



Union Minister Dr. Jitendra Singh Announces ₹720-Crore Quantum Fabrication & Central Facilities at IIT Bombay Under the National Quantum Mission

**₹720-Crore Push to Build Indigenous Quantum Fabrication
Capacity Across IIT Bombay and IISc Bengaluru**

**India Reduces Dependence on Foreign Quantum Labs with
New Fabrication Centres at IITs and IISc: Dr. Jitendra Singh**

**TIH at IIT Bombay Powers 50 Deep-Tech Startups and 96
Technology Projects, Strengthening India's Innovation
Pipeline**

**BharatGen Delivers India's Sovereign Multilingual AI
Models Across 22+ Languages: Dr. Jitendra Singh**

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Union Minister of State (Independent Charge) for Science & Technology, Dr. Jitendra Singh, today announced the establishment of four state-of-the-art Quantum Fabrication and Central Facilities worth ₹720 crore across IIT Bombay, IISc Bengaluru, IIT Kanpur and IIT Delhi under the National Quantum Mission (NQM). Making the announcement during his visit to IIT Bombay, the Minister said that these cutting-edge facilities mark a decisive leap in India's journey toward technological sovereignty, positioning the nation among the select global leaders advancing next-generation quantum technologies.

The event was attended by senior leadership from the country's premier scientific institutions, including Dr. Sireesh, Director of IIT Bombay; Dr. Abhay Karandikar, Secretary, Department of Science & Technology; Dr. N. Kalaiselvi, Director General, CSIR; Dr. Rajesh Gokhale, Secretary, Department of Biotechnology; senior faculty members of IIT Bombay; researchers; innovators; and representatives from the Technology Innovation Hubs and start-up ecosystem.

Dr. Singh said that under the visionary leadership of the Hon'ble Prime Minister, India has emerged as one of the earliest nations to launch a National Quantum Mission, reflecting the government's willingness to embrace disruptive ideas and rapidly translate them into national initiatives. He added that the new fabrication and characterization capabilities, spanning quantum sensing, quantum computing, and quantum materials, will serve as the foundational hardware ecosystem needed to build sovereign, secure, scalable quantum devices and systems within the country. These facilities, he said, will be open not only to NQM investigators but also to academia, industry, start-ups, and strategic sectors across India.

Referring to IIT Bombay as one of India's oldest and most respected science and technology institutions, the Minister noted that the institute has consistently partnered with the Department of Science & Technology (DST) since its inception, and continues to be a national leader in deep-tech domains. He highlighted that IIT Bombay and IIT Kanpur will anchor the nation's quantum sensing and metrology infrastructure; IISc Bengaluru and IIT Bombay will advance quantum computing fabrication using superconducting, photonic and spin qubits; and IIT Delhi will host India's quantum materials and device development ecosystem. These capabilities, he noted, will create a controlled environment for prototyping indigenous quantum devices, supporting translational research, and training the next generation of quantum hardware experts.

Dr. Singh recalled the remarkable evolution of science and medical technology over the years, from invasive diagnostic methods of the past to the emerging non-invasive, physics-driven therapeutics of today, and emphasized that quantum technologies will accelerate this transition further, enabling breakthroughs in healthcare, diagnostics, imaging, materials science, and advanced computing. He observed that India's deep-tech innovations increasingly demand interdisciplinary training, adding that future medical education may very soon require physics as a core component. He praised institutions like IIT Bombay, IIT Kanpur and IISc for already moving toward integrated medical-tech research ecosystems.

The Minister stressed the importance of breaking silos and fostering multilateral collaboration among major institutes to translate academic R&D into real-world impact. He cited his own efforts in facilitating multi-institutional MoUs among IITs, AIIMS, IIMs, CSIR labs and communication institutes to ensure stronger market linkages, wider public dissemination of scientific breakthroughs, and more effective outreach to stakeholders such as students, farmers, and start-ups.

Speaking about IIT Bombay's Technology Innovation Hub (TIH) under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS), Dr. Singh noted that the hub has become a national model for translational research, supporting 96 technology development projects and more than 50 deep-tech start-ups. Among its 23 portfolio companies, several are already revenue-generating, with a combined valuation of ₹466 crore. He also emphasized the national importance of BharatGen, India's first sovereign multilingual and multimodal AI initiative aimed at building large language models across 22+ Indian languages. He said that BharatGen's text, speech, and vision models, and applications such as Krishi Sathi, e-VikrAI and Docbodh, represent India's growing leadership in AI, data sovereignty and inclusive digital innovation.

Dr. Singh highlighted that many farmers and citizens remain unaware of scientific breakthroughs meant for their benefit, urging institutions to actively demonstrate technologies on the ground. Referring to examples from IMD, CSIR and agricultural missions, he said that the true test of

innovation lies in its reach and acceptance by those who need it most. He urged IIT Bombay and all NQM institutions to ensure wider awareness, including demonstrations for farmers, students, and early-stage learners, so that India's next generation can discover its scientific aptitude early.

The Minister added that the new quantum fabrication and centralized facilities will become a national pride asset, just as India's space achievements such as Chandrayaan have elevated the global esteem of Indian youth and scientists. He said that India is witnessing a democratization of science, where even non-degree holders and rural innovators are building successful technology enterprises such as lavender-based biotech start-ups, proving that innovation is no longer confined to elite institutions.

Dr. Singh concluded by saying that the National Quantum Mission, NM-ICPS and BharatGen collectively represent India's bold strides toward a future defined by deep-tech leadership, knowledge sovereignty, and Atmanirbhar Bharat. He said that the ₹720-crore quantum facilities will act as a springboard for India to build globally competitive quantum hardware and will accelerate the nation's rise toward Prime Minister Modi's vision of a Viksit Bharat by 2047. "These facilities," he said, "will empower India to design, fabricate and scale its own quantum technologies, ushering in an era of sovereign, secure and world-class scientific innovation."







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