

STRIDES

Science, Technology, Research, Innovation & DEvelopmentS

BRINGS NEWS ON S&T DEVELOPMENT FROM DST SUPPORT AND BEYOND

EDITORIAL

As we bid goodbye to 2022 the achievements across the S&T sector gives prior indications of the bright days to come. While India's ranking in global S&T indices continues to rise, the country is creating a robust start-up and innovation ecosystem for new ideas to bloom and young minds to flourish. India is achieving new heights in supercomputing capacity and boosting technology development in cyber-physical domains like AI, Robotics, IoT through research and innovation hubs. With new MoUs signed and old ones upscaled, India's position in international S&T engagement is being strengthened. The new geospatial policy is increasing access to spatial data while geospatial data, infrastructure and technology are leading to improved citizen services. Technology commercialization has seen crucial success stories and scientific infrastructure is becoming accessible for all stakeholders. Besides, S&T is bringing critical solutions to challenges in new and emerging areas like energy, environment and climate change.

Talents in S&T are being nurtured in upcoming areas by attracting the best talent pools to pursue their career in science, augmenting research capabilities in state universities and colleges, promoting science and technology through the S&T supported in states and UTs as well as promoting career opportunities for women scientists. S&T is also helping us conserve our heritage and joining hands with other ministries to bring S&T solutions for everyday problems in all sectors.

Happy New Year to you all!

—DR AKHILESH GUPTA, EDITOR-IN-CHIEF

COVER STORY



Union Minister Dr Jitendra Singh says, India producing medical devices at 1/3rd world price

Union Minister Dr Jitendra Singh said, India is among the top five countries in the world manufacturing life-saving high risk medical devices but the cost of our devices is about one-third of those manufactured by the other four countries.

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Two countries emphasize on having institutionalised joint working group on areas of mutual interest

Finland Minister of Education and Culture, Petri Honkonen called on Union Minister of Science and Technology Dr Jitendra Singh at North Block to seek enhanced bilateral cooperation between the two countries in the field of Science, Technology and Innovation (STI).

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Editorial
Cover Story

Popular Science Stories

INSIDE THE E-NEWSLETTER

Major Achievements of DST in 2022



POPULAR SCIENCE STORIES



MoU signed between Ministry of Ayush and Department of Science and Technology

The MoU will identify the potential areas of research to explore cooperation, convergence, and synergy for evidence-based scientific intervention in the Ayush sector and further application of these into the public health care system

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Sweden delegation visits India to enhance S&T Cooperation

Dr Srivari Chandrasekhar Secretary, DST, and Ambassador Jan Thesleff, Embassy of Sweden in India spoke about ways to enhance the S&T Cooperation between the two countries while addressing a delegation from Sweden along with young startups which visited India.

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Need to build on community strength & customize role of technology according to their needs highlighted at National Conclave on Techneev@75

The need to build on the strength of the community and customize the role of technology according to the systemic needs of the community for changing their life and livelihood was highlighted at the National Conclave on Techneev@75, organized on December 21, 2022.

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Indo-UK workshop highlights commitment towards environmental goals of both countries

Dr. Srivari Chandrasekhar, Secretary, DST, highlighted India's commitment towards environmental goals, which includes consistent efforts towards the development of mitigation & monitoring solutions for environmental pollution and techno-based pathways for reducing carbon emissions to achieve net zero targets.

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Potential for India & US to jointly address global challenges through S&T interventions in critical and emerging areas discussed

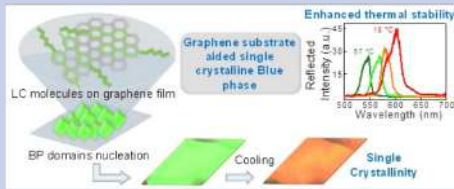
The potential for India and US to work together to address the common global challenges through scientific and technological interventions was underscored at 22nd meeting of Governing Body Indo-US Science Technology Forum held on 15 December 2022.

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POPULAR SCIENCE STORIES



Graphene-stabilised tunable photonic crystal can make more durable & better reflective display and lasers devices

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Importance of public and private collaboration highlighted at meeting to discuss setting up of hydrogen valley platforms in India

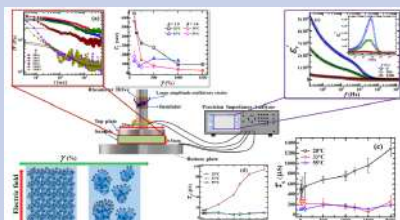
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First data taken by the 3.6-meter telescope detects unexpected kilonova emission from a long-duration gamma-ray burst

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Intriguing flow behaviour changes of temperature-responsive polymer can impact their use in electrical energy storage devices

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Recurrent outburst of twin star points towards rare future supernovae

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New study on behaviour of charged particles in a magnetic field under ultra-cold temperatures can help control noise in quantum technology

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New technique of mineralogical analysis of potsherds of Harappan site shows proficiency of potters of the ancient civilization

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India's SARAS radiotelescope provides astronomers clues to the nature of Universe's first stars and galaxies

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New low cost Powerless Heating System activated with water can heat food in remote areas

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Infosys awardee brings affordable diagnostic technologies for remote, resource constrained areas

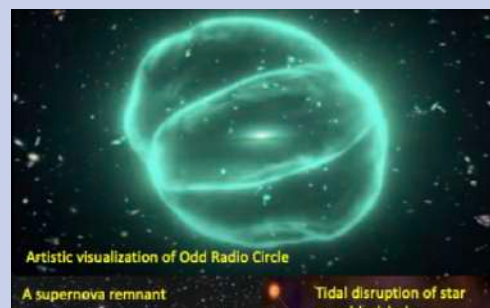
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Climate change likely to increase rough wave days in Indian Ocean, northern sector of Arabian Sea, & central Bay of Bengal

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New mechanism for identification of future dysfunctional cells can help in spotting autism & early detection of cancer

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Mysterious circles of radio emission detected in space may come from supernova explosions or massive black holes

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Major Achievements of DST In 2022

In the year 2022, S&T has seen major achievements bringing with it hopes for a better future. India's advances in new & emerging areas of S&T, it's demonstration of capability to find solutions to critical global & local challenges, it's innovation eco-system which is continuously encouraging young talents are all helping it stand out as a major global S&T contributor.


 **India's ranking in global S&T indices continues to rise**

 **Creating a robust start-up and innovation ecosystem**

 **India achieving new heights in supercomputing capacity**

 **Boosting technology development in cyber-physical domains like AI, Robotics, IoT through research and innovation hubs**


 **Strengthening India's position on international S&T engagement**


 **Geospatial data, infrastructure and technology leading to improved citizen services**


 **New feathers to technology commercialization**

 **Accessible scientific infrastructure for all stakeholders**

 **Technology-led solutions for energy and environment challenges**


 **Climate change research expanding to newer areas**


 **Promoting career opportunities for women scientists**

 **Attracting the best talent pools to pursue their career in science**

 **Conserving the heritage through digital technologies**

 **Augmenting research capabilities in state universities and colleges**

 **Nurturing science and technology through the s&t supported in states and uts**

 **Policy formulation in some key areas**

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