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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*

IIT-Delhi Developed First National-Scale Mapping of Soil Erodibility

Researchers at Indian Institute of Technology (IIT) Delhi developed a first of its kind National-Scale Mapping of Soil Erodibility that highlights specific areas where the soil is most prone towards erosion. Researchers also added that this study fills a critical gap and brings us one step closer to estimating soil loss at a national level and developing a soil erosion model. As being able to assess its causes and impacts at a high-resolution would help to develop a national soil conservation plan that could help the vital agricultural sector. In addition to this, the researchers conducted a comprehensive statistical analysis of the soil erodibility map to visualize its distribution over the national territory in terms of the different soil types, textures, and percentage ranges of erodibility values.

IIT Kanpur - EIL Launched Hackathon EngSUI Startup Innovation Quest

Indian Institute of Technology Kanpur (IITK) and Engineers India Limited (EIL) launched 'Hackathon EngSUI Startup Innovation Quest' that offered impactful opportunities for aspiring entrepreneurs to bring innovative ideas to life. The Initiative encompassed key areas, including oil & gas hardware, hydrocarbon innovation, IT solutions, IIOT, lube packaging, renewable energy, green materials, and sustainability initiatives, empowering startups to drive growth and promote environmental sustainability.

Scientists Fabricated Optically Active Flexible Biodegradable Polymer-nanocomposite Films

Scientists at the physical sciences division of the Institute of Advanced Study in Science and Technology (IASST), Guwahati, an autonomous institute of North-East India under the Department of Science and Technology (DST), fabricated a biodegradable PVA-CuO nanocomposite film using a facile solution casting technique, where Cu salt used as a precursor for the in-situ CuO nanoparticles formation under different heat treatment. The fabricated optically active biodegradable nanocomposite film could be used as a stretchable optical devices like flexible display, flexible organic LED, etc. Scientists reported that polyvinyl alcohol (PVA) is one of the most widely studied synthetic biodegradable polymers having good film-forming and excellent mechanical properties

India Launched Global Biofuel Alliance

On the sidelines of G20 Summit, PM of India along with leaders of Singapore, Bangladesh, Italy, USA, Brazil, Argentina, Mauritius and UAE, launched the Global Biofuel Alliance on 09th Sept. 2023. The Global Biofuel Alliance (GBA) is an initiative by India as the G20 Chair and the Alliance intends to expedite the global uptake of biofuels through facilitating technology advancements, intensifying utilization of sustainable biofuels, shaping robust standard setting and certification through the participation of a wide spectrum of stakeholders. The alliance would also act as a central repository of knowledge and an expert hub and to serve as a catalytic platform, fostering global collaboration for the advancement and widespread adoption of biofuels.

Special Update: Pragyan Rover Found Sulphur on Moon

Indian Institute of Technology (IIT) Madras explained the Chandrayaan-3's Pragyan rover detected the presence of sulphur and oxygen on the Moon's surface using Laser Induced Breakdown Spectroscopy (LIBS). This discovery was part of a joint project between the Indian Space Research Organisation's (ISRO) Laboratory for Electro-Optics Systems (LEOS) and IIT Madras. IIT Madras, explained that the development of Laser Induced Breakdown Spectroscopy begun in 2009 with the challenge to adapt the technology to function under conditions similar to those on the Moon's surface. Researchers further added that the LIBS works by directing a laser beam at a target, creating a plasma and as the plasma cools down, the excited electrons settle, and the spectrometer reads the specific wavelengths associated with different elements, confirming their presence. The analysis performed by the Pragyan rover provides valuable information about the lunar surface.