

# Frontiers in Asymmetry

**Cheng Zhi Huang**

College of Pharmaceutical Sciences, Southwest University, Chongqing 400715, China

\* Correspondence author; E-mail: [chengzhi@swu.edu.cn](mailto:chengzhi@swu.edu.cn).

Due to the unidirectionality of time, the world is inherently asymmetric. This asymmetry spans from photons and elementary particles to the entire universe. Therefore, I believe that symmetry, a gift from nature, is merely a special case of asymmetry at different scales.

We are familiar with several fundamental constants, including the gravitational constant ( $G$ ), Planck's constant ( $h$ ), the vacuum speed of light ( $c$ ), and the Boltzmann constant ( $k$ ). These constants define the Planck length, which is much smaller than the characteristic length scale of particle physics. At the Planck scale, even symmetric gravitational fields become asymmetry, and the perfect Lorentz symmetry displays rich quantum structures. Although current asymmetric detection techniques cannot perfectly distinguish these asymmetries, the combined symmetry of Charge, Parity, and Time Reversal (CPT) links the behavior of particles and antiparticles.

It is precisely for this reason that we launched the journal *Asymmetry*, aiming to explore the universality and specificity of asymmetry from various perspectives and disciplines, from theory to practice. Whether it is the mathematical analysis of classical mechanics, equation solving of quantum mechanics, topological description of material structures, behavioral characterization of information particles, development of new material or drugs, discovery of asymmetrical phenomenon in nature, construction of social and economic models, or other ubiquitous asymmetric phenomena, they are all of interest to this journal!

To achieve our goals, *Asymmetry* has assembled a large editorial board of experts across fields such as algebra, optics, particle physics, astrophysics, synthetic chemistry and biology, biomaterials and biomedical science, immunology, informatics, artificial intelligence, sociology, and economics. I believe that with the efforts of the editorial board members, *Asymmetry* will become a comprehensive publication featuring cutting-edge basic research, technological development, and insights into social evolution.

*Asymmetry* is a peer-reviewed open access journal dedicated to the publication of original research, communications, reviews, perspectives, reports, and commentaries covering a wide range of topics related to asymmetry in various fields, including but not limited to:



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- Asymmetry in algebra
- Asymmetry in the life sciences and biological systems
- Asymmetric synthesis and catalysis
- Asymmetry in physics and its applications
- Asymmetry in social science
- Asymmetry in information science

*Asymmetry* is a dedicated platform for you to express your asymmetric, unconventional and unique ideas, and it will undoubtedly become a cherished companion for your intellectual journey!