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Design and Application of Quantum Sensors

Guest Editor:

Dr. Weijian Chen

Department of Physics, Washington University, St. Louis, MO 63130, USA

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Message from the Guest Editor

Dear Colleagues,

Quantum sensing takes advantage of the unique properties of quantum systems, including quantum squeezing, superposition, and entanglement, to measure various physical quantities, such as magnetic field, electric field, temperature, acceleration, rotation, time, and frequency. Recent advances in quantum state preparation, control, and detection have enabled quantum sensing applications with unprecedented sensitivity and precision. Quantum sensors have been realized in many physical platforms from photons, neutral atoms, trapped ions, and solid-state spins to superconducting circuits and found novel applications in high-resolution magnetic resonance spectroscopy, noise spectroscopy, and dark matter detection, to name a few.

This Special Issue on the "Design and Application of Quantum Sensors" aims to highlight the latest advances of this field and is open to both original research papers and review articles, with particular emphasis on new design and sensing protocols for quantum sensors and their real-world applications.

For more information, please see: mdpi.com/si/128094













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Prof. Dr. Vittorio M. N. Passaro

Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, Italy

Message from the Editor-in-Chief

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