



Embassy of India, Berne

INDIA SCIENCE AND INNOVATION WEEKLY

23 October 2023

*Ask the right questions, and nature will open the door to her secrets
- Dr. C.V. Raman, The Nobel Prize in Physics 1930*

MeitY Inaugurated Robotic Process Automation (RPA) Lab

Ministry of Electronics & IT (MeitY) inaugurated Robotic Process Automation (RPA) Lab in NIELIT Gorakhpur. The state-of-art RPA lab has been built under the Future Skill PRIME Project funded by MeitY with an objective to upskill/reskill manpower in emerging technology of RPA. This is the First-of-its-kind lab in Uttar Pradesh under FutureSkill PRIME Project, which has been established to bridge the gap between Industry and Academia. MeitY also added that, the state-of-the-art RPA lab, is going to play a pivotal role in transforming India into a global technology powerhouse.

IIT-Madras Developed New Way to Sterilise Surgical Instruments

Researchers at the Indian Institute of Technology (IIT) Madras developed a new way to sterilise surgical instruments that dentists use at medical camps in remote areas with poor access to electricity and water. The team developed a sterilisation system using portable steam cylinders charged by solar energy-based stations. They are strategically placed in rural areas for power generation, steam generation and other uses. The team also designed special sterilisation chambers to use stored steam to sterilise the instruments. A portable steam storage canister, which has multi-layer insulation that can retain heat of steam generated via solar plants for longer durations could facilitate minor medical interventions.

IIT-Madras Created an Artificial Neural Network Model

To estimate Ocean Heat Content (OHC) in ice-covered Arctic regions, Scientists at the Indian Institute of Technology (IIT) Madras created an Artificial Neural Network (ANN) model. The heat content of the Arctic Ocean is crucial globally, affecting climate, weather, sea levels, and ecosystems. It serves as an indicator of broader climate change effects worldwide, connecting ecosystems, economies, and societies globally. Scientists linked satellite-based sea ice data to in-situ CTD (conductivity, temperature, depth) profiles to estimate OHC up to 700 metres deep. As this model accurately predicts OHC changes and tracks spatio-temporal variations, offering insights into historical trends and regional patterns. The study uses satellite data products like sea ice concentration, sea ice thickness, surface temperature, ambient air temperatures, and snow depth.

IIT-Madras Partnered with IndusDC

To boost start-ups in decarbonisation technology, the Indian Institute of Technology (IIT) Madras partnered with deep-tech venture studio, IndusDC, which is India's first deep-tech focused venture studio to nurture and launch start-ups working towards decarbonisation. This initiative is geared towards taking ideas straight from research labs to create change in the real world. By enabling a wave of hardware innovation, IIT Madras hopes to propel India to the global forefront of decarbonisation technology leadership. The first phase of commercialisation is currently underway with IndusDC that collaborated with The Energy Consortium, a Centre of Excellence set up at IIT Madras under the Institute of Eminence initiative. Also, three Intellectual Properties (IP) have already been on-boarded, namely next generation cooling, carbon neutral consumer wear and advanced grid scale storage. The vision of this initiative is to replicate this model across institutes in India and take it to a global level.

Special Update: MeitY Launched "Made-In-India" 2KW DC Portable Charger

To help Boost Electric Vehicle Adoption in the country, Ministry of Electronics & IT (MeitY) launched an indigenous Technology of 2KW DC Portable Charger developed by Centre of Excellence at Indian Institute of Technology (IIT) Madras Research Park. MeitY also added that the 'Design in India' would provide impetus to home-grown IP and would accelerate start-ups ecosystem in the country. MeitY further mentioned that IIT-Madras Research Park is now an internationally recognised brand. The launch marked a significant step in contributing towards the Ministry of Electronics and Information Technology's (MeitY) mission of accelerating Electric Vehicle adoption in India, reducing the current dependence on imported charging solutions.