POLITECHNIKA GDAŃSKA

WYDZIAŁ CHEMICZNY

Katedra Chemii Nieorganicznej

# Nanotechnologia

## Seminaria

Andrzej Okuniewski

*Wszystkie tematy seminariów stanowią tytuły artykułów naukowych opublikowanych w 27 numerze czasopisma Nanotechnology:*

http://iopscience.iop.org/volume/0957-4484/27

*Dostęp do czasopisma zapewniony jest poprzez sieć Politechniki Gdańskiej oraz przez system HAN po zalogowaniu się kontem bibliotecznym.*

Gdańsk 2017

## Grupa tematów „A”

1. Unzipping of carbon nanotubes is geometry-dependent
   *https://doi.org/10.1088/0957-4484/27/1/015601*
2. Flexible resistive switching memory with a Ni/CuO x /Ni structure using an electrochemical deposition proces
   *https://doi.org/10.1088/0957-4484/27/12/125203*
3. Cobalt phosphide nanowall array as an efficient 3D catalyst electrode for methanol electro-oxidation
   *https://doi.org/10.1088/0957-4484/27/44/44LT02*
4. Modified silver nanowire transparent electrodes with exceptional stability against oxidation
   *https://doi.org/10.1088/0957-4484/27/10/105705*
5. Detection of base-pair mismatches in DNA using graphene-based nanopore device
   *https://doi.org/10.1088/0957-4484/27/13/135101*
6. Cobalt silicate hierarchical hollow spheres for lithium-ion batteries
   *https://doi.org/10.1088/0957-4484/27/36/365401*
7. New memory devices based on the proton transfer proces
   *https://doi.org/10.1088/0957-4484/27/1/015202*
8. Flame-made ultra-porous TiO2 layers for perovskite solar cells
   *https://doi.org/10.1088/0957-4484/27/50/505403*
9. Biodegradable mesoporous bioactive glass nanospheres for drug delivery and bone tissue regeneration
   *https://doi.org/10.1088/0957-4484/27/22/225102*
10. Nanomaterial-based x-ray sources
    *https://doi.org/10.1088/0957-4484/27/8/082501*
11. One-pot synthesis of a gold nanoparticle–Vmh2 hydrophobin nanobiocomplex for glucose monitoring
    *https://doi.org/10.1088/0957-4484/27/19/195701*
12. Ammonium hydroxide modulated synthesis of high-quality fluorescent carbon dots for white LEDs with excellent color rendering properties
    *https://doi.org/10.1088/0957-4484/27/29/295202*
13. One-pot synthesis of single-crystal Pt nanoplates uniformly deposited on reduced graphene oxide, and their high activity and stability on the electrocalalytic oxidation of methanol
    *https://doi.org/10.1088/0957-4484/27/14/145602*
14. Electromechanical transducer for rapid detection, discrimination and quantification of lung cancer cells
    *https://doi.org/10.1088/0957-4484/27/19/195101*
15. Mesoporous polyaniline nanofiber decorated graphene micro-flowers for enzyme-less cholesterol biosensors
    *https://doi.org/10.1088/0957-4484/27/34/345101*

## Grupa tematów „B”

1. Carbon-coated MoS2 nanosheets as highly efficient electrocatalysts for the hydrogen evolution reaction
   *https://doi.org/10.1088/0957-4484/27/4/045402*
2. Wide bandgap mesoporous hematite nanowire bundles as a sensitive and rapid response ethanol sensor
   *https://doi.org/10.1088/0957-4484/27/18/185702*
3. Transparent resistive switching memory using aluminum oxide on a flexible substrate
   *https://doi.org/10.1088/0957-4484/27/7/07LT01*
4. Printable photonic crystals with high refractive index for applications in visible light
   *https://doi.org/10.1088/0957-4484/27/11/115303*
5. Photothermal ablation of cancer cells using self-doped polyaniline nanoparticles
   *https://doi.org/10.1088/0957-4484/27/18/185104*
6. Ferroelectric KNbO3 nanofibers: synthesis, characterization and their application as a humidity nanosensor
   *https://doi.org/10.1088/0957-4484/27/39/395607*
7. Can natural fibers be a silver bullet? Antibacterial cellulose fibers through the covalent bonding of silver nanoparticles to electrospun fibers
   *https://doi.org/10.1088/0957-4484/27/5/055102*
8. Synthesis and characterization of a BaGdF5:Tb glass ceramic as a nanocomposite scintillator for x-ray imaging
   *https://doi.org/10.1088/0957-4484/27/20/205203*
9. Reverse osmosis desalination of chitosan cross-linked graphene oxide/titania hybrid lamellar membranes
   *https://doi.org/10.1088/0957-4484/27/27/274002*
10. Biomimetic synthesis of highly biocompatible gold nanoparticles with amino acid-dithiocarbamate as a precursor for SERS imaging
    *https://doi.org/10.1088/0957-4484/27/10/105603*
11. Plasmon-enhanced nanoporous BiVO4 photoanodes for efficient photoelectrochemical water oxidation
    *https://doi.org/10.1088/0957-4484/27/23/235401*
12. Synthesis of nanostructured LiMn2O4 thin films by glancing angle deposition for Li-ion battery applications
    *https://doi.org/10.1088/0957-4484/27/45/455402*
13. Nanoporous aerogel as a bacteria repelling hygienic material for healthcare environment
    *https://doi.org/10.1088/0957-4484/27/8/085705*
14. Significant light absorption enhancement in silicon thin film tandem solar cells with metallic nanoparticles
    *https://doi.org/10.1088/0957-4484/27/19/195401*
15. Imaging nanoscale lattice variations by machine learning of x-ray diffraction microscopy data
    *https://doi.org/10.1088/0957-4484/27/37/374002*

