

# STRIDES

Science, Technology, Research, Innovation & DEvelopmentS

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

## EDITORIAL

2023 started with the celebration of science in several programmes and festivals. It kicked off with the Indian science congress at Nagpur inaugurated by the Hon'ble Prime Minister of India. He spoke about how the progress of great achievements of science from experiments to experiences of people influences the youth and encourages them to change the world. He also stressed that Indian science is poised to grow further because of the access to data and the proficiency of technology.

This was followed by the India International Science Festival which brought together school students, teachers, researchers, rural innovators and people from all walks of life from all over India to celebrate the achievements of science and its benefits to different sections of society. Scientists and grassroot innovators were honoured with several Padma awards for their contributions to society just as they were in the Pravasi Bharatiya samman awards.

Preparations have started for another major day for Science—The National Science Day with the unveiling of the theme – Global science for Global Wellbeing.

The month also saw the initiation of the science engagements under G20 in the year of India's Presidency for G20 which will continue through the next few months.

—DR AKHILESH GUPTA, EDITOR-IN-CHIEF

## COVER STORY



### PM addresses 108th Indian Science Congress via video conferencing

Addressing the gathering, the Prime Minister highlighted the role of India's scientific strength in India's story of development over the next 25 years.

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### Union Minister Dr Jitendra Singh unveils the theme for National Science Day 2023, titled Global Science for Global Wellbeing

Union Minister Dr Jitendra Singh released the theme for

the "National Science Day 2023", titled "Global Science for Global Wellbeing" at National Media Centre, here.

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Editorial  
Cover Story

Popular Science Stories  
What's New

INSIDE THE E-NEWSLETTER

Research Innovation Initiative Gathering (RIIG) Schedule



## Science leaders discuss India's path toward a knowledge intense economy

Leaders of scientific departments of the Government of India chalked out the framework for making India a knowledge intense economy and deliberated on the challenges and opportunities in the path at the first plenary session of the Indian science congress at Nagpur.

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## Improved, heavy rare earth-free, low-cost magnets for EV vehicles could reduce mobility costs

Scientists have fabricated improved low cost heavy rare earth-free high Nd-Fe-B magnets, which are in high demand for Electric Vehicles and can make them more affordable.

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## 15 startups selected in first cohort of NIRMAN accelerator will work towards solutions in healthcare and agriculture

Fifteen startups selected in the first-of-its-kind product accelerator program for innovators developing sustainable solutions will soon

start working towards solutions in the healthcare and agriculture domains.

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## New artificial nanostructures for infrared absorption technologies can be useful in defense, imaging & sensing

A new method to confine and absorb infrared (IR) light with GaN nanostructures can help develop highly efficient infrared absorbers, emitters, and modulators that are useful in defense technologies, energy technologies, imaging, sensing, and so on.

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## An Innovator from India makes the country proud by winning a competition at the 3rd ASEAN India Grassroots Innovation forum in Cambodia

Ms Shalini Kumari from India received first prize in the Grassroots Innovation Competition at the 3rd ASEAN India Grassroots Innovation forum for her

innovation 'Modified walker with adjustable legs'.

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## Organic solar cells developed on steel substrates can convert a steel roof into an energy-producing device

An organic solar cells consisting of a combination of an organic polymer and PCBM (an organic semiconductor) developed on steel substrates can potentially convert a steel roof into an energy-producing device with greater efficiency than those currently available in the market.

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## Bimetallic antitumor agents can help manage platinum-resistant cancers

A newly found bimetallic highly potent antitumor agent that inhibits new blood vessel development (antiangiogenic) can help treat cancer cases that become resistant to platinum drugs commonly used for tackling the disease.

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# POPULAR SCIENCE STORIES



## Protein found in Zebrafish can regenerate aged degenerated discs

A protein found in the backbone of zebrafish that plays a positive role in disc maintenance and promotes regeneration in aged discs between vertebrae can have potential therapeutic implications to promote regeneration in degenerated human discs.

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## New electrolyte found can help better ammonia synthesis

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## Five generations of high-temperature stars revealed in the largest Milky Way globular cluster Omega Centauri

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## Repository of palaeoclimatic records

## of Himalayan tectonics & geomorphic evolution in Kashmir Valley and Ladakh region needs preservation

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## Stellar discoveries of the 40-inch telescope at the Vainu Bappu Observatory in Kavalur highlighted at 50-year celebration

The several stellar discoveries of the 40-inch telescope at the Vainu Bappu Observatory in Kavalur, Tamil Nadu, were highlighted at the celebration of its 50 years of operation on 15-16 December.

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## An innovative, green, novel antimicrobial air filtration technology can mitigate airborne infection

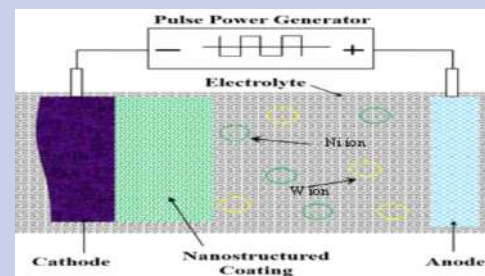
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## Fossil lizards and snakes indicate climate of Late Miocene hominid locality of Haritalyangar, Himachal Pradesh, India

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## New technique of corrosion-resistant nickel alloy coatings can replace toxic chrome plating

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## NEW INITIATIVES

► Call for Proposals under CURIE Programme to support Women's PG Colleges

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► Australia-India Strategic Research Fund: collaborative research projects Round 15

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► Call for Project Proposal under Strengthening, Upscaling & Nurturing Innovations for Livelihood (SUNIL) programme

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# RESEARCH INNOVATION INITIATIVE GATHERING (RIIG) SCHEDULE

**SIDE-EVENT4:**  
18-19 MAY 2023  
(MoES), **DIU**

**SIDE-EVENT3:**  
**DHARAMSHALA,**  
19-20 APRIL  
2023 (SERB)

**SIDE-EVENT2:**  
24-25 MARCH  
2023 (DBT)

**SIDE-EVENT1:**  
**RANCHI, 2-3 MARCH**  
2023 (CSIR)

**DIBRUGARH/ ITANAGAR**

**RIIG  
SUMMIT  
AND  
RESEARCH  
MINISTERS  
MEETING,  
**MUMBAI**  
(4-6 JULY 2023)**

**INCEPTION  
MEETING:  
**KOLKATA, 8-9  
FEBRUARY 2023**  
(DST & SERB)**

Map Courtesy: Survey Of India, GOI



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