photonics

an Open Access Journal by MDPI

IMPACT FACTOR 2.4

CITESCORE 2.3

Quantum Enhanced Devices and Instruments for Sensing Applications

Guest Editors:

Dr. Yanhui Hu
Institute of Molecular Physical Science, ETH Zurich, Vladimir-Prelog-Weg 1-5/10, 8093 Zurich, Switzerland

Dr. Kai Wei
School of Instrumentation and Optoelectronic Engineering, Beihang University, Beijing 100191, China

Deadline for manuscript submissions:
closed (10 May 2024)

Message from the Guest Editors

Quantum-enhanced sensors enable us to acquire unprecedent sensitivity and precision for many measurements and explorations in various scenarios, including but not limited to electric and magnetic fields, acceleration, gravity and exotic forces. At present, the question of how we can develop more versatile quantum sensors and further improve their performance for sensing applications is attracting great interest from researchers. This Special Issue is expected to advance and develop novel quantum-enhanced sensing technology and related techniques. Topics include, but are not limited to, the following:

- Novel design and simulation of quantum sensors;
- Progress on improvement on quantum enhanced sensors and systems;
- Novel principles and technology on light-matter interactions;
- Optical detection techniques;
- Signal detection and control of photonics devices;
- Advanced manufacturing and integration technologies;
- Noise analysis and suppression methods;
- Applications using quantum enhanced sensors;
- Other quantum metrology with optical systems.

mdpi.com/si/169742

Special Issue