EDITORIAL

This special issue of the Journal of Nepal Physical Society (JNPS) is a collection of selected articles from the manuscripts submitted to the Association of Nepali Physicists in America (ANPA) Conference 2020. The conference was organized by ANPA in association with the Nepal Physical Society (NPS) and Physics Research Initiative (PRI), Pokhara, Nepal. In this special issue of JNPS, some recent research results on diverse areas of physical sciences including Space Physics, Condensed Matter Physics, Astrophysics, Accelerator Physics, Bio-medical Physics are highlighted. This Special Issue consists of ten contributed articles. The following list provides brief information on the articles accepted for this issue.

The issue starts with a paper by Dev Joshi (University of Scranton, USA) describing recent progress on the dependence of the irregularity parameter characterizing the equatorial ionospheric irregularities on the background ionospheric density. In the next article, contributed by Rai *et* al. (Tribhuvan University, Nepal), reports computational results on the electronic and the transport properties of Sr- site Substituted: $Ca_xSr_{(1-x)}VO_3$ based on density functional theory (DFT) and dynamical mean-field theory (DMFT) calculations. The third article is by Gautam *et* al. (Tribhuvan University, Nepal) on the star formation rate of the low redshift dwarf galaxies. The fourth article is by Silwal *et* al. which reports the ionospheric behavior through the changes in total electron content (TEC) during the par- tial eclipse by using the data archived at the five different global positioning system (GPS) stations of Nepal. The fifth article is by Shrestha *et* al. (Patan Multiple Campus, Tribhuvan University, Nepal) report their study of the variability of atmospheric ozone over Jumla in half period of 24 solar cycles. The sixth article is by Malla *et* al. (Central department of Physics, Tribhuvan University, Nepal) on spatial orientations of angular momentum vectors of galaxies in Supercluster S and substructures. The seventh article is by A. D. Pant (Institute of Materials Structure Science, High Energy Accelerator Research Organization, Japan)that provides a review of life science studies with muons. The eighth article is by GPS-TEC observations over Nepal during the total solar eclipse on 22 July 2009 by A. N. Shrestha and team (Department of Physics, Amrit Campus, Kathmandu, Nepal). The ninth paper is on the strain-induced electronic and optical properties of 2D silicon carbide monolayer using DFT by S. B. Sharma and team (Goldengate International College, Tribhuvan University, Nepal and Kathmandu University). Finally, the tenth article is on the structural energy distribution and particle-phase stability of longitudinal dynamics of a simple linear proton accelerator, which is a MATLAB-based simulation by R. Timalsina (Tribhuvan University, Nepal). Thus, these articles exhibit broad research activities currently undertaken by Nepali origin researchers in various institutions in Nepal and abroad. I hope that readers will find these articles interesting.

I would like to thank everyone for your contribution (authors, handling editors, reviewers, JNPS team) to this special issue of the Journal of Nepal Physical Society. Last but not the least, I appreciate and thank the ANPA Executive team for providing me this opportunity, NPS (Drs. N. P Chapagain, G.C. Kafle), JNPS Chief Editor (Dr. B. Adhikari), PRI (Dr. K. Adhikari) for their continuous support and cooperation during the whole editorial process.

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