

# 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**

## Important Dates

## Conference Venue

**Hotel & Recreation Center "ELLADA"**

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

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

**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. Pogrebnjak, 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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NAP-2018

# Tracks & Topics

## 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.

## 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.

## 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.

## 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.

## 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.

## Carbon-based and other 2D Materials

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

## 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

## 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).

Find more at:

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

Proceedings of the NAP-2018 will be available online in IEEE Xplore Digital Library and indexed by Scopus and Web of Science Core Collection Databases.

