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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

IISc Bangalore, Developed Germ-Destroying Air Filters

Researchers at Indian Institute of Science, Bengaluru (IISc), Bangalore, developed germ-destroying air filters that could inactivate germs using ingredients like polyphenols and polycationic polymers commonly found in green tea. These 'green' ingredients rupture the microbes through site-specific binding. The research was supported by Science & Engineering Research Board (SERB) during the challenging COVID-19 pandemic and SERB-Technology Translation Awards (SERB-TETRA) funds. The novel antimicrobial air filters were tested at the NABL Accredited Laboratory and were found to deactivate SARS-CoV-2 (delta variant) with an efficiency of 99.24%. As this innovation holds promise to develop antimicrobial filters that could prevent endemics caused by air-borne pathogens, a patent was granted in 2022.

ARCI Scientists Fabricated Improved Low Cost Heavy Rare Earth-Free High Nd-Fe-B Magnets

Scientists from the Centre for Automotive Energy Materials at the International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI), an autonomous Research and Development Centre of the Department of Science and Technology (DST), Govt. of India, enhanced the coercivity of Niobium (Nb)-containing Nd-Fe-B melt-spun ribbon by grain boundary diffusion process (GBDP) using a low melting point alloy of Nd 70 Cu 30 which acts as the source for the "non-magnetic" element. The Nd-Fe-B magnets, are in high demand for Electric Vehicles & could make them more affordable.

ISRO to Develop "Spatial Data Infrastructure Geoportal 'Geo-Ladakh' for UT-Ladakh"

Department of Space, Govt. of India infored that Indian Space Research Organisation (ISRO) to develop "Spatial Data Infrastructure geoportal 'Geo-Ladakh' for UT-Ladakh". The project aims towards training of UT-Ladakh officials on Geospatial techniques and applications and the Portal provides geospatial data visualization and analytics for UT-Ladakh, consisting of Spatial viewer, Carbon Neutrality, Geospatial utlility mapping and Geo-Tourism. Further, the project encompasses spatial database generation (water resources, vegetation and energy potential) using remote sensing, geospatial techniques and the development of a Geo-portal for hosting this database. Presently, ISRO is setting up an optical tele-scope at Hanle for tracking spacecraft and space objects.

Four Units of 1000 MW each of Kudankulam Nuclear Power Plant to Complete by 2027

Department of Atomic Energy announced that in addition to Kudankulam Nuclear Power Plant Units 1 & 2 of 1000 MW capacity, which are already in operation, four units of 1000 MW each of Kudankulam Nuclear Power Plant (KKNPP-3&4 (2X1000 MW) and KKNPP-5&6 (2X1000MW) would be completed by 2027. The power generated by nuclear power plants (including Kudankulam nuclear power plants) is allocated by the Ministry of Power (MoP) to the various beneficiary States / Union territories in the region from time to time. Finally, on the progressive completion, the full capacity of Kudankulam site would be 6000 MW, which is expected to be reached by the year 2027.

Special Update: Generation of Renewable Energy

Ministry of New and Renewable Energy informed regarding the ongoing major Renewable Energy Schemes / Programmes:

i. Scheme for Development of solar parks and Ultra-mega Solar Power Projects with a target of setting up 40,000 MW capacity.

ii. Central Public Sector Undertaking (CPSU) Scheme Phase-II (Government Producer Scheme) for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) Power Projects.

iii. PLI Scheme 'National Programme on High Efficiency Solar PV Modules' for achieving manufacturing capacity of Giga Watt (GW)

iv. Rooftop Solar Programme Phase II for grid connected solar rooftop power plants

v. Waste to Energy Programme