

WEDNESDAY 29

09,00-10,00

Conference Registration

Plenary

10,00-10,30

Sumio Iijima (Meijo University, Japan)

"To be defined"

Keynote Speaker

10,30-11,00

Uzi Landman (Georgia Tech, USA)

"Small is different: adventures and surprises in nanoscale computational microscopy"

Keynote Speaker

Break / Poster session

Graphene & Nanotubes

11,20-11,50

Stephan Roche (ICN2, Spain)

"Do we understand the Dirac Point (Spin) Transport Physics in Graphene?"

Keynote Speaker

11,50-12,20

Andras Kis (EPFL, Switzerland)

"Single-layer MOS<sub>2</sub>-2D devices and circuits beyond graphene"

Keynote Speaker

12,20-12,30

Gemma Rius (Nagoya Institute of Technology, Japan)

"Control of graphene deposition on SiC by ex situ and in situ surface conditioning of SiC"

Oral Contribution

12,30-12,40

Markus Ahlskog (University of Jyväskylä, Finland)

"Electronic transport in multiwalled carbon nanotubes"

Oral Contribution

12,40-12,50

Lin Yang (Weizmann Institute of Science, Israel)

"Molecular Dynamics analysis on crack initiation and extension of defective single walled carbon nanotube"

Oral Contribution

12,50-13,00

Koji Ishibashi (Tokyo Institute of Technology, Japan)

"Carbon nanotube nanostructures with molecular heterojunctions"

Oral Contribution

Lunch break / Poster session

Graphene & 2D materials

14,00-14,30

Yoichi Ando (Osaka University, Japan)

"Transport Studies of Topological Insulators"

Keynote Speaker

14,30-15,00

Andrea C. Ferrari (Univ. of Cambridge, UK)

"Graphene Spectroscopy and Photonics"

Keynote Speaker

15,00-15,10

Bruno Dlubak (Unité Mixte de Physique CNRS/Thales, France)

"Graphene: new venues for spintronics"

Oral Contribution

15,10-15,20

Eiji Osawa (NanoCarbon Research Institute, Japan)

"Structure of detonation nanodiamond"

Oral Contribution

Nanomaterials

15,20-15,30

Amir Pakdel (NIMS / MANA, Japan)

"Interface Engineering of Hierarchical BN Nanostructure Films"

Oral Contribution

15,30-15,40

Xianmao Lu (National University of Singapore, Singapore)

"Smart" nanomaterials for seawater desalination"

Oral Contribution

15,40-15,50

Atsushi Nagai (Institute for Molecular Science, Japan)

"Preparations and Functions of Conjugated Covalent Organic Frameworks"

Oral Contribution

Break / Poster session

Nanomaterials & Nanodevices

16,20-16,50

Hiroyuki Sakaki (Toyota Tech. Institute, Japan)

"Recent progress in self-organized growth of quantum dot and wire structures and their advanced device applications"

Keynote Speaker

16,50-17,10

Markus Maier (Omicron Nanotechnology, Germany)

"New Experiments and Applications Made Possible by a Low Temperature 4-Tip STM with UHV-SEM Navigation"

Invited Speaker

17,10-17,30

David Peyrade (LTM-CNRS, France)

"SMART FORCE: From A colloidal droplet to the chip - from fundamental research to business opportunities"

Invited Speaker

17,30-17,50

Gilgueng Hwang (LPN-CNRS, France)

"Nanorobotic swimmers: fabrication, control and applications"

Invited Speaker

17,50-18,10

Lukas Gerhard (KIT, Germany)

"A graphene electron lens"

Invited Speaker

18,10-18,30

Jouni Ahopelto (VTT, Finland)

"Acoustic Phonons in Ultra-Thin Silicon Membranes"

Invited Speaker

THURSDAY 30

09,30-10,00

Masakazu Aono (MANA – NIMS, Japan)

Opening

*"Nanoarchitectonics: Its basic concept and recent topics"*

Nano-power

10,00-10,30

Kohei Uosaki (MANA – NIMS, Japan)

Keynote Speaker

*"Electrocatalytic Activity of Boron Nitride Nanosheets for Oxygen Reduction Reaction – Theoretical and Experimental Investigations"*

10,30-10,50

Jinhua Ye (MANA – NIMS, Japan)

Invited Speaker

*"Design of Nano-Photocatalytic Materials for Solar Fuel Conversion and Environmental Remediation"*

10,50-11,10

Yoshitaka Tateyama (MANA – NIMS, Japan)

Invited Speaker

*"Reductive decomposition mechanism of lithium ion battery electrolyte via DFT free energy simulations on the K(京) computer"*

Break / Poster session

Nano-materials

11,30-12,00

Zhong Lin Wang (Georgia Tech, USA/MANA, Japan)

Keynote Speaker

*"Piezotronics and Piezo-phototronics"*

12,00-12,20

Minoru Osada (MANA – NIMS, Japan)

Invited Speaker

*"2D Oxide Materials and Device"*

12,20-12,40

Yusuke Yamauchi (MANA – NIMS, Japan)

Invited Speaker

*"Functional Nanoporous Materials: Synthesis and Applications"*

Lunch break / Poster session

Nano-life

13,40-14,10

Françoise Winnik (U. Montreal, Canada/MANA, Japan)

Keynote Speaker

*"Innovation in nanomedicine through materials nanoarchitectonics: Facts and Challenges"*

14,10-14,30

Mitsuhiro Ebara (MANA – NIMS, Japan)

Invited Speaker

*"Smart anticancer nanofibers that allows the simultaneous use of chemo- and radiotherapy"*

