

***Biophysics and Physicobiology* (ON-LINE JOURNAL)**

INSTRUCTIONS FOR AUTHORS

Biophysics and Physicobiology is the official on-line journal (e-journal) of the Biophysical Society of Japan (BSJ). This journal inherited all the assets of *BIOPHYSICS*, the former BSJ official journal and expanded its scope to keep abreast of the future direction of the field.

Biophysics has covered a broad range of biological and physical issues and *BIOPHYSICS* has played a role of a research forum for researchers from different backgrounds including physicists, biologists, engineers and so forth. Among the biophysicists, a quantitative consideration for biological issues based on physical and mathematical principles has been the common basis of this forum. Biophysics now spans all scales of biological organization, from the molecular scale to whole organisms and ecosystems, and hence biophysical research demonstrates significant overlaps with biochemistry, physiology, cell biology, nanotechnology, bioengineering, computational biology, systems biology, theoretical biology and so forth, and the field has evidently grown over the first idea in "biophysics". This outgrowth has been realized by the enthusiastic integration of ideas from physicists and biologists on various biological issues. *Biophysics and Physicobiology* is a forum for the discussion between physicists studying biology and biologists studying physics. By including the term *physicobiology* in the name of the journal, we intend to widen the scope of the journal to broader range of biologists and further stimulate the exchange of ideas among the biophysicists.

Based on the ideas above, *Biophysics and Physicobiology* widely covers the topics of physiology, molecular and cellular biology, genome biology, systems biology, synthetic biology, bioinformatics, mathematical biology, quantitative biology, photobiology, mechanobiology, thermobiology, neuroscience, behavioral biology, developmental biology, quantum biology, radiobiology, and rising fields of biology under the extreme environments, space life science, nanobiology, and other various fields of biology. These fields can be represented by, but not limited to, the following keywords: protein (structure, function, expression, measurement and analysis); nucleic acid (structure, function, expression, measurement and analysis); genome (structure, function, interaction, measurement and analysis); biological and artificial membrane (structure, function, dynamics, synthesis, excitation and channels, transport); molecular motors; electronic state; hydration and electrolyte; chemoreception; neuronal circuit and information processing; vision and photoreception; photosynthesis; signal transduction; origin of life and evolution; nonequilibrium state; biological rhythm and so forth.

We intend to provide the biophysicists in the Asia-Pacific area the opportunity to publish original research in *Biophysics and Physicobiology*. Scientists from Australia, China, Hong Kong, India, Korea, Singapore, Taiwan, as well as Japan, have been invited to serve as Associate Editors. To make the Asia-Pacific region a world leading center of biophysics, submission of papers is encouraged not only from the Asia-Pacific region, but also from all over the world.

Articles that *Biophysics and Physicobiology* publishes are categorized into (1) Regular Articles, (2) Review Articles, (3) Notes, (4) Experimental Methods and Protocols, (5) Hypotheses and Perspectives, and (6) Databases and Computer Programs.

Regular Articles are the main category of the journal and must be prepared in accordance with the instructions provided below. Review Articles summarize a particular aspect of biophysical research. Most of the Review Articles are invited, but contributed Review Articles are also welcome (please send inquiries with an outline to the Editor-in-Chief before sending the manuscript). Notes are short articles that are not necessarily categorized into Regular Articles because of the content, containing important information on new devices and/or new ideas (comments) that are useful for researchers working in the field of biophysics. Experimental Methods and Protocols cover new methods or significant new advancement of established methods that will be widely applicable to the field of experimental biophysics. Hypotheses and Perspectives should present a novel idea or a new interpretation of the established observations. The goal of this category is to encourage critical evaluation of the concepts, idiosyncratic viewpoints, and challenges to ideas. However, the manuscript should go through rigorous review, and the ideas should be based on sound data without excessive speculation. Databases and Computer Programs should be a description of the core data or software that would be useful for biophysics studies. The databases/computer programs should be available via website designated by the authors or via *Biophysics and Physicobiology*. The review process of this category is based on the functionality of the database/computer program.

We welcome a proposal of a topic for Special Issue from the members of the Society, the Editorial Board, Associate Editors and Advisory Board. The proposer should contact the Editor-in-Chief directly, and may take on the duty of a Deputy Editor. Note that these special issues are not invited, but all the manuscripts are reviewed and the publication and page charges must be paid. In addition, the proceedings of a scientific meeting can be considered for a special issue publication.

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[7] Harada, Y., Funatsu, T., Murakami, K., Nonoyama, Y., Ishihama, A. & Yanagida, T. Single-molecule imaging of RNA polymerase-DNA interactions in real time. *Biophys. J.* **76**, 709–715 (1999).

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- [8] Komatsu, H., Hayashi, F., Sasa, M., Shikata, K., Yamaguchi, S., Namba, K., *et al.* Genetic analysis of revertants isolated from the rod-fragile fliF mutant of Salmonella. *Biophys. Physicobiol.* **13**, 13–25 (2016).
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[12] Go, M. Protein structures and split genes. in *Adv. Biophys.* (Kotani, M. ed.) vol. 19, pp. 91–131 (Japan Sci. Soc. Press and Elsevier Sci. Pub., Tokyo and Limerick, 1985).
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[15] Oosawa, F. & Asakura, S. *Thermodynamics of the Polymerization of Proteins* (Academic Press, New York, 1975).

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Revised 30th, October, 2017.