

## GUEST EDITORIAL

The Indian National Young Academy of Science (IN-YAS) was founded in 2014 by INSA council and it is the first and only recognised academy of young scientists of India. IN-YAS took initiative to bring out a special issue of Proceedings of INSA and in the first attempt 41 articles were submitted by young researchers including IN-YAS members. After rigorous review process, 26 articles were accepted for publication and out of which 16 articles appeared in the 1<sup>st</sup> special issue of PINSA by IN-YAS (*Proc Indian Natn Sci Acad 85 No. 3, September 2019*). Given the space constraints in one volume it was decided to bring out 2<sup>nd</sup> special issue with the remaining 10 articles and a few more out of the call for the 3<sup>rd</sup> special issue.

This 2<sup>nd</sup> special issue of PINSA by IN-YAS includes 16 articles (one concept note, six review papers and nine research papers) and those can be broadly categorized as biological and medical sciences (four articles), chemical science (one article), engineering science (one article), earth and environmental science (five articles), materials science (two articles), classical music (one article), accelerator physics (one article) and agricultural science (one article). The concept note by Ray and Begum discusses the pro and cons of using immunity passport i.e., tagging individuals who are immune against Covid 19. Review article by Biswas and Kumar discusses the effect of entropy mixing in developing novel metallic, ceramic as well as polymeric materials. Ramanathan and Pai explain about the miscoded rāga names in Carnatic music. John and Ramzan have reviewed abiotic stress impression and tolerance due to climate change from the perspective of Kashmir Himalayas. Further, Amrutha *et al.* have reviewed denudation rate studies performed using <sup>10</sup>Be as a proxy and associated challenges. Das has reviewed the saline contamination in the aquifers present in Mahanadi delta. Gowda and Manvi have reviewed the effect of agriculture crop residue disinfection methods on mushroom growth. In the research paper

category, Begum *et al.* have performed in depth analyses of SARS-COV 2 spike protein sequences from various parts of the world and tried to correlate the data with possible functional relevance of mutations. Wasan *et al.* have conducted survey on more than 500 dentists and describes the outcome on the analgesic prescription in Delhi-NCR region in dental related treatments. Paper by Bajaj and Sharma deals with the role of C-terminal methylation and side chain guanidinium group of arginine in stabilization of gold nanoparticles. Article by Agnihotri *et al.* deals with the electronic properties of various combinations of phosphorus and silicon atoms organized in honeycomb lattice and found that the P2Si is a Dirac semi-metal, P3Si is an indirect bandgap semiconductor, and rest of the monolayers are metallic in nature. Pattanaik *et al.* have performed an important study which is useful in enhancing the precision in <sup>10</sup>Be measurement with accelerator mass spectrometry and has articulated the result of metal ion mixing on higher and stable ion current from Ion source. Kisku *et al.* have done an exhaustive hydrogeological study of Morang river draining Rajmahal Basalt. Singh *et al.* have discussed the seasonal constraint for somatic embryogenesis using in vitro leaf explants and genetic fidelity testing of *Sapindus mukorossi*. Satsangi *et al.* have discussed about the chemical characterization and source apportionment of fine particulate matter (PM<sub>2.5</sub>) at a rural site in North-Central India. Jayalakshmi *et al.* have described the Lifshitz transition on SrFe<sub>2</sub>As<sub>2</sub> and SrFe<sub>2</sub>Bi<sub>2</sub> compounds under pressure.

It is indeed a matter of pleasure to acknowledge the contribution, cooperation, and generous support of the IN-YAS members. Thanks are due to all of the authors who have contributed to this 2<sup>nd</sup> special issue and also to all the reviewers who have helped in getting the special issue in this shape. Grateful to the former chair, IN-YAS Dr. Mahesh Kumar, current chair Dr. Chandra Shekhar Sharma and all existing and previous core committee members, (Drs. Rajan Jha, Gitanjali

Yadav, Jitendra Pattanaik, Rohit Kumar Sharma, R S Dhaka, Mithun Palit, Mudrika Khandelwal, Syed Abbas, Rifat John and Paramdeep Singh) for entrusting us with this assignment. We are indebted to Professor S C Lakhotia, former Chief Editor of PINSA, and Professor A K Singhvi, Vice President, INSA for their keen interest and guidance at each and every step in bringing out this special issue of PINSA. We are also grateful to Professor Chandrima

Shaha, President, INSA and Professor Sanjay Puri, Chief Editor, PINSA for their kind support. Thanks to Dr. Seema Mandal, Ms. Richa Sharma and other members of Editorial office for their continuous efforts to bring out this issue. All the reviewers are also gratefully acknowledged for their time and constructive comments and suggestions which have helped a lot in giving the shape to this special issue.

*Guest Editors:*

**Dr. Pankaj Kumar**, *IUAC, Delhi*

**Dr. Ranjit Kumar**, *DEI, Agra*

**Dr. V. Ramanathan**, *IIT (BHU) Varanasi*