14,30-14,50

Jun Nakanishi (MANA – NIMS, Japan)

Invited Speaker

*"Photoactivatable substrate: a new platform for cell migration assay"*

14,50-15,10

Genki Yoshikawa (MANA – NIMS, Japan)

Invited Speaker

*"Nanomechanical Membrane-type Surface Stress Sensor (MSS) as a Practical Sensing Platform"*

Break / Poster session

Nano-system & Methodology

15,30-16,00

James K. Gimzewski (UCLA, USA/MANA, Japan)

Keynote Speaker

*"Self-organization and Emergence of Dynamical Structures in Neuromorphic Atomic Switch Networks"*

16,00-16,20

Tsuyoshi Hasegawa (MANA – NIMS, Japan)

Invited Speaker

*"Neuromorphic Functions Achieved by Atomic Switches"*

16,20-16,40

Tomonobu Nakayama (MANA – NIMS, Japan)

Invited Speaker

*"Multiple-probe Scanning Probe Microscope for Nanometer- and Micrometer-scale Transport Measurements on Nanomaterials"*

16,40-17,10

Toshiaki Enoki (Tokyo Tech, Japan)

Keynote Speaker

*"Edge geometry and chemistry effects on the electronic structure of graphene nanostructures"*

17,10-17,30

Tadaaki Nagao (MANA – NIMS, Japan)

Invited Speaker

*"Plasmon-enhanced molecular sensing and photocatalyst for green nanotechnology"*

17,30-17,50

Kazuhito Tsukagoshi (MANA – NIMS, Japan)

Invited Speaker

*"Atomically thin semiconducting channels for future nano-electronics"*

17,50-18,00

Yoshio Bando (MANA – NIMS, Japan)

Closing

FRIDAY 31

Nanobio & Nanomedicine

09,30-10,00	<b>Jean-Jacques Toulmé</b> (IECB-Univ de Bordeaux, France) <i>"Aptasensors: detecting small molecules with a kiss"</i>	Keynote Speaker
10,00-10,10	<b>Alexey Yashchenok</b> (MPI of Colloids and Interfaces, Germany) <i>"Laser induced changes of thin shells composed of gold nanoparticles and carbon nanotubes for application in bioscience"</i>	Oral Contribution
10,10-10,20	<b>Javier Ramón</b> (WPI-AIMR, Tohoku University, Japan) <i>"Dielectrophoretical fabrication of hybrid carbon nanotubes-hydrogel biomaterial for muscle tissue engineering applications"</i>	Oral Contribution
10,20-10,30	<b>Takahito Ohshiro</b> (Osaka University, Japan) <i>"Development of Single-Molecule Tunnel-current based Electrical Identification of DNA/RNA nucleotides"</i>	Oral Contribution
10,30-10,40	<b>Tsuneo Urisu</b> (Nagoya University, Japan) <i>"Development of neural network high-throughput screening device- a human neurodegenerative disease model "</i>	Oral Contribution

Nanomaterials

10,40-10,50	<b>James Cole</b> (University of Tsukuba, Japan) <i>"Discrete Green's Function Approach for Computational Photonics"</i>	Oral Contribution
10,50-11,00	<b>Peter Koval</b> (CFM-UPV/EHU & DIPC, Spain) <i>"Self-consistent GW calculations for molecules"</i>	Oral Contribution

Break / Poster session

DIPC/CFM Session

11,20-11,50	<b>Javier Aizpurua</b> (CFM-UPV/EHU & DIPC, Spain) <i>"Optoelectronics in plasmonic nanogaps"</i>	Keynote Speaker
11,50-12,20	<b>Juan José Sáenz</b> (UAM & DIPC, Spain) <i>"Non-conservative Optical Forces on Nanoparticles"</i>	Keynote Speaker
12,20-12,50	<b>Daniel Sanchez-Portal</b> (CFM-UPV/EHU & DIPC, Spain) <i>"DFT Based Simulations of Electron Dynamics in Solids and Nanostructures"</i>	Keynote Speaker
12,50-13,20	<b>Ulrich Höfer</b> (Philipps-Universität Marburg, Germany) <i>"Structure and Dynamics of Internal Interfaces"</i>	Keynote Speaker

Lunch break / Poster session

Spain-Japan Dual Year session

14,20-14,25	<b>H. E. Miguel Ángel Navarro Portera</b> (Spanish ambassador in Tokyo) <div>Opening</div>	
14,25-14,50	<b>Francisco Guinea</b> (ICMM - CSIC, Spain) <i>"Unique structural properties of graphene"</i>	Keynote Speaker
14,50-15,15	<b>Yoshiaki Kato</b> (GPI, Japan) <i>"Toward in-situ observation of Li-ion distribution in Li-ion batteries"</i>	Keynote Speaker
15,15-15,40	<b>Yoshitaka Okada</b> (University of Tokyo, Japan) <i>"Quantum dot intermediate band solar cells: proving the concept and beyond"</i>	Keynote Speaker

Break / Poster session

16,00-16,25	<b>Sadamichi Maekawa</b> (ASRC - JAEA, Japan) <i>"Spin Seebeck Effect in a Variety of Magnetic Systems"</i>	Keynote Speaker
16,25-16,50	<b>Hernán Míguez</b> (ICMSE - CSIC, Spain) <i>"Versatility and Multifunctionality of Porous Photonic Structures"</i>	Keynote Speaker
16,50-17,15	<b>Fernando Rey</b> (ITQ - CSIC, Spain) <i>"First observation of a pressure-induced reconstructive phase transition in zeolites"</i>	Keynote Speaker