals,UK

KEY TAKEAWAYS:

Mr. Chopra highlighted the crucial role of **young engineers** in shaping the future and shared insights that strengthened our commitment to **connect academic knowledge with real-world industry practices**. His expertise had a lasting impact, marking a significant milestone for Team IPI and reinforcing our commitment to bridging the gap between education and professional application.

POLYGENESIS-II

Mr. Ashish Rastogi, CEO of ASSA Group, and a proud alumnus of Delhi College of Engineering (DCE), was the second speaker of our flagship event-Polygenesis. Mr. Ashish Rastogi, CEO of ASSA Group, and a proud alumnus of Delhi College of Engineering (DCE), is a testament to the power of determination and innovation. Beginning his journey from the ground up, he has transformed ASSA Group into a prominent industry leader. His inspiring rise from a young engineer to a successful CEO motivates aspiring entrepreneurs across the nation.



KEY TAKEAWAYS:

Mr. Ashish Rastogi emphasized on the importance of **resilience** and **adaptability** in overcoming obstacles. He also shed some light on the importance of **innovation, strategic planning** and **market research** for business growth in the industry. He also highlighted the importance of cultivating strong professional networks and offered valuable insights on developing impactful leadership skills.



POLYGENESIS-III

IPI DTU recently organised a Polygenesis event featuring Dr. Anant Narayan Bhatt, Senior Scientist at DRDO's Institute of Nuclear Medicine and Allied Sciences and also the brain behind the anti-COVID drug 2-DG. Currently working as Researcher at Defence Research and Development Organisation (DRDO).

He played a pivotal role in DRDO's efforts during the COVID-19 pandemic, contributing to the development of vaccines and other critical medical supplies. He was among a few esteemed scientists who gave contribution in discovery of COVID-19 Vaccine.



KEY TAKEAWAYS:

Dr. Bhatt emphasized that fostering innovation is crucial for the development of our country. He also highlighted the pivotal role of **scientific research** and **technological advancements**, along with the need for strong collaboration among academia, industry, and government institutions. Together, these institutions form the foundation for driving progress and shaping a sustainable, forward-looking future for our nation.



ICGH '24

(International Conference on Green Hydrogen 2024)

The Government of India hosted the **International Conference on Green Hydrogen (ICGH-2024)** from 11–13 September 2024 at **Bharat Mandapam**, New Delhi, focusing on recent advances and emerging technologies in the **Green Hydrogen** value chain. For Team IPI, the experience was both insightful and rewarding.

The 3-day event featured **plenary talks, expert panels, and technical sessions** on developing a robust Green Hydrogen ecosystem aligned with global decarbonization goals. It also addressed **green financing, workforce upskilling, and startup initiatives**, while enabling valuable networking with global scientific and industrial experts.

KEY TAKEAWAYS:

- The conference was led by **Mr. Ajay K. Sood**, Scientific Advisor to the Government of India, and **Mr. Nishaanth Balashanmugham**, Director of GH2 India.
- Mr. Nishaanth highlighted the uses of green hydrogen and the climate impact of **fossil fuel combustion**, emphasizing the role of greenhouse gases in **global warming**.
- The exhibition featured cutting-edge technologies like **hydrogen production systems, fuel cells, electrolyzers, and infrastructure solutions**.
- Organizations such as Indian Oil Corporation, Reliance, ReNew, and Hydrovert showcased their green hydrogen projects.



GCPRS '24

(The Global Conclave on Plastics Recycling and Sustainability 2024)

The **Global Conclave on Plastics Recycling & Sustainability (GCPRS)** 2024 was held from July 4 to 7 at Bharat Mandapam, Pragati Maidan, New Delhi. Organized by **AIPMA and CPMA**, the event brings together industry leaders, recyclers, policymakers, and sustainability advocates to explore advancements in plastic recycling and circular economy practices. With over 350 exhibitors and nearly 50,000 expected visitors, it features an exhibition, international conference, and networking opportunities.



Interacted with organisations like:

- Reliance Industries Limited
- HMET for
- IPCA

KEY TAKEAWAYS:

GCPRS highlights cutting-edge recycling technologies, such as - **Chemical recycling** that **breaks plastics down** to their raw form, Bio-based and biodegradable plastics as sustainable alternatives and Smart sorting systems using **AI and robotics**.

GCPRS connects you with industries and institutions working in green technology, waste management, and circular economy.

