

Guest Editorial

The Indian National Young Academy of Science (INYAS) is the first academy for young scientists of India. INYAS was established in 2015 with 20 bright young scientists and is inspired by the Global Young Academy (GYA). Current strength of INYAS has increased to 96 members. INYAS took a step forward for bringing out a special issue of the "Proceedings of the Indian National Science Academy" (PINSAs).

The members of the INYAS took the responsibility for inviting, corresponding and contributing articles for PINSAs- special issue. Research and review articles were invited on contemporary topic of all areas of science (physical and chemical sciences/biological sciences/applied science/interdisciplinary science and engineering science. A total of 41 articles were received and 26 articles were finally accepted after the due course of review process. Several eminent researchers and INYAS members were requested to review the submitted manuscripts.

The present special issue includes 16 articles and those can be broadly categorized as biological sciences (six articles), chemical Science (two articles), engineering science (one article), earth and environmental science (four articles), materials science (one article), mathematical science (one article), interdisciplinary science (one article). Article by Chaudhary and Pal is an overview paper describing excited state proton transfer of a versatile fluorescent probe in different reverse micelles. Article by Sharma *et al.* deals with the multiple implantations of nitrogen in Si based GaAs matrix to improve the crystal quality. Article by Pettiwala *et al.* is a short review and aimed to explore further the interesting photo-physical properties of Thioflavin-T for sensing clinically important biological and chemical analytes. Article by Raina and Kalle deals with the Histone deacetylases

(HDACs) role in regulating gene transcription. Review article by Masih *et al.* is on Moringa as a future crop from nutrition values point of view. Article by Kumar *et al.* discusses the ground water quality of Singrauli power belt region. Ramanathan and Keseven have demonstrated the effectiveness of Raman Spectroscopy in identifying the usage of different inks and forensic applications. Review article by Potphode *et al.* is on the potential of candle soot carbon nanopartilces as electrode material for energy storage. Prakash *et al.* have provided an overview of actin-membrane interactions and their role in modulating GPCR function and organization. Article by Singh and Rastogi highlights the contribution of biomass burning to ambient organic carbon in fine aerosol particles and its seasonal variation. Review article by Jatan and Lata summarizes the contribution of miRNAs as molecular regulators in abiotic stresses and plant-pathogenic interactions. Article by Das *et al.* have reported ^{14}C dating of bricks from Nalanda using state of art technique *Accelerator Mass Spectrometry*. Article by Gunjal and Kapadnis illustrates the pot experiment for evaluation of paddy husk and press mud based formulations of *B. gladioli* for the plant growth. Short communication by Maroof *et al.* highlights field based observations for the manifestations of weathering over the Himalaya and Bundelkhand region. Article by Gupta *et al.* deals with the health risk analysis of fine and respirable suspended particulate matter.

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