## Grupa tematów „C”

1. GaN nano-pyramid arrays as an efficient photoelectrode for solar water splitting
   *https://doi.org/10.1088/0957-4484/27/45/455401*
2. A flexible organic resistance memory device for wearable biomedical applications
   *https://doi.org/10.1088/0957-4484/27/27/275206*
3. Nb2O5 microstructures: a high-performance anode for lithium ion batteries
   *https://doi.org/10.1088/0957-4484/27/46/46LT01*
4. Two chiroptical modes of silver nanospirals
   *https://doi.org/10.1088/0957-4484/27/11/115703*
5. Synthesis of core–shell AlOOH hollow nanospheres by reacting Al nanoparticles with water
   *https://doi.org/10.1088/0957-4484/27/20/205603*
6. In-vacuum thermolysis of ethane 1,2-diamineborane for the synthesis of ternary borocarbonitrides
   *https://doi.org/10.1088/0957-4484/27/43/435601*
7. Nanostructured conducting polymers for stiffness controlled cell adhesion
   *https://doi.org/10.1088/0957-4484/27/7/074001*
8. Porous ?-Fe2O3 spheres coated with N-doped carbon from polydopamine as Li-ion battery anode materials
   *https://doi.org/10.1088/0957-4484/27/21/215403*
9. Enhanced rare earth photoluminescence in inverse opal photonic crystals and its application for pH sensing
   *https://doi.org/10.1088/0957-4484/27/40/405202*
10. In situ synthesis of 3D CoS nanoflake/Ni(OH)2 nanosheet nanocomposite structure as a candidate supercapacitor electrode
    *https://doi.org/10.1088/0957-4484/27/14/145401*
11. Nanoporous silver cathode surface treated by atomic layer deposition of CeO x for low-temperature solid oxide fuel cells
    *https://doi.org/10.1088/0957-4484/27/18/185403*
12. A carbon nanotube based x-ray detector
    *https://doi.org/10.1088/0957-4484/27/47/475501*
13. LiFePO4 nanoparticles enveloped in freestanding sandwich-like graphitized carbon sheets as enhanced remarkable lithium-ion battery cathode
    *https://doi.org/10.1088/0957-4484/27/15/155401*
14. Low-haze, annealing-free, very long Ag nanowire synthesis and its application in a flexible transparent touch panel
    *https://doi.org/10.1088/0957-4484/27/29/295201*
15. Structure and properties of phosphorene-like IV-VI 2D materials
    *https://doi.org/10.1088/0957-4484/27/41/415203*

## Grupa tematów „D”

1. Color tunable electroluminescence and resistance switching from a ZnO-nanorod–TaO x –p-GaN heterojunction
   *https://doi.org/10.1088/0957-4484/27/11/115204*
2. Electrode-induced digital-to-analog resistive switching in TaO x -based RRAM devices
   *https://doi.org/10.1088/0957-4484/27/30/305201*
3. Ultra-lightweight pressure sensor based on graphene aerogel decorated with piezoelectric nanocrystalline films
   *https://doi.org/10.1088/0957-4484/27/47/475203*
4. A multifunctional upconverting nanoparticle incorporated polycationic hydrogel for near-infrared triggered and synergistic treatment of drug-resistant bacteria
   *https://doi.org/10.1088/0957-4484/27/12/125601*
5. High-performance flexible nanoporous Si-carbon nanotube paper anodes for micro-battery applications
   *https://doi.org/10.1088/0957-4484/27/24/245401*
6. Amyloid Aβ 42, a promoter of magnetite nanoparticle formation in Alzheimer's disease
   *https://doi.org/10.1088/0957-4484/27/46/465102*
7. Soluble organic nanotubes for catalytic systems
   *https://doi.org/10.1088/0957-4484/27/11/115603*
8. Effects of intrinsic strain on the structural stability and mechanical properties of phosphorene nanotubes
   *https://doi.org/10.1088/0957-4484/27/21/215701*
9. Systematic layer-by-layer characterization of multilayers for three-dimensional data storage and logic
   *https://doi.org/10.1088/0957-4484/27/15/155203*
10. Hierarchically constructed NiCo2S4@Ni(1-x)Co x (OH)2 core/shell nanoarrays and their application in energy storage
    *https://doi.org/10.1088/0957-4484/27/23/235402*
11. The preservation of living cells with biocompatible microparticles
    *https://doi.org/10.1088/0957-4484/27/26/265101*
12. Catalyst morphology matters for lithium–oxygen battery cathodes
    *https://doi.org/10.1088/0957-4484/27/49/495404*
13. Ethanol flame synthesis of carbon nanotubes in deficient oxygen environments
    *https://doi.org/10.1088/0957-4484/27/16/165602*
14. Water-soluble photoluminescent fullerene capped mesoporous silica for pH-responsive drug delivery and bioimaging
    *https://doi.org/10.1088/0957-4484/27/31/315104*
15. Serial weighting of micro-objects with resonant microchanneled cantilevers
    *https://doi.org/10.1088/0957-4484/27/41/415502*