GCPRS also discusses - **EPR** (Extended Producer Responsibility) regulations, **Circular business models** used by big brands and Global plastic waste trends and solutions

INDUSTRIAL VISIT

(Jubilant Ingrevia collaboration with IICHE-NRC)

Students of IPI-DTU had the opportunity to visit the **Jubilant Ingrevia** manufacturing plant in **Gajraula, Uttar Pradesh**, which is recognised as the world's largest integrated producer of **picoline** and **pyridine** derivatives. The visit offered students an enriching exposure to industrial-scale chemical processes and plant operations.

The Gajraula facility of Jubilant Ingrevia is a key site for speciality chemicals and ethanol-based derivatives. Students toured major process units like the **CSTR**, learning about mixing, **temperature control**, and **material compatibility**.

Students also had the opportunity to interact with R&D and operations personnel, who shared practical insights on process optimisation, energy efficiency, and sustainability initiatives implemented at the site.

This educational visit not only deepened students' technical understanding but also inspired them to explore how innovation and automation are transforming the chemical industry. Sincere thanks to **IICHE-NRC** and Jubilant Ingrevia for facilitating this valuable learning experience.



WHITE PAPERS

At IPI DTU, our commitment to fostering **sustainable innovation** and industry-academia synergy is embodied in our white paper initiative. These authoritative, in-depth documents are more than just reports—they are strategic tools crafted to explore **pressing issues**, present evidence-based analysis, and propose actionable solutions.

Highlighted White Papers:

1. Unlocking the Potential of Biodegradable Plastics: Poly-Butylene Succinate (PBS)

Author: Aaditya Vashisht

Published under: IPI-DTU Chapter

This white paper, developed under the **Intellectual Property & Innovation** (IPI) society at DTU, examines PBS, a biodegradable plastic alternative, analyzing its environmental impact, resource use, and microplastic concerns. It challenges the assumption that **PBS is entirely sustainable** and suggests greener production methods.

[LinkedIn](#)

2. Is There Life Beyond Earth? Unveiling the Science Behind the Search for Extraterrestrial Life!

Author: Aviral Chaturvedi

Published under: IPI-DTU Chapter

Produced as part of the IPI-DTU Chapter's research initiatives, this paper reviews **astrobiology, biosignatures, exoplanets, and SETI techniques** in the search for alien life. It discusses future space missions and the **Fermi Paradox**, making it essential reading for space science enthusiasts.

[LinkedIn](#)

White papers play a crucial role in advancing knowledge across various fields. The highlighted works, created under the **IPI-DTU Chapter**, demonstrate how student-led research contributes to meaningful discussions on **sustainability** and **space exploration**. These papers bridge academic research and real-world applications, fostering innovation and intellectual growth.

FUTURE GOALS

1. Launch IPI Media Unit & Content Team

We'll build a media unit across Instagram, LinkedIn, and YouTube to create science-driven reels, explainers, and long-form content for society branding.

2. Maintain Weekly Content & Showcase Achievements

Post at least twice weekly on tech, environment, and policy; highlight IPI events, DTU research culture, and member milestones to boost visibility.

3. Speaker Series & Innovation Cycles

Host monthly expert talks and run two annual innovation cycles supporting research, prototypes, and policy ideas with mentorship and DTU lab access.

4. Community Outreach & School Engagement

Collaborate with NGOs to deliver low-cost science kits and conduct outreach visits, sparking curiosity in under-resourced schools and documenting it for publications.

5. Internal Strategy & Execution Cell

Set up a Strategy Cell to manage projects via weekly syncs, team trackers, and review systems ensuring deadlines and coordination.

6. Blog Launch & Themed Communication

Launch a blog archiving all initiatives and adopt "Mood of the Month" theming for cohesive planning across digital content and offline events.

OUR TEAM



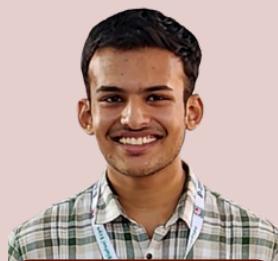
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Neil Bhatia

TEAM COORDINATOR

THANK YOU

We extend our heartfelt gratitude for considering our proposal. Your support and collaboration are invaluable to us.

Together, we can drive innovation, foster professional growth, and contribute to a sustainable future in the field of chemical and material sciences.



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