

# INDO-FRENCH WORKSHOP ON CLEAN AND SUSTAINABLE ENERGY TECHNOLOGIES (INFINITE)



21-24 February 2023

Venue: CSIR – National Physical Laboratory, Pusa, New Delhi

Funded by

Indo-French Centre for the Promotion of Advanced Research (IFCPAR/CEFIPRA)



सत्यमेव जयते

Department of Science & Technology  
Government of India



AMBASSADE  
DE FRANCE  
EN INDE

Liberté  
Égalité  
Fraternité



CEFIPRA

Organized by



CSIR

The Innovation Engine of India



CIMFR

CSIR-CIMFR, INDIA



CSIR-Central Institute of Mining and Fuel Research,  
Dhanbad, Jharkhand

National Centre for Scientific Research (CNRS)  
Campus Gérard Mégie, 16th arrondissement of Paris

## INDO-FRENCH WORKSHOP ON CLEAN AND SUSTAINABLE ENERGY TECHNOLOGIES

The workshop is broadly focused to bring together academic and industrial experts from France and India to develop synergistic collaborations especially in the area of clean and sustainable energy. The specific objectives are to create new contacts, identify specific partners to develop new knowledge base, joint IPs, and tangible outcomes in biomass energy, coal to methanol/ clean fuels, solar energy, hydrogen, energy storage, and carbon capture utilization and storage. The shared ambition is to pave the way for future technologies adapted to the needs and to undertake joint efforts required to reduce the cost of the proposed technologies. An additional important aim is the participation of a significant number of young scientists and students to be in close contact with outstanding scientists and industrials in this growing field.

Filling the gap between energy demand and energy supply is a great challenge for many countries. Though new technologies and new energy sources are introduced, rapid economic development in many countries like India has led to huge energy demands. France is one of the leading countries in the world that generates energy at a cheapest cost and exports lots of electrical energy. The country is planning for transition to low carbon energy sources. India being a tropical country endowed with abundant sunlight and wind energy resources. The country has matured solar and wind energy technologies. However, India has huge energy demand which is likely to increase by 2 to 3 times in the coming two decades. There are lots of opportunities to adopt emerging technologies. Most promising and relevant new technologies are underground coal gasification, tapping the solar energy, developing hydrogen as a source of energy, biomass, carbon capture, etc. Both France and India are in a juncture to adopt major technological transformation to meet the energy challenges. This can be achieved by adapting matured, efficient, and cleaner technologies. Thus the proposed Indo-French workshop on Clean and Sustainable Energy Technologies (INFINITE) would be an excellent platform for the eminent scientist and industrialist to interact and deliberate on the technological gaps of these two countries and to design complementary strategies to meet the goals.

### Major areas to be covered

- ❖ Renewable Energies
- ❖ Solar Energy
- ❖ Clean Fuels
- ❖ Energy Storage and Grid
- ❖ Hydrogen
- ❖ Carbon Capture Utilization and Storage



सीएसआईआर - केंद्रीय खनन एवं ईंधन अनुसंधान संस्थान  
CSIR – CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH

## Programme

February 21, 2023 (Evening)	Registration Inauguration Welcome Dinner
February 22, 2023	Registration Technical Sessions ❖ Solar Energy ❖ Hydrogen Energy Poster Interaction
February 23, 2023	Technical Sessions ❖ Carbon Capture Utilization and Storage ❖ Storage and Electric Grid ❖ Clean Fuels Working Group Meetings Concluding Session
February 24, 2023	Field visits

## Registration link

<https://forms.gle/7MCwmN32wPSrukGD6>

## Travel support

Limited funds are available for Indian students. Please contact organizers for details.

## Important dates

Submission of abstracts

December 31, 2022

Last date of confirmation

January 10, 2023

## Accommodation

Guest House accommodation on chargeable basis may be provided, subject to availability. Participants can also arrange for their own accommodation in New Delhi.



