

**SPEECH BY THE PRESIDENT OF INDIA, SHRI PRANAB
MUKHERJEE AT THE INAUGURATION OF 100TH SESSION OF
INDIAN SCIENCE CONGRESS**

Kolkata, West Bengal : 03-01-2013

At the outset, I wish the participants to the Centenary session of Indian Science Congress and the people of the Nation, a purposeful and productive New Year. My warmest congratulations to the Indian Science Congress on the occasion of the celebration of their centenary. The Prime Minister of India generally inaugurates the annual sessions of Indian Science Congress. In the current year, the Association has elected the Prime Minister as its General President. I congratulate Dr. Manmohan Singh for being elected as the General President of Indian Science Congress in this historic year. It is a befitting honour. I can from personal experience vouchsafe the abiding faith of Dr. Manmohan Singh on education, science and technology. The good performance of science and technology sector in the recent years, I believe, owes greatly to the generous government support for S&T catalysed by the Prime Minister.

Ladies and Gentlemen:

2. I am an alumnus of Calcutta University. Naturally, I am delighted to participate in a function co-organized by Calcutta University. As an alumnus, I fondly remember defining role of this university and Sir Asutosh Mukherjee in nurturing the Indian Science Congress in the early years. Kolkata has remained historically a city of culture, of knowledge. All Nobel Prizes

awarded for work from India are somehow linked to the city of Kolkata. Sir Ronald Ross carried out his pioneering research on Malaria in this city for which he was awarded the Nobel Prize in 1902. Sir CV Raman's remarkable discovery, the Raman Effect, for which he was awarded the Nobel Prize in Physics in 1930, was made here in Kolkata. The legendry Rabindranath Tagore and Mother Teresa were also awarded Noble Prizes for their work carried out in Kolkata. The earliest organizations associated with science—The Asiatic Society, The Indian Association for the Cultivation of Science and the Indian Science Congress Association were established here. These organizations gave rise to celebrated luminaries in science who promoted a scientific culture. Sir JC Bose, Prof. Satyendra Nath Bose, PC Ray, Meghnad Saha and many others who built the edifice of modern science in the country. Sir JC Bose is hailed as the first of modern scientists of this country. His original contributions to the invention of radio are well known. The recent discovery of Higgs-boson particle highlights the epoch making contributions of Prof. Satyendra Nath Bose to particle physics. I do hope that the modern scientists of this city would emulate the examples of these leaders of science of the past.

3. ISCA presented me a compilation of all the addresses of General Presidents of the Association as well as the inaugural addresses delivered over the years. These make fascinating reading. In a sense, these capture the history of Indian science as it evolved over the past 100 years. In the year 1957, I was a student at Calcutta University. In that year, the Prime Minister of India Pandit Nehru was the Chief Guest. The Chief Minister of

Bengal, the visionary Prof BC Roy was the President of the Science Congress. The topic of BC Roy's address to the Congress was "On Science for Human Welfare and Development of Country". The topic then was akin to the theme of the present session - 'Science for Shaping Future of India '. I was greatly touched by BC Roy's concluding message and I quote: *"The clouds of time may have hidden for us innumerable problems, trials and dangers, yet time may also reveal solutions of unknown difficulties or delightful surprises which man with his knowledge of Science should be prepared to turn to his advantage with faith, hope and good will."*

Ladies and Gentlemen:

4. Let me congratulate the Indian Science Congress for selecting "Science for Shaping Future of India" as the focal theme for its 100th Session. Science has to be closely linked to a culture within the society which is built on scientific knowledge. It calls for a scientific temper that Pt. Nehru always used to talk about. Scientific culture demands that choices and decisions are made by individuals, society and the nation on the basis of scientific logic. Indian economy has been following a new paradigm of development; faster, sustainable and inclusive growth with equity. It is a new concept because it combines the faster growth with objectives of inclusiveness and sustainability. How to harness the forces of science, technology and innovation to achieve this end calls for deep deliberation. I am sure, you will discuss this in all its aspects and implications with the seriousness that it demands.

