

### **Welcome Speech (SSNTD-19 Inaugural Function)**

Dignitaries on the dais, off the Dais, Office bearers of the NTSI, fellow scientists and young researchers, members from press and media, ladies and gentleman

Good morning to all.

It is a matter of great pleasures that Department of Physics Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab is organizing 19<sup>th</sup> National Conference on Solid State Nuclear Track Detectors and Their Applications (SSNTDs-19) in collaboration with Nuclear track Society of India. As president of the society, I welcome Prof. R.K. Sinha, Director, CSIO, Chandigarh and thank the institute with a special mention of Professor I K Bhat, The Director in absentia, Prof. Arvind Agnihotri, officiating Director and Sr. Most Dean of the institute and Dr. Rohit Mehra, the convener and his entire team for giving their consent for organizing this conference. I think we all present here should give them a big round of applause as that will be the right toast to their untiring efforts, accomplishments and success for bringing the event to fruition.

Friends

With the advent of 2<sup>0th</sup> Century, the new era for growth and development of new Physics had started and this culminated into so known Modern Physics. The process was perpetual and the 2<sup>1st</sup> Century is witnessing the miraculous effects of a gamut of cutting edge technologies with myriad of applications. The contemporary technologies viz., nanotechnology, nano-electronics, nano sensors, smart materials, biotechnology, bio-informatics, bio-nanotechnology, information technology, optical fibre technology, laser technology, remote sensing, space technology, nuclear and radiation technologies etc. can be quoted as the most important out of a large list. It is beyond doubt that physics has played and is still playing a dominant role in the culmination and development of these technologies, which have largely affected human life. In the arena of modern technology and development, nuclear science and technology hold great promise and it is imperative to consider what the practical applications of technological developments will be. I believe that the field holds great promise, while also posing important questions as to how we can make wise use of these advances for the physical and spiritual welfare of all people. The Solid State Nuclear Track Detectors have been recognised as very potential and effective tools in exploring various areas of research. SSNTDs have a very important use in radiation measurements and dosimetry and thus play a significant role in spreading awareness about the radiation environment and its impact to the general public and the academic peers besides applications in diverse fields of science and technology.

The visit

The visit of Professor P.B. Price to the Tata Institute of Fundamental Research (TIFR), Mumbai in 1965 marked the beginning of SSNTD research activity on cosmic ray prehistory using meteorite samples at TIFR, lead by Professors D. Lal and "NTSI founder president" S. Biswas. Various pioneers in the field include late Professor K.K. Nagpaul who initiated SSNTD work at Kurukshetra University in 1969. Prof. S.K. Chakarvarti also carried forward and even carrying forward this legacy. Experimental work using SSNTDs were initiated independently by R.H.Iyer at the Bhabha Atomic Research Centre (BARC) in 1968. Perhaps amongst the most important factors, which attracted many of these Indian Universities and research institutes to this field of research, was the versatile and inexpensive nature of the technique. At present there are more than 55 active research groups and specialized centres in India engaged in research and development work involving SSNTDs. Considering the involvement of a large number of Indian scientists in the use and application of the nuclear track technique, the Bhabha Atomic Research Centre played a lead role to bring together different groups working in this field and organised the first Seminar-cumworkshop on SSNTD during March 12-13, 1979 and this modest beginning paved the way for holding regular National Symposia/conferences on SSNTDs once every two years and hosted by different institutions.

3. Contributions of the Nuclear Track society of India (NTSI) As outlined above in Sec.1.2, the efforts to bring together Indian scientists working on SSNTDs initiated by BARC by holding the first seminar –cum workshop on SSNTD during March 1979 and this led to the formation of the nuclear track society of India in 1987. Today we have about 400 members in NTSI including a few distinguished scientists from abroad.

Activities of society:

- To organize “National Conferences on SSNTDs” once in every two years to bring together trackologists working in India and abroad and to provide a forum for exchange of views and opinions and to discuss current trends and new developments.
- To bring out its own house magazine the “NTSI Newsletter” on a bi-annual basis. This serves as a medium of communication and information dissemination on current developments through bibliography and current title services in SSNTDs; though columns like “FOCUS”. Reports & news items; brief review articles etc.
- To organise “National workshops on SSNTDs” and introduce this technique as a regular topic in the university curriculum at the MSc level. In an effort to popularize this simple, versatile and inexpensive technique among the academic community.

NTSI has made very good progress in all these areas and conducted several successful workshops and national symposia/conferences and is making a visible impact of its efforts among large sections of the scientific community in the country.

This conference is the 19<sup>th</sup> conference in the series of biennial conferences being organised with all these objectives in mind where the researchers and academicians will interact on a common platform and derive useful inputs for maintaining the perpetuality.

I believe that the SSNTDs-19 is going to be the most comprehensive conference focused on the various aspects of advances in Solid State Nuclear Track Detectors and Their Applications. The deliberations will explore various aspects of advances in the related fields. I am sure this conference will also provide an apt platform to the experts, industry professionals and other participants to share their experiences. It would also inspire the young researchers to continue to work with dedication to further improve their skill and update their knowledge.

Besides many ITs, about 80 abstracts received from all over the country for Oral Presentations and Poster Presentations speaks about the success of the conference. Once again I would like to congratulate Dr. Mehra, the convener and his whole team for their untiring efforts which they have made in attracting the scientists to this place.

We will hear a good many presentations from a good many eminent experts and the ideas projected in the seminar will be used to improve the situation for human health, for our environment and for the benefit of humans. The discussions that will take place will enable this scientific galaxy to concentrate on the subjects talked about. I am sure that everybody who has participated in this conference will be illuminated and will be full of new ideas. The deliberations and the interactions during the conference will certainly help in augmenting the research activities and give a new direction to the young researchers.

As president of Nuclear track Society of India, I express my sincere thanks and gratitude to the institute administration and the Department of Physics for taking this initiative to organize this scientific event of national importance and on behalf of the Organizers including the executive committee members of the Nuclear track Society of India deem it a privilege to have your blessings and good wishes on this event.

So, thank you all for coming to this three days national conference and it is very good that we have such a big audience. I wish you every success in your work and happy journey back home.

Dr. Krishan Kant Gupta

President Nuclear Track Society of India, BARC, Mumbai