

Launch: Indo-German initiative, “Heidelberg-Hyderabad Hub in Advanced Chemical Education” (H³ACE) at IIT Hyderabad

Partners: Heidelberg University (Germany), IIT Hyderabad, TIFR Hyderabad

Highlights:

- *IIT Hyderabad and TIFR Hyderabad collaborates with Heidelberg University (Germany) to establish the Heidelberg-Hyderabad Hub in Advanced Chemical Education (H³ACE).*
- *The hub aims to foster Indo-German Academia-Academia and Academia-Industry partnerships in chemical research, innovation, and technology transfer.*
- *A seven-member delegation led by Heidelberg University’s two Vice Presidents will visiting Hyderabad from February 24-28, 2025.*
- *The launch at IIT Hyderabad will feature an Indo-German School on Computational Chemistry with participation from top institutions in Hyderabad and Heidelberg University, Germany.*
- *Key leaders emphasize the hub’s role in advancing interdisciplinary collaboration and global research excellence.*

Hyderabad, 24th February, 2025: IIT Hyderabad proudly announces the launch of the Indo-German initiative, the *Heidelberg-Hyderabad Hub in Advanced Chemical Education (H³ACE)*. The Hub is initiated by Heidelberg University, Germany in partnership with institutions of eminence, IIT Hyderabad and TIFR Hyderabad.

Heidelberg University is Germany’s oldest university and a global leader in interdisciplinary research and education. Building on its excellence strategy and existing partnerships with institutions in Hyderabad, the university is setting up H³ACE as a long-term Indo-German initiative in Hyderabad. This hub aims to strengthen bilateral and multilateral Academia-Academia and Academia-Industry partnerships, fostering chemical research, innovation, technology transfer, and student employability.

Chemical research and innovation are crucial for addressing global challenges, as they drive advancements in materials, pharmaceuticals, energy, and agriculture. Computational Chemistry, in particular, has become a key enabler in modern industry, accelerating innovation, reducing costs, and minimizing environmental impact by simulating molecular processes. Recognizing its transformative potential, the Heidelberg Hyderabad Hub for Advanced Chemical Education (H³ACE) is launching its first event focusing on Computational Chemistry. In pharmaceuticals, computational methods are revolutionizing drug discovery by predicting biological activity and toxicity profiles, significantly shortening development timelines. Similarly, in the energy sector, computational techniques aid in designing advanced materials for energy storage and fuel cells, aligning with Germany’s leadership in sustainable energy and India’s renewable expansion goals. Agriculture also benefits through optimized agrochemicals that enhance yield while minimizing environmental impact. Given the impact of chemical research, strong Indo-German collaborations are essential. Hyderabad and Heidelberg, with their complementary academic and industrial strengths, provide an ideal ecosystem

for joint research and innovation. A key initiative is the establishment of a long-term Indo-German exchange program at the master's and graduate levels, fostering education, training, and cross-cultural learning in advanced chemistry. Industry and governmental support will be vital in driving this collaboration, paving the way for sustainable scientific, technological, and economic partnerships between the two regions.

The inaugural event was initiated with welcome message delivered by Prof. G Narahari Sastry, Dean SRC, IIT Hyderabad and vote of thanks delivered by Dr Suboor Bakht, Director, Foreign Office South Asia, Heidelberg University

To mark the launch, a seven-member delegation led by Heidelberg University's two Vice Presidents, Prof. Andreas Dreuw and Prof. Katja Patzel-Mattern, visiting Hyderabad from February 24-28, 2025. The inauguration has been accompanied by an Indo-German School on Computational Chemistry, featuring the participation of five German professors and 17 German students, alongside 17 professors and 40 students from eminent institutions in Hyderabad, including IIT Hyderabad, TIFR Hyderabad, IICT, and the University of Hyderabad.

Statements from Key Leaders:

- **Shri. Jayesh Ranjan, IAS, Special Chief Secretary for Information Technology, Electronics & Communications (ITE&C) and Industries & Commerce, Government of Telangana shared an electronic message:** *In line with the long-standing Indo-German partnership in science & technology and research & innovation, the Government of Telangana supports the strategic Indo-German initiative, “Heidelberg-Hyderabad Hub in Advanced Chemical Education” between Heidelberg University from Germany and IIT Hyderabad and TIFR Hyderabad. The programme would foster collaborative research and enable students to gain hands on experience and training in modern, state-of-the-art advanced chemistry.*
- **Dr. Kathrin Misera-Lang, German Consul General, Chennai:** *“Germany and India are both frontrunners in the areas of chemistry and biotechnology. The new Heidelberg-Hyderabad Hub in Advanced Chemical Education will enable the next generation of Indian and German academics to conduct cutting-edge research together, for the benefit of both our societies. Congratulations on this initiative!”*
- **Dr Ramanuj Bannerjee, S&T Councillor Indian Embassy Berlin:**
The establishment of the Heidelberg-Hyderabad Hub in Advanced Chemical Education (H³ACE) will provide an innovative joint path to foster Indo-German bilateral collaboration. It is expected that the hub will serve as a nerve centre to develop knowledge network, encourage Academia-Industry partnerships, co-generate networking and values among stakeholders of both countries through chemical research, innovation, and technology transfer.
- **Prof. Dr. Andreas Dreuw, Vice President for Research and Digitalisation, Heidelberg University:**
“The planned collaboration between the great, lively Indian institutions at Hyderabad and

the established Heidelberg University offers a remarkable opportunity to leverage our complementary expertise and scientific traditions.”

