



S3IC 2023

Single-Molecule Sensors and nanoSystems
International Conference

November 22-24, 2023 | Barcelona

CALL FOR PAPERS – S3IC 2023

Sensor systems exhibit extraordinary sensitivity for detecting physical, chemical, and biological entities at the micro/nanoscale. The detection and analysis of molecules on miniature devices that have many possible applications in health, environment, analysis, and security is particularly exciting. A new class of label-free micro and nanosensors is starting to emerge allowing us to observe dynamic processes at the single molecule level directly, with unprecedented spatial- and temporal resolution and without significantly affecting the natural and functional movements of the molecules. Micro- and nanosensors by virtue of their small interaction length probe molecules over a dynamic range often inaccessible by other techniques. Their small size enables an exceedingly high sensitivity, and the application of quantum optical measurement techniques can allow us to approach or surpass classical limits of detection. Advances in optical and electrical measurement methodology, laser interferometry, quantum optics, micro/nanofluidics, control of molecules and reactions at the nanoscale, DNA origami/synthetic molecular machines, in-vivo and wearable sensing materials, all contribute to the rapid progress of the field of Single Molecule Sensors and nanoSystems. It is this convergence of previously often disparate fields that is accelerating the advancements in micro and nano-sensing.

This conference will bring together researchers in the rapidly advancing field of Single Molecule Sensors and nanoSystems. The conference focusses on the most recent advances in micro and nano-sensing techniques that have either demonstrated single-molecule detection or that claim single-molecule detection capability on sensor chips in the longer term.

Topics of interest include, but are not limited to:

- Single-Molecule Spectroscopy, Imaging, and Forces
- Micro/Nanofluidics/Chemical control at the Nanoscale
- Molecular Machines, Synthetic Biology, and DNA Origami
- Single-molecule Sensors and Sequencers
- Molecular Electronics
- From Quantum Sensing to Quantum Biology
- Nanothermodynamics in experiments and theory
- Computational approaches

Important Dates:

- Early bird Submission: June 30th, 2023
- Early bird Registration: July 28th, 2023
- Submission: September 22nd, 2023
- Notification to authors: October 16th, 2023
- Registration: October 27th, 2023
- Conference: November 22nd-24th, 2023

Guidance for authors:

The submission must be done here: <https://s3ic2023.exordo.com/>

You must create your own account. This abstract management system enables you to manage your submission as you wish.

Proceedings & Publishing:

- Nanophotonics

More information about the publication is available [here](#).

<https://www.premc.org/S3IC>
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