



Embassy of India, Berne

# INDIA SCIENCE AND INNOVATION WEEKLY

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

## Indian Scientists discovered evidence for lithium enhancement during the helium-flashing phase of 2 million years

Astronomers at the Indian Institute of Astrophysics (IIA), Bengaluru, an autonomous institute of the Department of Science & Technology, GoI, found observational evidence for lithium enhancement during the helium-flashing phase of 2 million years, followed by a rapid decrease in lithium abundances of such stars. IIA Astronomers pinned down the mechanism behind the lithium production in low mass Red Clump Stars and found that the discrepancy between the abundance of lithium as inferred from observations of stars and the theoretically predicted amount has intrigued astronomers for a long time

## IIT Delhi developed Hydrogen fuelled Spark-Ignition Engine Generator

IIT Delhi, researchers at the Engines and Unconventional Fuels Laboratory developed a new technology and built "Hydrogen fuelled Spark-Ignition Engine Generator" in collaboration with Kirloskar Oil Engines Limited (KOEL), and the Indian Oil R&D Centre for the utilization of hydrogen in internal combustion engines for zero-emission with higher thermal efficiency. The project was mainly funded by the Ministry of New and Renewable Energy (MNRE), Government of India, and supplementary funded by KOEL and IOCL R&D Centre. IIT Delhi and KOEL have jointly filed a patent application for the technology. The technology would be useful to the industries (chloro-Alkali, Ammonia, etc.), those are producing hydrogen as tangible or main products, to generate electrical power to meet their inhouse-power requirement in the industry". The developed hydrogen engine could also be used in decentralized power generation for industries, buildings.

## IIT Guwahati developed smart materials for climate control of buildings

Researcher at Indian Institute of Technology (IIT), Guwahati developed smart window materials for automatic climate control of buildings. These materials could be helpful in designing smart climate control systems in buildings to save energy and reduce carbon emissions. Such smart window materials would help developing efficient automatic climate control systems in buildings, researchers said. The emergent smart windows, could dynamically adjust the amount of light and heat radiation entering a building in response to external stimuli, thus conserving the building's energy. The results of their study have recently been published in the journal, Solar Energy Materials and Solar Cells.

## DPIIT recognised 50 Thousand number of Start-ups

An Startup India is a flagship initiative of the Government of India, which intended to catalyse startup culture and build a strong and inclusive ecosystem for innovation and entrepreneurship in India. The Department for Promotion of Industry and Internal Trade (DPIIT) acts as the nodal Department for the Startup initiative and reported that as on 03 June 2021, 50,000 Startups across have been recognized as Startups by DPIIT, of which 19,896 have been recognized since April 1, 2020. Notably, it took only 180 days to add the last 10,000 Startups, as compared to 808 days for the first 10,000 at the beginning of the initiative. About 1.7 lakh jobs were created by recognized Startups in the 2020-2021 period alone.

## Special Update: STPI to launch 12 Centres of Excellence (CoE)

Software Technology Parks of India (STPI) is a premier S&T organization under Ministry of Electronics and Information Technology (MeitY) engaged in promoting IT/ITES Industry, innovation, R&D, start-ups, product/IP creation in the field of emerging technologies. On 06 June 2021, STPI announced to launch the following 12 Centres of Excellence (CoE) in India:

1. CoE - AIC STPINEXT - for HealthTech, Big Data and AI at Bengaluru
2. CoE for Efficiency Augmentation in Bengaluru,
3. CoE for IoT in Agriculture in Akola
4. CoE for Fintech in Gandhinagar
5. CoE for SmartAgri IoT in Patna
6. CoE for Emerging Tech in Bhubhaneshwar
7. CoE for Industry 4.0 Technology in Vishakapatnam
8. CoE for IT Applications in Healthcare and Agritech in Gangtok
9. CoE for GIS Applications including Drone Tech in Itanagar
10. CoE for T Applications in Graphic Design in Kohima
11. CoE for Gaming in Aizawl
12. CoE for Data Analytics in Agartala