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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

IITians develop new method for transportation of vital droplet

IIT Guwahati researchers have developed an advanced technique for rapid evaporation of droplets, which will have applications in inkjet printing, Deoxyribonucleic acid (DNA) patterning and surface patterning. This research will provide a cost-effective device for the efficient mixing of fluid samples as well as for controlling evaporation of small fluid volume, which works by tuning the strength of applied magnetic field as well as the frequency of the droplet to have precise control over its lifetime.

IITians explain survival of coronavirus on various medium

Researchers from the Indian Institute of Technology (IIT) Bombay, through a study, published in the journal Physics of Fluids, have shown that novel coronavirus may survive for far lesser time on porous surfaces such as paper and clothes, i.e. three hours and two days respectively, than on impermeable surfaces like plastic and stainless steel, i.e. four days and seven days respectively. In order to reduce the risk of spread of disease, the study suggested that impermeable material, such as glass, stainless steel, or laminated wood, be covered with porous material in offices, hospitals and even public spaces like restaurants or public waiting halls.

HCL and IIT Kanpur to develop collaboration in cybersecurity

Indian tech giant, HCL Technologies has entered into a partnership with the country's university Indian Institute of Technology (IIT) Kanpur to work with C3iHub, to develop security framework. The teams will work together to discover and manage cyber threats, vulnerabilities, and risks for critical infrastructure.

IIT-Roorkee commences research on drones

Indian Institute of Technology Roorkee (IIT-R) inaugurated a state-of-art centre for drone research on the campus and this initiative secured a seed funding of INR 1.4 crore. The centre is envisaged to evolve as "a unique facility at the national level wherein state-of-the-art and frontier research would be conducted on several aspects of drone technology, including drone development, drone applications and anti-drone technology". According to experts, India would become a drone hub by 2030 and drones and anti-drones would define core defense strategies, healthcare and scoial impact domains. The growth of this segment aligns with the significance of indigenisation in the design process of drones and the need for prudent business models to make it commercially viable.

IITians shed light on yoga's effect on adults during COVID-19 lockdown

A study on Yoga's effects by IIT Delhi researchers, which was carried out on 668 adults, has shown that Yoga practitioners had lower stress, anxiety and depression, higher wellbeing and a higher peace of mind during 4-10 weeks of lockdown due to COVID-19 outbreak in 2020 as compared to the non-practitioners. The study was carried out on 668 adults, who were grouped as; yoga practitioners, other spiritual practitioners, and non-practitioners based on their responses to daily practices that they follow. Yoga practitioners were further examined based on the duration of practice as; long-term, mid-term and beginners. The long-term practitioners reported higher personal control and lower illness concern in contracting COVID-19 than the mid-term or beginner group. The long-term and mid-term practitioners also reported perceiving lower emotional impact of COVID-19 and lower risk in contracting COVID-19 than the beginners. The study has mapped the effect of yoga on the cognitive and emotional problems of COVID-19, besides showing beneficial effects of yoga on general wellbeing during adversity.

Special Update: Variable Energy Cyclotron Centre (VECC) Kolkata

Importance of Cyclotron for research in nuclear physics was conceived by Dr. Homi J. Bhabha in 1965 and the K130 machine similar to LBL K130 machine was decided upon. The activity at Kolkata started in 1969 by Bhabha Atomic Research Centre (BARC). The machine was commissioned in 1977 and first beam of alpha particle came out on 16th June, 1977. At present VECC has 3 Cyclotrons – K130 Cyclotron operating since 1977, K500 Superconducting Cyclotron, which accelerated internal beam in 2009 but diagnosed to have 1st harmonic magnetic field error and a 30 Mega (Million) Electron-Volts Hydrogen (MeV H-) medical cyclotron which is at the installation stage. The mandates of the Centre were to carry out research in experimental nuclear physics, radiation damage studies and isotope production for research and nuclear medicine. The centre became a national facility with full-fledged design and development facilities for mechanical engineering, power electronics, Radio-Frequency (RF) engineering and computation. The Centre is equipped with the state-of-art High Performance Computing facility and extensive network infrastructure. VECC is also a Constituent Institute of Homi Bhabha National Institute (HBNI).