



Single Photon Avalanche Diodes and Superconducting Nanowire Single Photon Detector

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Message from the Guest Editors

Single photon detection has gained a prominent role in the measurement of optical signals, driven by the need for ultimate sensitivity and temporal resolution in various scientific and industrial applications.

Different technologies and materials have been successfully exploited to reach single photon sensitivity. Remarkable results have been achieved with semiconductor devices as Single Photon Avalanche Diodes (SPADs), both in single channels and arrays, and their number-resolving counterparts, Silicon Photomultipliers (SiPMs). Even higher performance, but at the expenses of a higher cost and complexity, can now be routinely achieved with superconducting materials arranged in nanostructure like in Superconducting Nanowires Single Photon Detectors (SNSPDs).

This Special Issue of *Applied Sciences* on “Single Photon Avalanche Diodes and Superconducting Nanowire Single Photon Detectors” is dedicated, but not limited to the following aspects of single photon detectors:

- physical modeling
- device design and development
- fabrication
- front end and processing electronic
- applications of single photon detectors





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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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