

Launching *The Innovation Physics*: A trusted platform for innovative physical research

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Physics is entering a period in which matter, information, and energy are no longer only objects of explanation, but increasingly become programmable infrastructures for future technologies. Quantum materials can be designed, controlled, and interrogated at the atomic scale; extreme conditions reveal phases of matter inaccessible in ordinary environments; large-scale facilities, ultrafast probes, quantum devices, and artificial intelligence are reshaping the speed and style of discovery. At the same time, traditional disciplinary boundaries are becoming less rigid, bringing fundamental physics into ever closer contact with materials science, information technology, energy research, computation, and engineering. Space and astroparticle physics exemplify this convergence, building on the foundations of nuclear and particle physics, plasma physics, gravitation and relativity, to explore fundamental processes and some of the most energetic and extreme phenomena in the Universe. In this changing landscape, the physics community needs dissemination venues that are not only broad, but also selective, principled, and intellectually coherent.

The Innovation Physics (TIP) is launched to meet this need. We do not aim to be a journal that merely covers “all areas of physics” in the conventional encyclopedic sense. Our purpose is sharper: to publish work that changes how physicists understand, measure, compute, design, or apply physical systems. In our view, true innovation in physics is not equivalent to novelty alone, nor to technical complexity, nor to a claim that sounds spectacular. Innovation means a reliable advance in physical understanding: a new phenomenon established with convincing evidence; a new mechanism that explains more than a fitted curve; a new method that opens a generalizable route; or a scalable physical principle that can move from discovery toward devices, platforms, or technologies.

Our scope is broad, but not vague. We welcome outstanding work in condensed matter and materials physics, including superconductivity, topology, magnetism, correlated electrons, low-dimensional systems, surfaces and interfaces, and emergent quantum phases. We seek contributions in quantum information, quantum devices, low-temperature electronics, topo-

logical quantum matter, and solid-state platforms for quantum technologies. We welcome atomic, molecular, optical, ultrafast, and precision-measurement physics; plasma physics and fusion-related physics to space physics, astrophysics, and astroparticle physics; statistical physics, soft matter, nonlinear dynamics, and complex systems; astrophysical and cosmic physics when the physical insight is central; and physics-driven computational, experimental, and methodological advances, including interpretable machine learning, autonomous experimentation, and data-intensive discovery.

Equally important, we will be cautious with manuscripts that rely on a single irreproducible measurement, offer only incremental parameter optimization, present curve fitting without a physical mechanism, or make extreme claims without independent validation. High-impact claims—such as room-temperature superconductivity, unconventional quantum phases, beyond-standard-model signals, revolutionary device performance, or extraordinary energy conversion—will be assessed with a higher evidential threshold. Such papers should provide transparent raw data, control experiments, uncertainty analysis, independent confirmation when feasible, and a clear account of alternative explanations.

We will evaluate submissions according to five practical criteria: **novelty, technical soundness, presentation, implications, and language quality**. First, does the work offer sufficient novelty and advance beyond the existing state of knowledge? Second, is the study technically rigorous, with evidence and analysis that fully support its central claims? Third, is the underlying physical picture presented clearly and accessibly, including to readers beyond the immediate subfield? Fourth, does the work carry broader scientific implications and help open meaningful paths forward—through theory, experiment, computation, instrumentation, or application—that may influence future research? Finally, we also value the quality of scientific writing. Clear, precise, concise, and well-structured language is an essential part of effective scientific communication and will be considered as part of the overall assessment.

Research integrity will be non-negotiable. We expect authors to make data, materials, and code available whenever they are integral to the study, following principles of openness and reproducibility while respecting legitimate constraints such as privacy, safety, intellectual property, or facility agreements. We will ask for clear statements on data and code availability, author contributions, funding, competing interests, and the use of AI-assisted tools. AI may help improve language and readability, but it cannot replace scientific reasoning, data analysis, authorship responsibility, or citation verification. Image integrity, raw-data traceability, and consistency among figures, methods, and conclusions will be checked with appropriate seriousness. Plagiarism, duplicate publication, manipulated images, fabricated data, citation coercion, and undisclosed conflicts of interest will be treated as breaches of trust, not as technical mistakes.

A modern physics journal should also serve as infrastructure for the community. We will support article types and editorial formats that fit the changing practice of physics: full research articles, concise letters, authoritative reviews, perspectives, commentaries, news-style discussions, methodological papers, benchmark datasets, and reproducible workflows when appropriate. We will encourage papers that connect large-scale facilities, standardized metadata, interpretable theory, and automated experimentation. The goal is not to celebrate expensive hardware, but to publish work in which new tools create new physical knowledge.

Community building will be central to the journal's development. Special



Figure 1. Journal vision: Innovation Press emblem reimagined as a prism, dispersing white light into a spectrum to symbolize trusted evidence supporting diverse advances in physics.

issues and collections should be driven by genuine scientific momentum, not by fashionable labels. Guest editors will be selected for expertise, judgement, and fairness, and each topic should have a clear physical boundary, timeline, and editorial standard. We will encourage the participation of early-career scientists through youth editorial roles, reviewer mentorship, and opportunities to contribute perspectives on emerging fields. A strong journal is not built only by senior names; it is built by a community that learns to recognize quality together.

As a journal established in China, *TIP* should not be taken as a regional container for local output. It must be an international forum where high-quality work from China and around the world is judged by the same standards, discussed in the same language of evidence, and made openly accessible to the global community. The real value of developing a leading physics journal from China is to help reshape the scientific communication around quality, transparency, and intellectual independence.

We launch *TIP* with humility and ambition. Humility, because the trust of authors, reviewers, and readers must be earned paper by paper. Ambition, because physics deserves publication venues that can recognize risky long-

term work, interdisciplinary depth, negative but clarifying results, platform-level advances, and mechanism-rich discoveries that may not fit easily into existing categories. We invite researchers to submit their strongest work, to review with fairness, efficiency, and courage, to challenge us when our decisions can be improved, and to help shape the journal into a public infrastructure for physical science. Our commitment is simple: **quality before quantity, evidence before excitement, and lasting physical insight before short-lived attention.**

On behalf of the Editorial Board, we invite you to join us in building this platform. Let us collectively ensure that physics remains not only a testament to human curiosity but also a beacon guiding our technological and societal future.

DECLARATION OF INTERESTS

Xianhui Chen and Felix Aharonian are Editorial Board members of *The Innovation Physics* and were blinded from reviewing or making final decisions on the manuscript. Peer review was handled independently of these members and their research groups.