

岡山

OptoX-NANO 2019

*Current challenges of key enabling nanomaterials for emerging technologies:
Optical, X-ray metrology and rational material design*



2nd – 5th December, 2019

Okayama Convention Center, Okayama Japan

Submission deadline: 1 September, 2019

The second edition of OptoX-NANO conference is aimed at:

- giving an overview of:
 - a) current challenges for rational material design and emerging devices modelling and design and
 - b)the current status and future trends of optical, THz and X-ray metrology for key enabling nanoscale material characterization for emerging technologies, with a particular emphasis for ICT, renewable energy, health applications and heritage conservation.
- promoting and encouraging the interaction between worldwide academics and in particular Japanese, and European, US and Asia academics within all these emerging fields of science and technologies that are expected to have a significant societal impact
- promoting and encouraging young researcher interaction with worldwide academics and industry representatives.
- promoting and encouraging the interaction between academics and instrument manufacture to address scientific and technological challenges associated with the improvement of standard analytical methods and qualification of newer techniques suitable for addressing the needs for the emerging technologies of the future at nanoscale.

Conference Organizers:

Prof. Kenji Tsuruta, Okayama University, Japan
Dr. Mircea Modreanu, Tyndall National Institute-University College Cork, Ireland
Prof. Olivier Durand, UMR FOTON, CNRS, INSA, Rennes, France

Co-organisation (TBC):

Okayama University,
RIKEN (Spring-8),
Tyndall National Institute-University College Cork

Contact:

jointevent@ec.okayama-u.ac.jp

Website:

<http://opto-x-nano.com>

Scope:

Metrology for Novel and Advanced Materials

Energy materials and devices (Catalysts, Nanocarbons, 2D materials, Thermoelectrics, β -Ga₂O₃, Perovskites, SiC; Next Generation Solar cells, Energy Harvesting)
Bio-related materials (Proteins, Cancer Cells, in-vivo characterization ...)
Materials for New Mobility (Batteries, Supercapacitors, Fuel cells, CFRPs...)
Materials and devices for Information Technology and Photonics

Novel Metrology and Measurements Systems

Spectroscopic Ellipsometry (from UV to THz)
High intense field (Synchrotron/High power laser)
Microwave/Terahertz Science and Applications
Raman/SERS/TERS/Nano-IR/Nano-Photoluminescence and Cathodoluminescence
Ultrafast Spectroscopy/ Optical Pump-probe techniques
High Resolution Transmission Electron Microscopy

Synchrotron

Image processing, Real time experiments, Time-resolved methods

Modeling/Simulation of Materials and Devices:

First principles methods (DFT/Hybrid DFT, TDDFT), Mesoscale/Multiscale modelling and

simulation (Hybrid FDTD-TDDFT), Machine-learning algorithms for material/device design

Metrology for Cultural Heritage

Industrial Applications: ICT, Photonics, Health, Renewable Energy and Energy Storage, New instrumentation

Networking

Presentations of major Programs to support and strengthen Research proposals and projects

**ERASMUS (Europe) programs

** H2020 and successor: Horizon Europe (from 2021)

** HFS: Human Frontier Science program (Health and Biology oriented)

** E-NCP (Europe National Contact Point)

** JSPS / JST

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