सीएसआईआर - राष्ट्रीय भौतिक प्रयोगशाला  
CSIR – NATIONAL PHYSICAL LABORATORY

## About the Institutes

### CEFIPRA

Indo-French Centre for the Promotion of Advanced Research (IFCPAR/CEFIPRA) is a model for international collaborative research in advanced areas of Science & Technology. The Centre was established in 1987 and is being supported by Department of Science & Technology, Government of India and the Ministry for Europe & Foreign Affairs, Government of France. CEFIPRA is actively involved in supporting Indo-French Science, Technology & Innovation (ST&I) system through various activities. Scientific Collaborative Research Programme focuses on academia-to-academia collaborations between Indian and French academic collaborators in various domains. Industry Academia Research & Development Programme emphasizes to develop the linkage between Industry and Academia from France and India. Dedicated mobility support programmes of CEFIPRA provide exposure to young researchers of the working, social and cultural environment of the partnering country. Targeted programmes of CEFIPRA provide platform for Indian and French National Funding Agencies to implement programmes for specific areas. Innovation programmes through PPP mode, are the programmes where industries join hands with CEFIPRA as a funding partner for supporting R & D in defined priority areas.

### CSIR-CIMFR

CSIR-Central Institute of Mining and Fuel Research, Dhanbad, a constituent laboratory under the aegis of Council of Scientific and Industrial Research (CSIR), New Delhi aims to provide R&D inputs for the entire coal-energy chain encompassing exploration, mining and utilization. The laboratory also strives to develop mineral based industries to reach the targeted production for country's energy security and growth with high standards of safety, economy and cleaner environment. In view of the National Missions recently declared by the Government of India, CIMFR has re-aligned its vision, missions and policies and also redefined targets for short and long terms. This would promote rapid sustainable national techno-economic growth with equal emphasis on self-sustenance. CSIR-CIMFR is located in the town of Dhanbad, known as coal capital of India. It is strategically situated in the Damodar basin of Eastern part of the country which is endowed with rich coal deposits and hosts several large mineral based industries.

### CNRS

The French National Centre for Scientific Research is among the world's leading research institutions. Its scientists explore the living world, matter, the Universe, and the functioning of human societies in order to meet the major challenges of today and tomorrow. Internationally recognised for the excellence of its scientific research, the CNRS is a reference in the world of research and development, as well as for the general public. The French state has entrusted the CNRS with the role of advancing knowledge for the benefit of society. The organisation seeks to accomplish this national mission while respecting ethical rules and showing commitment.

#### INDIA COORDINATOR

Dr. R. Ebhin Masto  
Sr. Principal Scientist, CSIR-CIMFR  
Contact: +91 9431542415  
Email id: [mastocfri@yahoo.com](mailto:mastocfri@yahoo.com),  
[ebhinmasto@cimfr.nic.in](mailto:ebhinmasto@cimfr.nic.in)

#### FRANCE COORDINATOR

Prof. Abdelilah Slaoui  
Director, Adjoint Scientifique INSIS, Paris  
Contact: +33 619820898, 619845037  
Email id: [Abdelilah.slaoui@cnrs.fr](mailto:Abdelilah.slaoui@cnrs.fr)

#### CONVENER

Dr. M. S. Santosh  
Sr. Scientist, CSIR-CIMFR  
Contact: +91 9480793007  
Email id: [santoshgulwadi@gmail.com](mailto:santoshgulwadi@gmail.com) ,  
[santoshms@cimfr.nic.in](mailto:santoshms@cimfr.nic.in)

#### ORGANIZING SECRETARY

Dr. Manish Kumar  
Sr. Principal Scientist, CSIR-CIMFR  
Contact: +91 9431319972  
Email id: [manishcfri@gmail.com](mailto:manishcfri@gmail.com),  
[manish@cimfr.nic.in](mailto:manish@cimfr.nic.in)

#### CHAIRMAN

Prof. Arvind Kumar Mishra  
Director, CSIR-CIMFR  
Contact: +91 326 2296023, 2296006,  
+91 9471191122  
Email id: [director@cimfr.nic.in](mailto:director@cimfr.nic.in)



Indo-French Centre for the Promotion of  
Advanced Research, 5B, Ground Floor,  
India Habitat Centre, Lodhi Road,  
New Delhi - 110 003

CSIR - Central Institute of Mining and  
Fuel Research, Dhanbad,  
Jharkhand 826001

CNRS Energy Unit  
Institute of Engineering and System  
Sciences (INSIS), 3, rue Michel-Ange-  
75794 Paris cedex 16, France