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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 and AIIMS scientists devised Biopolymer scaffold to treat eye disease

Team of researchers from Indian Institute of Technology (IIT-Delhi) and All India Institute of Medical Science (AIIMS) developed a biopolymer-based scaffold, Polycaprolactone (PCL), as a substitute to Human Amniotic Membrane (HAM) for patients with limbal deficiency. The nano-engineered PCL holds promise to be used as an artificial substrate for ocular surface healing as opposed to HAM, which requires cryopreservation (freezing at a very low temperature) and is therefore not available elsewhere. According to researchers, the safety and efficacy tests of the plasma-treated PCL (pPCL) scaffolds had shown effective and better healing than HAM.

IIT Hyderabad researchers publishes first data from InPTA

Researchers from the Indian Institute of Technology (IIT-Hyderabad) published a paper based on the first official data from the India Pulsar Timing Array (InPTA), where they observed a set of pulsars using the upgraded Giant Metrewave Radio Telescope (uGMRT), near Pune. IIT-Hyderabad researchers used the data obtained from the uGMRT to observe pulsars simultaneously at two different frequencies in order to account for the variation of space between earth and pulsars caused by electrons and protons inhabiting the space. 'InPTA' has the most accurate measurement of the 'Dispersion measure' of all currently operating PTAs in the world. This observation along with data collected from other PTAs would let researchers uncover the origins of super massive blackholes.

IISER Bhopal researchers revealed genetic make-up of Indian cows

Researchers at the Indian Institute of Science Education and Research (IISER), Bhopal successfully revealed the genetic makeup of four indigenous breed of India cow – Kasargod Dwarf, Kasargod Kapila, Vechur and Ongole. Researchers said that with the help of this study, the genome structure could be used to improve the breeding and management of cows, thereby increasing the productivity and sustainability of the India cattle industry. Researchers at IISER, Bhopal used high-throughput sequencing technique to read and decipher the genomes of the indigenous cow breeds, which in turn could aid in fighting diseases and improve their breeds.

IIT Madras to develop lab grown Diamonds

The Indian Centre for Lab Grown Diamonds (InCent-LGD) at Indian Institute of Technology (IIT-Madras) has been identified by the Department of Commerce (DoC), Government of India (GoI), for the project based on nearly two decades of work experience in diamond research. As diamonds have thermal and electrical properties making it superior to contemporary technologies like silicon, silicon carbide and gallium nitride, they would be used to produce diamond wafers suitable for electronic applications. InCent-LGD has developed many technologies for industry, space and defence sectors. These environment-friendly diamonds have optically and chemically the same properties as natural diamonds. Lab grown Diamond (LGD) is a technology and innovation-driven emerging sector, which would help to create high employment potential within India and encourage indigenous production of LGD seeds and machines. The research grants would be provided to departments and research groups of IIT-Madras undertaking research in this field.

Special Update: IIT-Madras organized seminar on IT Education technology

Indian Institute of Technology (IIT-Madras) organized the first G20 Conference on Digital Technologies in Education from 31.01.2023 to 02.03.2023. It was conducted with the objective to identify areas/themes to promote possible research and academic collaboration among educational institutions in G20 member countries. The seminar included participations from each G20 member country, guest countries, academic institutions and international organizations such as United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), Organization for Economic Co-operation and Development (OECD) and World Bank. The attendees engaged in initiative for promoting the use of digital technologies for ensuring quality learning opportunities for all and improving learning outcomes.