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PRESS-RELEASE

"IIT (ISM) Dhanbad Wins First Prize at Pan-India IIT FIPI Hackathon; Hon'ble Minister Shri Hardeep Singh Puri Felicitates Team at Yashobhoomi Convention Centre, Delhi"

A team of innovative minds from IIT (ISM) Dhanbad has achieved a significant milestone by securing the first prize at the prestigious Pan-India IIT Hackathon of Federation of Indian Petroleum Industry (FIPI) held as part of India Energy Week 2025.

The award was presented today by Hon'ble Minister of Petroleum and Natural Gas, Shri Hardeep Singh Puri, along with Secretary, Ministry of Petroleum and Natural Gas, Shri Pankaj Jain, during the closing ceremony at Yashobhoomi Convention Centre, Delhi.

The award-winning team, consisting of Sayantika Thandar (M.Tech, Chemical), Riya Jaisawal (M.Tech, Chemical), Mohammad Faheem (B.Tech, Chemical), and Md. Modassir Ashraf (B.Tech, Chemical), developed a patented process for the low-cost production of nitrogen-doped multilayer graphene nanopowder designed for CO₂ adsorption and conversion.

Their breakthrough research, conducted under the guidance of Prof. Ejaz Ahmad from the Department of Chemical Engineering, IIT (ISM) Dhanbad, as Faculty Mentor of the team introduces a sustainable and eco-friendly method for creating advanced graphene materials using bamboo powder. This innovative solution demonstrates a significant advancement in tackling environmental challenges, particularly carbon dioxide emissions.

The graphene nanopowder, featuring a unique porous, layered structure ideal for capturing CO₂, presents a low-cost, green technology innovation with immense potential for global energy and environmental applications.

The hackathon, held under two key themes—Carbon Capture, Utilization, and Storage (CCUS) and the Development of Cost-Effective Renewable Energy Sources, Storage Systems, and Integration—witnessed participation from leading IITs, including IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kharagpur, IIT Madras, and IIT Roorkee.

Speaking about the achievement, Prof. Ejaz Ahmad commented, "This recognition underscores the innovative spirit of IIT (ISM) Dhanbad students. Their invention offers a promising step forward in sustainable energy solutions, aligning with India's energy transition goals."

This accolade further solidifies IIT (ISM) Dhanbad's reputation for excellence in technological innovation. Notably, in 2024, another team, Energy Nexus, won the Switch Energy Alliance Competition, triumphing over participants from 31 countries in a rigorous three-round challenge.

The continued success of IIT (ISM) Dhanbad in global and national competitions highlights its commitment to research-driven innovation and sustainable solutions, reinforcing its role as a leader in the energy and environmental sectors.

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