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Editorial

Dear Readers,

Science is a journey of understanding the world through observation, experimentation, and reasoning. It brings innovation and helps address the challenges of the present time. The Jan-Mar '26 issue of *Mapana-Journal of Sciences* reflects this spirit of discovery and brings together a range of research contributions. Through this, the journal continues its commitment to promoting quality research and interdisciplinary learning.

The issue begins with a study by Dyama et al., which investigates Li_2O-doped borosilicate glasses. They reveal enhanced conductivity, thermal stability, and dielectric behavior. The study by Manjula et al., presents the development of chitosan-loaded PbS nanoparticles with enhanced multifunctional properties. Improved photocatalytic degradation of dyes, superior electrochemical performance, and strong antibacterial activity against E. coli are highlighted here.

In the field of Chemistry, Mallayya et al., presented a comparative analysis of indole derivatives that revealed enhanced excited-state dipole moments and intramolecular charge transfer characteristics through experimental and DFT approaches. Lingappa et al., investigate a coumarin-based molecule (4MPPC), demonstrating significant solvent-induced spectral shifts. Blessy et al., introduce a novel graph labeling scheme that connects number theoretic properties with graph theory structures.

The study of Antony et al., which investigates the whole domination parameter in zero-divisor graphs. Their work further extends these concepts to biomedical applications by demonstrating how whole domination can be used to identify minimal sets of biomarkers for efficient disease diagnosis. The study by Priya et al., examined the effects of glyphosate on the earthworm *Eudrilus eugeniae* using morpho-behavioral observation and biochemical biomarkers. The results showcased significant oxidative stress, increased lipid peroxidation, and an altered antioxidant enzyme activity. This further highlighted the ecological risks of glyphosate contamination. The study by Vithyadevi et al., introduces a fuzzy optimization framework for multi-item, multi-outlet inventory systems considering lead time and carbon emission costs. This model effectively minimizes total cost while addressing uncertainties inherent in real-world systems.

With the rapid growth of digital media, spreading fake news has been a challenge in modern society. The study by Devi et al., proposes a hybrid

deep learning framework (QRMHF-DNK) for fake news detection. High precision while minimizing sampling error demonstrates its effectiveness for reliable information classification. Developing the next generation of electronic and energy storage devices keenly depends on understanding the properties of advanced glass. This issue is concluded by the study by Thimmaiah et al., which investigates radon concentration levels in water samples from the Kaveri River basin in the old Mysuru region using Smart RnDuo measurements. The findings reveal significant variations in radon levels; several groundwater samples exceeded the recommended limits. This highlighted potential health risks and the urgent need for monitoring drinking water quality.

As we present this issue of our journal, we extend our heartfelt appreciation to all the authors, reviewers, editorial board members, and assistant editors whose contributions have made this publication possible. We gladly welcome you to connect with this issue, to engage and discover beyond this summary.

Dr Manoj Balachandran
Editor