• **Prof. Dr. Katja Patzel-Mattern, Vice President for Transfer & Innovation, Heidelberg University:**

“The envisioned Academia-Industry Partnerships offer a unique opportunity to build a vibrant Indo-German innovation ecosystem, bringing together scientific innovation and visionary entrepreneurship from Heidelberg and Hyderabad.”

• **Prof. B. S. Murty, Director, IIT Hyderabad:**

“This Indo-German initiative aligns with IIT Hyderabad’s commitment to fostering global collaborations that enhance research excellence and technological innovation. H3ACE will serve as a model for interdisciplinary cooperation, addressing pressing global challenges through advanced chemical education and research. This initiative will strengthen and accelerate the existing Academic and Research Collaborations with the Universities of Germany like DAAD program, Siegen University, Magdeburg university, etc”

• **Prof. Dr. Krishnamurthy, Centre Director, TIFR Hyderabad:** *“The Heidelberg-Hyderabad Hub in Advanced Chemical Education (H³ACE) programme creates a unique space for three institutions- Heidelberg University, TIFR Hyderabad and IIT Hyderabad- to combine their strengths, and work towards addressing pressing challenges in the field of chemistry. The programme's strong focus on education and skill-building would greatly contribute towards nurturing the next generation of scientists.”*

This five-day school aims to bring together experts from India and Germany to:

- Present cutting-edge computational tools and techniques for solving real-world challenges.
- Provide hands-on sessions to familiarize students with the theoretical and practical aspects of advanced calculations.
- Develop a collaborative research roadmap to accelerate AI-driven innovations in computational drug design, electrochemistry, QSPR, and related fields.
- Foster strategic partnerships to optimize joint investments and establish collaborative clusters for mutual benefit.

About Heidelberg University :

Heidelberg University, established in 1386, is Germany's oldest university and a leading research institution in the World. Heidelberg University was ranked 84th in the world by the QS World University Rankings 2025. The university offers over 160 fields of study, providing a broad spectrum of subjects representative of a comprehensive university. Heidelberg University is an internationally networked research university dedicated to research-oriented teaching. It believes it has a duty to help address the issues facing humanity by crossing the divide between disciplines. The university is committed to sustainability, actively contributing to the scientific investigation of climate change and the development of sustainable technologies. Its excellence is reflected in consistent top rankings and recognition in international competitions.

About TIFR Hyderabad:

The Tata Institute of Fundamental Research (TIFR), a National Centre of the Government of India under the umbrella of the Department of Atomic Energy, operates at the cutting edge of global science. The Institute was founded in 1945 with support from the Sir Dorabji Tata Trust under the vision of Dr. Homi Bhabha. At TIFR, basic research in physics, chemistry, biology, mathematics, computer science and science education are carried out. TIFR main campus is located in Mumbai, with centres at Pune, Bengaluru and Hyderabad.

To facilitate a greater role in world science and technology, this premier centre of scientific research has taken the first steps towards establishing a 200-acre campus in Hyderabad. At TIFR Hyderabad (TIFRH), more than 300 members work on research topics that are carefully chosen across the life sciences, chemistry, physics and materials sciences. We emphasize an interdisciplinary approach to science. This well-rounded, multi-pronged approach has distinct merits – around the world there is increasing cognizance of the fact that some of the most interesting research in solving human problems is done at the frontiers of disciplines using tools from various streams to comprehensively address a scientific question. The department-less structure at TIFRH allows scientists to truly understand, engage in and contribute to each other's research in ways that cannot be possible in the best of other research institutes in the country. This truly presents a unique opportunity in the context of Indian science.

For more details visit : <https://sites.google.com/view/hhhace/home>

For further inquiries, please contact: Dr. Suboor Bakht (bakht@hcsa.uni-heidelberg.de)

About IIT Hyderabad:

IITH, established in 2008, as one of the second Generation IITs, has reached a respectable position in both academics, research, technology development and startups in the short span of 16 years. In the recent Indian National Ranking (NIRF-2024), IITH is placed at 3rd in Innovation and 8th among Engineering institutes in India.

It has 325+ full-time faculty, 5,350+ students (PG+PhD students accounting for about 60%). The institute has a strong research focus with Rs. 1400+ Cr of R&D funding (Rs. 250 Cr funding in 2023-24), 11,500+ publications, 460+ Patents (210 patents in 2024), and about 260+ startups (that have generated 1100+ jobs and a revenue of Rs. 1500+ Cr). Follow us on [Instagram](#), [LinkedIn](#), [Twitter](#), [Facebook](#), and [YouTube](#) for the latest updates.

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