

Special Issue

Second Quantum Revolution: Sensing, Computing, and Transmitting

Message from the Guest Editors

The Old Quantum Physics introduced concepts such as the quantum of action and the photon. The First Quantum Revolution saw the birth of the Quantum Mechanics that paved the way to the transistor, the laser, and the nuclear energy exploitation—inventions that deeply changed our society. The Second Quantum Revolution, currently underway, promises extremely sensitive sensors (quantum sensors), increasingly secure transmissions (quantum information), and unprecedented computing capabilities (quantum computing). The technological impact appears to be extraordinary in several fields, spanning from molecular engineering to cryptography, financial modeling, and environmental sustainability. This Special Issue is focused on, but not limited to, the following topics:

- Physical implementation of qubits and quantum gates;
- Cryogenic microelectronics for qubit control and readout;
- Quantum algorithms;
- Quantum antennas;
- Quantum optics;
- Quantum clock ;
- Quantum data processing and quantum radar;
- Quantum sensing and imaging;
- Quantum cryptography and cybersecurity;
- Quantum internet;
- Quantum information theory;
- Quantum neural network.

We look forward to receiving your contributions.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

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