

NAN  materials:

# Applications & Properties-2018



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Sept. 9-14, 2018, Zatoka, Odesa region, Ukraine

## Main Topics

**Nanoparticles & Nanocomposites, 2D Materials, Thin Films, Spintronics, Photonics, Energy Materials, Nanomedicine**

## Conference Venue

Hotel & Recreation Center "ELLADA"

Address: 99c Prymorska St., Zatoka,  
Odesa region, Ukraine

Web: <http://ellada.odessa.ua>

## Important Dates

Submission opened: January 15, 2018

Submission closed: May 10, 2018

Acceptance notification: July 15 - August 15, 2018

Program posted online: August 15, 2018

## Registration Fees

International ex-USSR

Regular: 300 EUR 50 EUR

Phd Student: 150 EUR 25 EUR

Student: 100 EUR 20 EUR

IEEE-members discount: 20 %

## Organizers

Main Organizer: Sumy State University (Ukraine)

Co-organizers: Lublin University of Technology (Poland), Technical University of Moldova (Moldova), D. Serikbayev East Kazakhstan State Technical University (Kazakhstan)

General Chairs:

Prof. A. Pogrebnyak, Sumy State University, Ukraine  
Dr. V. Novosad, Argonne National Laboratory, USA

Supported by: Ministry of Education and Science of Ukraine, IEEE Ukraine Section

## Awards

Student Travel Grants

Best Poster & Best Talk Awards

## Contact Us

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01

**Synthesis and Properties of Nanomaterials**

- ✓ New routes for synthesis of "building blocks", ✓ Size-, shape- and composition-dependent properties, ✓ Top-down and bottom-up approached for self-assembly, ✓ Block-co-polymers, interfacial science and morphology control, ✓ Nanocomposites and nanohybrids.

**Thin Films, Nanostructured Materials and Coatings**

- ✓ Advances in deposition techniques, ✓ Thin film growth & epitaxy: theory & experiments, ✓ New materials in thin film form: diamond-like films, granular alloys, high entropy alloys, oxynitrides, intermetallic compounds, ✓ Super-conducting, magnetic, semiconducting, and dielectric films, ✓ Industrial applications.

02

**Carbon-based and other 2D Materials**

- ✓ Carbon nanotubes, ✓ Graphene and graphene oxide, ✓ Fullerenes and nanodiamonds, ✓ Dichalcogenides, ✓ Xenex.

**Spintronics and Spin-related Phenomena at Nanoscale**

- ✓ Spin currents and magneto-transport, ✓ Magnonics, spin waves and magnetization dynamics, ✓ Spin textures, including magnetic domains, vortices and skyrmions, ✓ MRAM, magnetic field sensors, spin logic and related devices, ✓ Amorphous and nanocrystalline magnetic materials, ✓ Hard magnets: thin films, and nanostructures, ✓ Magnetic ribbons, thin films, nanoparticles, and nanowires, ✓ Heusler alloys and magnetocaloric materials, ✓ Magneto-optical materials and device, ✓ Interplay between magnetism and superconductivity.

03

04

**Nanotechnology and Nanomaterials for Life Sciences**

- ✓ Nanodevices and sensors for bio/nanomedicine, ✓ Nanoparticles-based platforms for cancer diagnostics, imaging and treatment, ✓ Nanoparticles manipulation, microfluidics and lab-on-chip technologies, ✓ Bio-nanomaterials and tissue engineering, ✓ Biomarkers and nanoparticles, ✓ DNA nanotechnology, ✓ Nanotoxicity

**Photonics & Nanomaterials**

- ✓ Plasmonic structures and quantum dots, ✓ Nanophotonics and optical manipulation, ✓ Spectroscopic studies of nanoscale materials, ✓ Molecular energy transfer and light harvesting, ✓ Photonic and optoelectronic materials and devices, ✓ Photodetectors, sensors and imaging, ✓ Non-linear optics.

05

06

**Miscellaneous and Interdisciplinary Topics**

- ✓ Quantum computing, ✓ Nano- and micro-fabrication techniques, ✓ High resolution imaging with scanning probes, ions, X-rays and photons, ✓ Thermal transport and heat exchange at nanoscale, ✓ Experiments at extreme environments (low/high temperatures, high vacuum).

**Nanomaterials for Clean Energy and Environment**

- ✓ Nanomaterials for solar-to-electric energy conversion, ✓ Hydrogen and fuels cells, ✓ Energy storage and generation, ✓ Bio-inspired energy materials, ✓ Nanomaterials for environment protection and remediation; CO2 reduction, ✓ Nanotech for water technologies.

07

08

Find more at:

<http://nap.sumdu.edu.ua>

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