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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

Supercomputer PARAM ANANTA Commissioned at IIT, Gandhinagar

Under the National Supercomputing Mission (NSM), a joint initiative of Ministry of Electronics and Information Technology (MeitY) and Department of Science and Technology (DST), a State-of the art Supercomputer PARAM ANANTA, was commissioned at IIT, Gandhinagar. PARAM ANANTA supercomputing facility is established under Phase 2 of the National Supercomputing Mission (NSM), where in majority of the components used to build this system have been manufactured and assembled within the country, along with an indigenous software stack developed by C-DAC, in line with the Make in India initiative. PARAM ANANTA system is based on Direct Contact Liquid Cooling technology to obtain a high power usage effectiveness and thereby reducing the operational cost.

IIT-Madras Developed Municipal Solid Waste Combustor

Indian Institute of Technology (IIT) Madras researchers at National Centre for Combustion Research & Development (NCCRD), developed Municipal Solid Waste (MSW) combustor which was commissioned at the Bharat Heavy Electricals Limited (BHEL) campus. The MSW combustor could process up to one tonne of unsegregated municipal solid waste (MSW) per day and generates steam as the main output along with clean gaseous emissions and ash as a by-product. This initiative was part of the Ucchatar Avishkaar Yojana.

Scientists Developed Smart Material that Responds to Light Stimulus

Researchers at the Centre for Nano and Soft MatterSciences (CeNS), Bengaluru, an autonomous institute of the Department of Science and Technology (DST), and the Department of Mechanical Engineering, Indian Institute of Technology (IIT) Madras, developed a smart material which responds to light stimulus easily by converting light into thermal energy. Scientists fabricated spatially splay-deformed (spread out) LCN films, by crosslinking a mixture of mono-functional and bi-functional liquid crystal mesogens (a chemical compound). A further extension of the work demonstrated that the films also perform exceptionally well under solar stimulation, suggesting that they could be employed to harness solar energy for applications in soft robotics and micro-electromechanical systems (MEMS) devices.

IIT Madras Researchers Developed Next-Generation Battery Technology

Researchers at Indian Institute of Technology (IIT) Madras, as an alternative to Lithium-ion batteries which are used in Electric Vehicles, developed next generation battery technology based on mechanically-rechargeable zinc-air batteries. Further, researchers have filed for patents for this new battery technology, and are also collaborating with major industries to develop these zinc-air batteries as they are economical compared with existing lithium-ion batteries and have a longer shelf life. Zinc-air batteries could be used in two-wheeler and three-wheeler EVs. Highlighting the key focus, researchers informed that they are developing a futuristic model for zinc-air batteries for Electric Vehicles (EVs).

Special Update: Inauguration of North India's First Biotech Park at Ghatti, Kathua district, J&K

Ministry of Science & Technology inaugurated North India's First Industrial Biotech Park at Ghatti, Kathua district, J&K. The Biotech Park would act as hub for incubation of new ideas and would support the Agri-entrepreneurs, Startups, Progressive farmers, scientists & scholars not only from J&K, but from neighbouring states of Punjab, Haryana and Himachal Pradesh. Further, Ministry of Science & Technology added that the Industrial Biotech Park has a potential to produce 25 startups in a year which would be among its great contributions to this region. The Biotech Park would carry out research on biodiversity, medicinal and aromatic plants of Jammu and Kashmir and Ladakh, and it would also promote green category businesses.