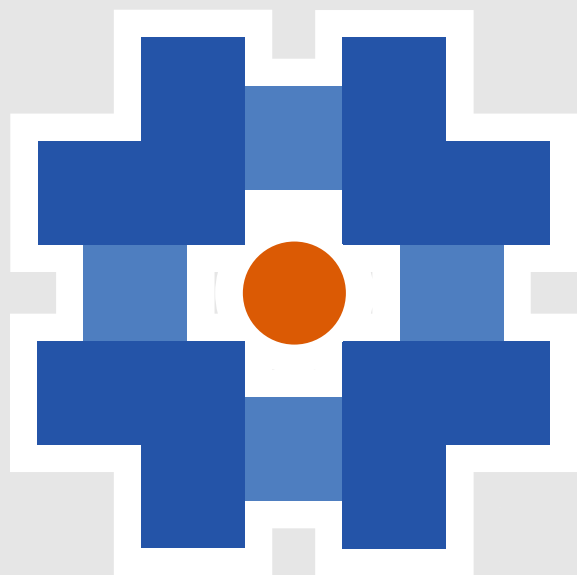




सत्यमेव जयते

Department of Science & Technology
Government of India



DST-IITB

Energy Storage Platform on Hydrogen

A Multi-Institutional R&D Centre on
Hydrogen Energy Systems



<http://www.es.e.iitb.ac.in/esphy>

Quotes



Message from the minister

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Dr. Harsh Vardhan

Hon'ble Minister, Dept. of Science and Technology, Govt. of India

Prof. Ashutosh Sharma

Hon'ble Secretary, Dept. of Science and Technology, Govt. of India



IIT Bombay with its Department of Energy Science and Engineering as the first such department in the country, is leading in the field of energy research.

Our research in the field of Hydrogen energy ranges from materials design, synthesis and characterization to systems simulation, design and development and demonstration for various stationary and vehicular applications. This Multi-Institutional R & D Centre will integrate the expertise and facilities available in the field of hydrogen energy across the nation and act towards addressing several energy related challenges.

Dr. Devang Khakhar

Director, IIT Bombay & Center Director



The ESPHy will be a unique R & D and National Resource Centre to enable Innovations and HRD in the field of Hydrogen Energy. With the strong expertise in both materials and

systems development, the Centre will act as a focal point towards development of next generation of materials and technologies, industrial and collaborative interactions, capacity building, knowledge dissemination and deployment of hydrogen based technologies. Large scale synthesis and development of materials and systems alongwith integration, demonstration and technology transfer for various stationary and vehicular applications will be the major objective.

Dr. Pratibha Sharma

Project Co-ordinator, IIT Bombay



DST-IITB
Energy Storage Platform
on Hydrogen

About Us

Vision

The Centre will be the lead focal point in the country in materials and systems research, prototype demonstration, technology development, incubation of innovative ideas, industrial interactions, collaborations, manpower development and information dissemination in the field of hydrogen energy.

Objectives

National level facility to enable innovations in the area of hydrogen energy

Collaborate with National and International level institutions and industries/companies to enable innovations and shared facilities

To develop the next generation of advanced materials and devices

Catering to address industrial problems where hydrogen can play a major role and provide industrial and societal solutions

Assist in developing standards, safety protocols associated with hydrogen systems, policy making and knowledge centre for the nation

Conduct training programs periodically for academia and industry, organise workshops and conferences, offer online courses, and publish newsletters

Capacity building and educating the next generation researchers, scientists, and engineers

Proposed Activities

Materials

- Metal hydrides
- Novel materials
- Process development
- Large scale synthesis

Devices & Systems

- Simulation, Design and fabrication
- Prototype development
- Performance evaluation
- Scale up

Utilisation

- System integration
- Stationary and vehicular applications
- Technology transfer
- IPR generation

Outreach

- Information dissemination
- Online and in-house programs
- Workshops and conference
- Mentoring and collaboration

Facilities

✓ Furnace and Melting units



✓ Rolling and Ball mills



✓ Measurement setup (Static & Dynamic PCI, ETC)



✓ Hydrogen storage and purification system



✓ Heating and cooling system



✓ Glove Box, Electrochemical Wet Bench, Hyphenated TGA-MS



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Academic & Industrial Partners



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