

Final Call for Abstracts

International Workshop on Semi-conducting Nanomaterials for Health, Environment and Security Applications



**Grenoble, France
November 6-7, 2018**

<https://nano2sense.sciencesconf.org/>

General Scope

Rapid on-site detection of molecular species using sensors, with remote data transmission is a growing field of research. The applications are multiple, including for example, point of care diagnosis, patient follow up, environment monitoring (air and water quality), agriculture and food processing. It requires the development of innovative sensors that must be sensitive, selective, robust and reliable, and based on a label-free detection technique so that the species to be detected do not need to be labeled first. Electrical detection is perfectly adapted to these specifications and compatible with the technologies of microelectronics. The workshop addresses the use of semi-conducting nanomaterials as transducers.

Their elaboration, functionalization and integration in miniature devices is a real challenge requiring a perfect control of many fabrication steps. During this international workshop, the last achievements on semi-conducting materials with various architectures such as nanoparticles (0D), nanowires (1D) and thin nanostructures (2D) will be presented, as well as their application to the electrical detection of various biological molecules.

Topics

- 0D semi-conducting nanostructures: nanoparticles.
- 1D semi-conducting nanostructures: nanowires, nanotubes.
- 2D semi-conducting nanostructures and nanowire networks: nanonets, arrays.
- Devices for electrical detection: design, modelling, fabrication.
- Development of innovative detection methods based on electrical properties.

Workshop Schedule

Tuesday 6th Nov.	Technical sessions + poster session
Wednesday 7th Nov. morning	Technical sessions

Confirmed Invited Speakers

- Muhammad A. Alam, Purdue University, USA
- Max Lemme AMO GmbH, RWTH, Germany
- Sandrine Bernardini, Aix-Marseille Univ., France
- Per-Erik Hellström, KTH, Sweden
- Carlotta Guiducci, EPFL, Switzerland
- Sven Ingebrandt, RWTH, Germany

Contributions

A **short abstract** must be submitted on the website before **September 25th, 2018**. Abstract template is available for download at:

<https://nano2sense.sciencesconf.org/>

Publication of papers

Authors of accepted abstracts could provide a paper, which could be published in a special Issue of:

- Material Research Express - IOP Science
- ISTE OpenScience - Nanoelectronic-Devices

Organization Committee

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*Grenoble, France

Important dates

- **Sept. 25th, 2018:** Extended Deadline for abstract submission
- **Oct. 8th, 2018:** Deadline for advanced registration
- **Nov. 6-7th, 2018:** Workshop