

## **Monthly Summary**

### **Department of Science and Technology**

### **(June, 2023)**

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#### **I. Important policy decisions taken and major achievements during the month:**

1. Indian National Science Academy (INSA), New Delhi participated in the Science20, one of the Engagement group summits of G20 under India's presidency in the year 2023 as the Knowledge partner. The Science-20 (S20) Engagement Group supports G20 by fostering an official dialogue with scientific community of member states. The overarching theme is "Disruptive Science for Sustainable Development". The Sub themes are: "Clean Energy for Greener Future", "Universal Holistic Health", and "Science for Society & Culture". The Third Science Thematic Conference on the theme "Connecting Science for Society and culture" was held in Bhopal on 16-17 June, 2023.
2. The Department has started two new programmes i.e. WIDUSHI (Women's Instinct for Developing and Ushering in Scientific Heights & Innovations) to encourage and support senior women scientists to conduct research in interdisciplinary areas of Science and Technology and WISE-PhD (WISE Fellowship for Ph.D.) for doing PhD in Basic and Applied Sciences.
3. The Cabinet approved introduction of National Research Foundation Bill in the Parliament on 28<sup>th</sup> June, 2023.
4. The PMO reviewed progress made in the National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS) Programme on 14<sup>th</sup> June, 2023.
5. Under INSPIRE programme, an amount of ₹ 16,03,36,000 was released as scholarship for 3601 students and an amount of ₹ 1,43,60,000 was released as KVPY Fellowship for 258 students.
6. Technology Information, Forecasting & Assessment Council (TIFAC), New Delhi, has facilitated granting of 2 patents, one each to Botanical Survey of India and Kerala Agricultural University.
7. National Innovation Foundation (NIF), Ahmedabad, has facilitated granting of 06 patents namely, herbal compositions for management of liver disorders and methods thereof; planting machine for sugarcane buds and tuber crops; an eco-kite; wrapper picker cum burner; an automatic mobile groundnut thresher; and a device for aiding a disabled part of a body.
8. Under Vigyan Jyoti Programme, various career counselling sessions, parent counselling sessions, role model interaction sessions, tinkering workshops and visits to knowledge partners were organized for the students of Jawahar Navodaya Vidyalayas in several states.
9. Under the Innovation in Science Pursuit for Inspired Research- *Million Minds Augmenting National Aspirations and Knowledge* (INSPIRE-MANAK) Scheme, one State level exhibition,

two district level exhibitions, four mentorship workshops, one State Nodal Officers meeting and one teachers meeting were organized.

10. Production of in-kind components for establishment of Facility for Antiproton and Ion Research (FAIR) and design and development of in-kind components for establishment of Thirty Meter Telescope (TMT) was continued under International Cooperation Programme. Technology Development towards various Indian in-kind components continued in different mega projects wherein 48 Indian Industries are involved. In FAIR project, one Research Infrastructure (DEGAS Detector Scanning Set-up) was created and one Prototype (DEGAS Cryostat) was produced during the month. WLCG Tier2 Centres at TIFR and VECC continued working and these facilities were utilized by Indian CMS & ALICE research groups to process the voluminous data obtained from these experiments.

11. 80 research groups were involved in different mega projects which include 200 faculties/engineers and 200 PhD students/post-docs. 400 users utilized 29 research facilities/research infrastructures. 8 experiments were performed and, 70 shifts were taken. Outputs includes 9 collaborative research publications, 7 research publications, 12 conference publications, 4 PhDs, 8 S&T Reports/Analysis Notes and, training of 39 technical human resource. 1 PhD student received CMS Award for Trigger work.

12. Post National Geospatial Policy (NGP-2022) discussion meeting with start-ups and MSMEs was held on 19<sup>th</sup> June 2023 to strengthen the Geospatial Innovation System of the country.

13. A meeting to discuss the formulation of the Skill Council for Geospatial Sector was held on 02<sup>nd</sup> June 2023 in which various experts from geospatial industry, Survey of India, National Skill Development Corporation (NSDC), Ministry of Skill Development and Entrepreneurship along with DST representatives participated.

14. Raman Research Institute has built the X-Ray Polarimeter (POLIX) payload of the XPoSat, for ISRO's mission that has been integrated with the XPoSat satellite. All integrated tests have been successfully completed.

15. Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru researchers in collaboration with Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, have addressed major issues in electrochromic smart windows that hinder their use in zero-energy buildings.

16. International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad conducted large scale milling of raw material for battery applications such as Carbon coated Lithium Iron Phosphate (C-LFP) and Lithium Manganese Iron Phosphate (LMFP).

17. ARCI has signed an agreement to conduct the on-field trials on super battery and technology demonstration of super battery powered drones.

18. Institute of Advanced Study in Science and Technology (IASST) Guwahati organised lab experience-based scientific education sessions as part of the DST-SEED supported SC/ST Community Development Programme,

19. Various Science outreach programmes for students were organized by autonomous institutes of DST, namely Institute of Advanced Study in Science and Technology, Centre for Nano Science and Engineering, Jawaharlal Nehru Centre for Advanced Scientific Research, Indian Institute of Astrophysics, North East Center for Technology Application and Reach and Indian Institute of Geomagnetism.

20. North East Centre for Technology Application and Reach (NECTAR), Agartala organized a one-month Residential training for Meghalaya Artisans.

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