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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

IISER-Bhopal Sequenced Genome of Medicinal Herb 'Giloy'

Indian Institute of Science Education and Research (IISER)-Bhopal researchers reported to have sequenced the genome of medicinal herb 'Giloy'. The medicinal herb is extensively used in allopathic pharmaceuticals and ayurvedic formulations to treat various health conditions. Researcher reported that in Ayurvedic science, Giloy served as a multipurpose medicinal plant, which has been used in various health conditions due to its immune-modulatory, anti-diabetic, anti-microbial, anti-viral, and anti-cancer properties, among others. The plant has come into the limelight recently due to its immunomodulatory and antiviral activity after the emergence of the COVID-19 pandemic.

IIT Delhi Researchers Developed Hydrogen fuelled 'Spark-Ignition Engine Generator' for zero-emissions

To tackle the emissions resulted from diesel fuelled internal combustion engine, which contributes to air pollution, researchers at Engines and Unconventional Fuels Laboratory-IIT Delhi, in collaboration with Kirloskar Oil Engines Limited (KOEL), and the Indian Oil R&D Centre developed a new technology and built "Hydrogen fuelled Spark-Ignition Engine Generator" for the utilization of hydrogen in internal combustion engines for zero-emission with higher thermal efficiency. IIT Delhi and KOEL, jointly filed a patent application for the technology.

Researchers at IIT Kanpur Developed Improved Water Management System to Treat Toxic Textile Effluents

To completely reuse industrial dye wastewater from textile industry, eliminating its toxicity and making it suitable for domestic and industrial usage, researchers at IIT Kanpur, Malaviya National Institute of Technology, Jaipur & MBM College Jodhpur, indigenously developed 'Advanced Oxidation Process (AOP)' technology. The AOP technology eliminates the need for the conventional primary, secondary, and tertiary processes resulting in maximum colour removal & meets the inland water discharge standards. The technology has resulted in the recuperation of 50% of the treatment cost incurred from conventional processes for water treatment in the water-scarce regions.

Researcher at IIT Hyderabad Developed Noise Control Sheet Absorber

IIT Hyderabad researcher indigenously developed a Noise Control Sheet Absorber (NCSA) by fabricating paper honeycomb and stronger polymer honeycomb structure as sound-absorbing panels that dissipate acoustic energy to low-frequency ranges. The technology, which is at the 6 stage of Technology Readiness Level can be used in building acoustics and also as environmental noise control solution. The technology is supported by the Advanced Manufacturing Technologies programme of the Department of Science & Technology (DST), Govt. of India.

Special Update: CSIO-CSIR Indigenously Developed "Precision Iodine Value Analyzer (PIVA)"

Researchers at Central Scientific Instruments Organisation (CSIO) of Council of Scientific and Industrial Research (CSIR), indigenously developed an instrument "Precision Iodine Value Analyzer (PIVA)" for the measurement of the degree of unsaturation (Iodine Value) in vegetable oils. PIVA provides a rapid analysis technique, which takes just three minutes for analysis of Iodine Value. CSIO also reported that technology has applications in Oil extraction units, quality control and assurance labs, food regulatory authorities, soaps and cosmetics, bakeries, meat industry, paint industry, biodiesel analysis, and charcoal industry & useful in determining adulteration in edible oils and fats. Food Safety and Standards Authority of India (FSSAI) gave recognition to the indigenous food testing equipment technology during World Food Safety Day.