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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

Researchers at IASST Developed Ultra-thin Hetero protein Films

Institute of Advanced Study in Science and Technology (IASST), Guwahati, an autonomous institute under the Department of Science and Technology successfully developed ultrathin monolayer protein films consisting of two globular proteins: bovine serum albumin (BSA) and lysozyme (Lys). The ultra-thin heteroprotein films provides with excellent thermal, mechanical and pH stability which could pave the way for expanding applications of thin films in biomedical and food packaging industries. Researchers also noted that the films are much thinner as compared to the other protein or plastic films. They are soft, thin and have the advantage of being more flexible.

Earthquake Observatory Inaugurated in Udhampur

Ministry of Science & Technology, Govt. of India, inaugurated a seismological observatory at Udhampur in Jammu and Kashmir. The Earthquake observatory was inaugurated under the umbrella of National Centre for Seismology (NCS) in the Ministry of Earth Sciences (MoES), which has initiated several new measures to upgrade and strengthen the infrastructural facilities and provide better scientific inputs required for improving disaster mitigation and preparedness measures. MoES has so far installed 152 permanent observatories throughout India with state-ofthe-art VSAT communication facilities. The new seismological observatory would help further strengthen the region's earthquake monitoring.

IISc & KIER Developed Special Footwear for Patients with Diabetes

Researchers from the Department of Mechanical Engineering at the Bengaluru-base, Indian Institute of Science (IISc), and Karnataka Institute of Endocrinology and Research (KIER), developed a special set of footwear for use by persons with diabetes. Foot injuries or wounds in persons with diabetes heal slower than in healthy individuals, which increases the chance of infection, and may lead to complications that even require amputation in extreme cases. The new footwear developed by the researchers, which is 3D printed and can be customised to an individual's foot dimensions and walking style, has a snapping mechanism that keeps the feet well-balanced, enabling faster healing of the injured region and preventing injuries from arising in other areas of the feet. The footwear is expected to be especially beneficial for diabetic peripheral neuropathy, where the patients suffer from a loss of sensation because of nerve damage caused by diabetes.

Indian Researchers Developed a Novel Experimental Framework in Fluid Dynamics

Researchers from Raman Research Institute, an autonomous institute of the Department of Science and Technology developed a novel experimental framework in fluid dynamics to describe deformation in disordered soft solids formed by mixing solid grains at significant proportions in a simple liquid which can help in developing early warning systems to minimize damage due to catastrophic events like landslides/earthquakes. Researchers have established a quantitative correlation between the flow behaviour and the inter-particle interactions and validated it over a wide parameter range.

Special Update: Development of New Greenfield Airport Dholera

Cabinet Committee on Economic Affairs, chaired by PM of Inida has approved the proposal for developmentof Phase I of New Greenfield Airport at Dholera, Gujarat at an estimated cost of Rs. 1305 crore. The project is being implemented by Dholera International Airport Company Limited (DIACL), which is a Joint Venture Company comprising Airports Authority of India (AAI), Government of Gujarat (GoG) and National Industrial Corridor Development and Implementation Trust (NICDIT) holding equity in the ratio of 51:33:16. The New Greenfield Airport at Dholera is planned for operationalization from the year 2025-26 and initial passenger traffic is estimated to be 3 lakh passengers per annum, expected to grow to 23 lakh over a period of 20 years.