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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*

STPI Initiated Plans to Set-up Center for Entrepreneurship in Andhra Pradesh to Promote industry 4.0 Technologies

Software Technology Park of India (STPI), an organisation under Ministry of Electronics and Information Technology, Govt. of India, to promote entrepreneurship and industry 4.0 technologies in Andhra Pradesh initiated a plan to set up Center for Entrepreneurship. STPI also conveyed that accelerating growth in manufacturing sector is vital to create a demand for service sector and the self-reliance in technology adoption to industry is promoted through the initiatives of Make in India and Made in India.

Energy and Resources Institute, New Delhi, Developed a Technology that Help to Achieve Zero Liquid Discharge (ZLD)

The Energy and Resources Institute, New Delhi, developed a technology 'Advanced Oxidation Technology or TADOX' which 'can reduce less dependence and load on biological and tertiary treatment systems and help achieve Zero Liquid Discharge (ZLD). TADOX also helps in bringing down capital expenditure on ZLD by 25-30% and operating expense by 30-40% for industrial wastewater treatment. The technology supported by the Water Technology Initiative (WTI) of Department of Science and Technology, Govt. of India involves UV Photocatalysis as an Advanced Oxidation Process (AOP) at the secondary treatment stage leading to oxidative degradation and mineralization of targeted pollutants. TADOX could be integrated and retrofittable in existing treatment systems making it a viable option as a novel Decentralized Wastewater Treatment Technology (DWTT) applicable in upcoming & existing infrastructural projects, townships, commercial complexes, green buildings etc.

IIT Roorkee Expanded Polystyrene (EPS) could Resist Earthquake in Multi-Storeys Buildings

Researchers at IIT Roorkee found that Expanded Polystyrene (EPS) or thermocol could be the material of the future for construction of earthquake-resistant buildings, with thermal insulation that could also save energy required to develop construction materials. Researchers also conveyed that Expanded Polystyrene (EPS) is used as a composite material in core of reinforced concrete sandwich, that could resist earthquake forces on up to four-storey buildings. Under the Fund for Improvement of S&T Infrastructure (FIST) programme, Department of Science & Technology (DST), Govt. of India, the National Seismic Test Facility (NSTF), Department of Earthquake Engineering, IIT Roorkee, developed & tested a full-scale building and reported that a four-storey building constructed with this technique is capable of resisting earthquake forces.

ARCI Scientists Indigenously developed powders from unused scrape materials

Scientists at International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI) an autonomous R&D Centre of Department of Science & Technology, Govt. of India, indigenously developed powders from unused scrape materials which can be used to repair aero-engine components made of Ni-based super alloy. With this developed powder, ARCI scientists for the first time repaired an aero-engine components through emerging additive manufacturing or 3D printing technique called Directed Energy Deposition process that can significantly reduce repair costs and overhaul time. Ni-based superalloys are widely used in aero-engine components.

Special Update: Drugs Controller General of India DCG(I) Approved Phase II/III Trial of India's First mRNA-based Covid-19 Vaccine

Drugs Controller General of India DCG(I) approved Phase II/III trial of India's First mRNA-based Covid-19 Vaccine, which was submitted by the Pune-based biotechnology company Gennova Biopharmaceuticals Ltd. The Phase II/III trial was approved after the the interim clinical data of the Phase I study to the Central Drugs Standard Control Organisation (CDSCO), the Government of India's National Regulatory Authority (NRA). Department of Biotechnology (DBT), Ministry of Science and Technology) – Biotechnology Industry Research Assistance Council (BIRAC) also commented that this is an important milestone in our Indigenous Vaccine Development Mission and positions India on the Global Map for Novel Vaccine Development.