Special Issue

Optical Resonators for Precision Metrological Devices

Message from the Guest Editor

In the past decades, optical resonators have been demonstrated to be capable of measuring extremely small perturbations. By manipulating the dispersion spectrum experienced by the laser field inside an optical resonator, the sensitivity of such a device can be improved further. Recently, efforts have been dedicated to improving sensitivity and bandwidth while reducing the dimensions of optical-resonator-based sensing devices. However, quantum noise analysis of active dispersive optical resonators, which is crucial for sensing devices, is still under investigation. Future advances would lead to more practical and miniaturized accelerometers, gyroscopes, and detectors for fundamental physics research. This Special Issue will focus on the development of metrological devices with high precision utilizing active or passive optical resonators for inertial gyroscopes, gravitational wave detection, and dark matter search. Researchers are invited to submit their contributions to this Special Issue. Potential topics include (but are not limited to): optical resonators nonlinear optics light–atom interaction laser gyroscopes interferometers white light cavity

Guest Editor

Dr. Zifan Zhou
Department of ECE, Northwestern University, 2145 Sheridan Rd, Evanston, IL 60208, USA

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

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You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

Editor-in-Chief

Prof. Dr. Nelson Tansu
School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

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