



# Initiation and Nurturing of Research in Physics in India circa 1850-1950



Dr. Homi J Bhabha speaking at the formal inaugural function on December 19, 1945 at Kenilworth Bungalow

A historical account of nucleation of research in physics in colleges, universities and institutions all across India from mid-nineteenth century to the establishment of national laboratories and Atomic Energy Commission (AEC) in independent India shall be presented.

The first education policy to regulate school and college education in Indian sub-continent was enunciated via the Wood's dispatch (1854). The British teachers appointed to teach science in the colleges forming the nuclei of the first three universities initiated in 1857 did not engage native students in any research activity until the enactment of common Indian Universities Act (1904). The said Act enjoined every university to appoint teachers and create faculties in different subjects. Each university followed its own path, and it took nearly three decades to yield noticeable research output by the native teachers and their research students.

Dr. J C Bose was the first native scientist to set up physics research laboratory in Presidency College Calcutta in 1894. The Indian Association of Cultivation of Science (IACS) had been set up by the medical doctor Dr. Mahendra Lal Sirkar in 1876, however, research activity in IACS got commenced only in 1908, when civil servant C V Raman started to work there in his spare time. The School of Physical Sciences in Calcutta University got going via an innovative approach of the legendary Vice Chancellor Justice Asutosh Mukherjee.

The Indian Institute of Science at Bangalore had been established in 1909, however, its Department of Physics came into being after C V Raman became its Director in 1934. Meghnad Saha and S N Bose had commenced nurturing research students at Allahabad and Dacca, respectively from mid-1920s. Saha's students P K Kichlu and D S Kothari were inducted as faculty members in the universities at Lahore and Delhi, respectively. BHU, AMU and Andhra University had also established research-oriented Physics Departments by 1940.

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## ASET Colloquium talk

by **Prof. Arun Grover**

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Lecture Theatre AG69, TIFR

YouTube Live: <https://tinyurl.com/AKGrover>

CSIR came into being in 1942 with S S Bhatnagar as its first Director. He proposed the establishment of National Physical Laboratory (NPL) in New Delhi. TIFR commenced its operation in Bombay in December 1945, Saha's Institute of Nuclear Physics at Calcutta got established in 1949, and Vikram Sarabhai's Physical Research Laboratory (PRL) at Ahmedabad had come into being in November, 1947, all the three institutions had received financial support from CSIR in their initial phases.

UGC Chairman S S Bhatnagar and Lok Sabha Member Meghnad Saha passed away in 1955 and 1956, respectively, and it donned on Homi Bhabha as Chairman-AEC and D S Kothari as Chairman-UGC to expand the research in Physics in the institutions and the universities of independent India.



A K Grover, a condensed matter physicist from TIFR, served as the 12<sup>th</sup> VC of Panjab University, Chandigarh(2012-18). He received Homi Bhabha Science and Technology Award of BARC in 1995 for his contributions in Magnetism and Superconductivity. Elected (1997) Fellow of NASI as well as that of IASc., he served as the Vice President of IASc. from 2016-18. He embedded himself as DAE-Raja Ramanna Fellow in Punjab Engineering College (PEC) from 2019-21. He continues as Honorary Professor in Department of Physics of PEC.

He has been a member of IUPAP Commission (C14) on Physics Education since 2022, and also serves on IUPAP Working Group (WG16) on Physics and Industry (2025-27).

An initiative commenced in 2012 by him, which caught the national attention, has been the nucleation of Chandigarh Region Innovation and Knowledge Cluster (CRIKC), which brought together all the institutions in and around Chandigarh on a common platform.

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