Special Issue

Recent Advances in Quantum Biology

Message from the Guest Editor

One of the great challenges of modern science is to bridge the gap between atomic and cellular level phenomena that affect outcomes in living systems. A potentially transformational facet of this challenge is quantum biology: understanding how quantum properties play governing roles in biological functions. For example, key mechanisms for bird navigation, olfactory sensing, and photosynthesis implicate quantum effects in biological systems. The defining feature of quantum biology is that quantum effects such as coherence and superposition are found at room temperature, in wet environments that typically have lots of motion. Implementation of these principles can lead to a new generation of bio-inspired quantum technologies that can function at ambient temperature and will change the way we think about our world, with applications for improved regenerative medicine, enhanced wound healing, improved human performance, efficient solar energy harvesting, and vision based magnetoreception.

Guest Editor

Dr. Carlos F. Martino
Sr. Professional Staff II, Johns Hopkins University Applied Physics Laboratory, Laurel, MD, USA

Deadline for manuscript submissions

closed (31 December 2021)

Quantum Reports

an Open Access Journal by MDPI

Impact Factor 1.3
CiteScore 3.0

mdpi.com/si/60711

Quantum Reports
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
quantr@mdpi.com

mdpi.com/journal/quantumrep

Quantum Reports

an Open Access Journal by MDPI

Impact Factor 1.3
CiteScore 3.0

mdpi.com/journal/quantumrep

MDPI

About the Journal

Message from the Editor-in-Chief

We get more and more evidence that quantum theory is the correct description of nature. It was born a century ago by explaining a few paradoxical results that could not be understood in the framework of classical physics. Today, quantum physics leads technological revolution in metrology, communication, computation, and the design of novel materials. Still it needs more solid foundations, and we need to develop a deeper understanding of how it can be used for new applications.

Quantum Reports is an online, open-access journal providing an advanced forum for clarifying foundations of quantum theory and developing its applications in all fields of physics and technology. *Quantum Reports* is inviting innovative and insightful contributions from the growing community of researchers of quantum science.

Editor-in-Chief

Prof. Dr. Lajos Diósi
1. Wigner Research Center for Physics, H-1121 Budapest, Hungary
2. Institute of Physics and Astronomy, Eötvös Loránd University, H-1117 Budapest, Hungary

Author Benefits

High Visibility:

indexed within ESCI (Web of Science), Scopus and other databases.

Journal Rank:

CiteScore - Q2 (Physics and Astronomy (miscellaneous))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.8 days after submission; acceptance to publication is undertaken in 3.7 days (median values for papers published in this journal in the second half of 2025).