Mapana – Journal of Sciences
2025, Vol. 24, No.4, *v-vi*
ISSN 0975-3303 | https://doi.org/10.12723/mjs.75.0

Editorial

Dear Readers,

Original thought and innovation form the cornerstone of the Mapana Journal of Sciences. On behalf of our editorial team, I am pleased to present the fourth issue of 2025 of the Mapana Journal of Sciences. This journal continues its commitment to publishing high-quality research and review articles across diverse scientific disciplines, including Mathematics, Astrophysics, Computer Science, Material Sciences, Life Sciences, and Chemical Sciences. We are confident that this edition will further strengthen our mission of publishing noteworthy works.

This issue opens with an article by Katageri et al., which presents an experimental and theoretical study of the photophysical properties of an iodinated coumarin derivative using solvatochromic methods and DFT calculations. This combined approach reveals enhanced excited-state polarity and promising nonlinear optical properties of the molecule. Choudhury et al., present a cost-effective and straightforward method for determining the Shockley-Read-Hall (SRH) recombination lifetimes in GaAs PIN solar cells using differential photoconductance. The factors, such as absorber thickness and electron-hole lifetime asymmetry, influencing the behaviour are highlighted.

With traffic, the time people spend inside vehicles has increased. Therefore, comfort and air quality have become essential aspects of modern automobiles. Sasikala et al., review the role of activated carbon charcoal in reducing odours and improving air quality in automotive textile interiors. The study by Oinam et al., examines the Chemoinhibitory effects of selected fruits from Manipur on calcium oxalate kidney stone in both aqueous and urinary media. The results were compared with the herbal drug Cystone to evaluate the relative antiurolithiatic effectiveness of the fruits.

Mosquitoes, as we all know, are the primary vectors of infectious diseases and therefore pose a significant threat to public health. The paper by Karan et al., examines the effects of NaCl on the morphology and biochemical aspects of *Aedes albopictus* larvae, highlighting its potential application as a safer larvicidal agent. The review by Saralaya et al., discusses the applicability of the plant part extracts of *Sapindus* species as green corrosion inhibitors. Velmurugan et al., presented a machine learning-based framework to analyse and predict the sugar content of foods using nutritional parameters. They go on to propose a personalised dietary recommendation model to support effective blood sugar management in diabetic patients.

The paper by Eswari et al., investigates extremal disconnectedness in neutrosophic nano topological spaces through the introduction of a neutrosophic nano mixed space. They focus on bio-mathematical applications. Iyer et al., track how groundwater quality in the Industrial belt of Chandrapur, Maharashtra, changes with the seasons. They concentrate on fluoride contamination and reveal how monsoonal recharge temporarily improves water quality. The paper by Mohan Kumar H. M. explores the anticancer potential of *Chrysopogon zizanioides* root and *Acorus calamus* rhizome extracts using the UMR-106 bone cancer cell line. This study demonstrates cytotoxic effects and reveals that *C. zizaniodes* effectively induces apoptosis, making it a promising plant-based anticancer agent.

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. Through this, Mapana continues to nurture knowledge that contributes to the positivity of science, society, and the future.

Dr Manoj Balachandran

Editor