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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

Arsenic-resistant rice cultivated in West Bengal

Researchers have developed and commercialised a rice variety that is resistant to arsenic. The new rice variety, Muktosri was developed jointly by Rice Research Station, Chinsurah, West Bengal and the National Botanical Research Institute, Lucknow over several years.

IIT Madras develop AI tech to convert brain signals into speech

IIT Madras researchers have developed an Artificial Intelligence technology to convert brain signals of speech impaired humans into language. The other major application for this field of research is that the researchers can potentially interpret nature's signals such as plant photosynthesis process. This will help in predicting natural disasters.

Indian team create software to cut space taken by mobile apps

A team led by an Indian-origin scientist has developed a new 'streaming' software that can reduce the space taken up by apps on a smartphone by at least 85 per cent. The App, called AppStreamer, cuts down storage requirements by at least 85 per cent for popular gaming apps on an Android.

IIT Hyderabad researchers show progress in treating ALS

Researchers from the Indian Institute of Technology, Hyderabad have made potential headway in the treatment of Amyotrophic lateral sclerosis (ALS). They have identified a molecule called AIM4, which inhibits abnormal aggregation of TDP-43, a major pathological protein which causes ALS.

IIT Madras unveils cutting edge missiles at the DefExpo 2020

A team from Institute of Technology Madras (IIT Madras) unveiled one of the fastest, medium-range ramjet supersonic cruise missile at the DefExpo 2020.

National Quantum Mission

Quantum technology has been given a massive boost in India's latest budget, receiving 80 billion rupees (US\$1.12 billion) over five years as part of a new National Quantum Mission. India's considerable investment in the field places it alongside the United States, Europe and Russia. In 2018, a quantum-technology research programme received USD 27.9 million over five years, as part of the National Mission on Interdisciplinary Cyber-Physical Systems. The new Mission will oversee the development of quantum technologies for communications, computing, materials development and cryptography. It will coordinate the work of scientists, industry leaders and government departments.

Defence Expo India 2020

Defexpo India is India's largest showcase for new and future defence technology and it is the largest exhibition for the world's defence companies to display their land, sea and air capabilities at a single exhibition. DefExpo-2020 was held at the Uttar Pradesh capital city, Lucknow, from February 5-8 2020 with the theme 'India: The Emerging Defence Manufacturing Hub'. Defence Ministers of 40 countries and over 3,000 delegates from 70 nations attended the event. During this event, twenty-three Memorandum of Understanding (MoUs) have been inked and proposals for investment worth INR 50,000 crore have been received which would generate employment opportunities for over three lakh youths in the state.

Biomass production from aquatic weeds

Researchers at Imphal-based Institute of Bioresources and Sustainable Development (IBSD) have sought to address the problem of unchecked growth of two perennial aquatic weeds [Water Hyacinth and Paragrass] by exploring the possibility of using the weeds for production of valuable bio-oils and chemicals through the techniques of hydrothermal liquefaction and pyrolysis. Scientists associated with the study noted that the conversion of the weeds into biochar and bio-oil would not only help release more space for the growth of indigenous plants that Sangai deers like, but also help become a new source of income generation to the local communities through the transportation of this biomass for future biorefineries.

Special Update: Physical Research Laboratory

The Physical Research Laboratory (PRL), Ahmedabad is an autonomous unit of Department of Space and a premier research Institute engaged in basic research in the areas of Astronomy and Astrophysics, Solar Physics, Planetary Science and Exploration, Space and Atmospheric Sciences, Geosciences, Theoretical Physics, Atomic, Molecular and Optical Physics and Astro-chemistry.

PRL is actively participating in planetary exploration programme and significant progress has been made in the areas of planetary sciences and exploration. Studies of stellar and solar astronomy are conducted from the Infra-red Observatory at Mt. Abu, and a lake site Solar Observatory in Udaipur, respectively. Another campus at Thaltej, Ahmedabad, hosts the planetary exploration (PLANEX) programme.

Further details can be found at:
<https://www.prl.res.in/prl-eng/>