

Papers Invited

The Biophysicist

Editor-in-Chief: Sam Safran, Weizmann Institute of Science

The Biophysicist is a peer-reviewed journal dedicated to highlighting and nurturing biophysics education, and its scholarship and development.

The Biophysicist is accepting original manuscripts from the international science community and invites submissions from scientists and educators in biophysics and related disciplines. The articles focus on fundamental concepts and techniques used in biophysics education, as well as evidence-based pedagogical practice, accessible to individuals at all levels.

Research Articles to be peer reviewed are invited in the following categories:

- Novel Learning and Teaching Approaches
 - These articles include new methods of teaching experimental and theoretical biophysics at the molecular, cellular, and systems levels. Articles and tutorials describing novel approaches to the teaching of specific subject matter, active learning methods, assessment techniques, or curricular design will provide insights into the intellectual infrastructure in the field. This helps ensure that biophysics-related biology, chemistry, engineering, or physics topics can be taught effectively. Scholarly articles on the intellectual history of biophysics or on the scientific impact of key biophysics papers are also welcomed, but they should include discussion of their use in teaching and learning biophysics. Novel research findings per se, should be submitted to research journals, such as *Biophysical Journal*.
- Laboratory and Computational Teaching Tools
 - Articles that outline new research technologies, approaches, and internet-based resource collections, including in-vivo, chemical, physical, and computational studies, with an emphasis on assessments of student learning needs and/or the impact of such teaching tools on biophysics learning. These can include videos, computer simulations, programs, or interactive online resources.
- Research-based Studies of Student Learning
 - Studies of innovative problem-solving approaches, exploratory or "flipped" instruction, as well as curricular units that have been reformulated to improve their effectiveness in facilitating learning or addressing student misconceptions.
- Biophysics Learning Perspectives
 - Mini-reviews and tutorials that pedagogically survey a subfield of contemporary biophysics (e.g., single-molecule spectroscopy, mechanobiology, protein folding dynamics and structure, macromolecular interactions). The Perspectives will be geared towards the learning of fields by relative novices and must include discussion of their

place in the biophysics curriculum, as well as guidance on how the article can be used in the classroom. Reviews aimed at researchers should be submitted to the appropriate research journals.

- Adapted Research Articles
 - APL (Adaptation of Primary Literature) allows beginners in a field to comprehend fundamental research papers of important impact using condensation, definition of terms, and inclusion of extended "boxes" depicting the chemical, biological, mathematical, experimental, or physical background needed to properly understand key concepts. The papers can be written by the original authors or by others (with appropriate permissions obtained for quoting text, figures etc.).

Brief Reports to be assessed by the Editorial Board are invited in the following areas:

- Biophysics and Related Disciplines
 - Reports highlight newsworthy information on the role of biophysics in related areas (e.g., chemistry, physics, biology, engineering, technology, and health) with a focus on recent advances that impact biophysics summarized from the scientific literature of those fields. These should be written at the level of an upper-level undergraduate student in biophysics.
- Biophysics in Society
 - Reports of activities in the biophysics community in both academia and industry that focus on careers, graduate student mentoring, postdoc searches, and mentoring of faculty in teaching institutions. Accounts of activities aimed at outreach (K-12, general community), diversity and inclusion, and best educational practices.
- Student Forum
 - Contributions from students and postdoctoral trainees on issues important to them to provide their unique perspective on biophysics and the current state of scientific training. Examples include: lessons from TA experiences, suggestions for alternative approaches to the teaching of biophysics and related disciplines, suggestions for new mentoring and career development topics, scientific activities of BPS Student Chapters. These can range from a few paragraphs to half a journal page. More extensive treatments can be submitted as a Report (1–2 journal pages and assessed by an Editorial Board member) or, if appropriate, as a research-based manuscript that is a peer reviewed Article as defined above.
- Book Reviews and Comments
 - Book reviews of textbooks or other educational publications. Research monographs per se, are best reviewed in other publications. Short notes on articles that have previously been published in *The Biophysicist*.

For additional information about these article types, the Editorial Board and more, visit

<https://www.thebiophysicist.org/>

Articles may be submitted to <https://thebiophysicist.msubmit.net>

Please consult the **Instructions for Authors** for additional information

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For questions and inquiries, contact thebiophysicist@biophysics.org