Ladies and Gentlemen:

5. Science is one of the creative endeavours of human mind. Pursuit of Science as a personal passion can not be regulated or directed when the thrill of pursuit is in “Knowing the truth of Nature”. Prepared and creative minds are required to observe the revelations of Nature. Science seeks universal and fundamental truth. Culture of Excellence is the second nature of creative scientists. Eminent scientists of the world have always been concerned as to how their understanding of natural phenomena could be applied to solve social problems of the future. Sir JC Bose, more than a century ago, on 5th March 1885, wrote in his diary *“I have been thinking whether the solar energy that is wasted in tropical regions in a new way could be utilized. Of course trees conserve the solar energy. But is there no other way of directly utilizing the radiant energy of the sun?”* The seed for artificial photosynthesis was sown then. Even now it is an active area of research pursuit globally. His disciple Prof. Satyendra Nath Bose was a powerful communicator and an inspired teacher. He delivered lectures on ‘power’ and ‘nuclear energy’ in a language that lay people could understand. He motivated generation of people to move towards scientific endeavour. Public and political understanding of science is crucial. For that, I would like to urge upon you all to apply modern tools for communicating science in a manner that can be understood by the common man. This understanding would contribute to the creation of a science culture in the Indian society.

Ladies and Gentlemen:

6. The prime concern of any government in a country is enhancing the well being of its people. Technology has the power of changing the lives of the people by creating physical well being. Countries have undergone transformational changes, all in one generation, from a relatively weak to an emerging economy. In this transformational change, technology-led economic growth has played a key role. While technology can be considered a logical extension of knowledge gained from science, it is much more than mere application of science. Technology is contextual. There is a economic value to technology. We all are a witness to the transformational changes being brought about by mobile telephony and internet. The number of mobile phone users in India was around 19 crore in October 2012 which is the second highest in the world after China. The mobile phone density of 74.21 per cent of India compares favourably with the other top ranking countries. Another marvel of technology—the internet—has become a vital source of information and communication. India ranks third after China and USA in terms of number of internet users. However, the penetration of internet use as the percentage of the population is only 11.4 indicating the huge potential for future growth.

7. Another transformational application of technology is Aadhaar project which focuses on electronic transfer of benefits directly to the beneficiaries of various social sector schemes. I understand the roll out of Aadhaar enabled service delivery has

already started in twenty districts. In the Budget 2012-13, a target for covering fifty districts has been set which, I am sure, will be met.

Ladies and Gentlemen:

8. It is essential to innovate if we have to compete in a globalised economy. India has declared 2010-20 as the decade of innovation. The announcement of Science, Technology and Innovation Policy today lays the roadmap for the development of an eco system for innovations and for encouraging, recognizing and rewarding the innovators in the society, especially the grass root innovators who through their genius are adding value to the processes which directly impact the local population.

9. The new STI policy has also addressed the issue of right-sizing our research and development system. Balanced economic growth especially in emerging economies like India is of paramount importance. Productive engagement of our youth in agriculture, manufacturing and value based services holds the key for a balanced growth of the country. The new STI Policy, I am confident, will pave the technology-led path for change ensuring prosperity with peace and inclusiveness.

Ladies and Gentlemen:

10. We need an educational system which lays importance on development of a scientific culture within the society. Mere economic growth without the attendant knowledge capacity to manage the dimensions of change would neither suffice nor be appropriate.

11. Our ancient universities, whether these be Nalanda or Taxila, focused on value based holistic education. Perhaps it is appropriate to quote from an address of Rabindranath Tagore delivered ninety years ago : *“You know the traditions of our country are never to accept any material fees from the students in return for teaching, because we consider in India that one who has knowledge has the responsibility to impart it to the students”*. Swami Vivekananda always spoke of fusion of cultural values of the orient with practical methods of the occident. Innovation is a modern means of converting knowledge into social value and wealth. Indian philosophy, seeks to balance the pursuit of wealth and material success with the mastery of the self and the quest of inner happiness. The deeply introspective, yet practical, wisdom of Indian philosophy must find resonance in the metaphor of competition and conquest popularized in the modern world.

12. I conclude with a quote from Swami Vivekananda, he said: *"No nation can be said to have become civilized, only because it has succeeded in increasing the comforts of material life by bringing into use lots of machinery and things of that sort. ... In this age as on the one hand people have to be intensely practical, so on the other, they have to acquire deep spiritual knowledge "*.

13. I would like to call upon the scientific community to work for the promotion of a scientific culture for shaping our future in which prosperity and peace, excellence and equity and oriental values and occidental methods of science converge and co-

exist. India is expected to emerge as a major economic power by 2035. We should also emerge as a major knowledge power with high human and societal values. Let me mention in this regard that it has been 83 long years since CV Raman won the Nobel Prize for Physics. Another Nobel Prize in the sciences is long overdue for India. I call upon scientific fraternity gathered here to rise upto this challenge and work towards this goal in a time bound manner.

With these words, I formally inaugurate the 100th session of Indian Science Congress.

Thank you and Jai Hind.