

# Recent results at nanoscale



[www.imt.ro/NANOPROSPECT](http://www.imt.ro/NANOPROSPECT)

Centre of Nanotechnologies of **IMT Bucharest** - affiliated to the Romanian Academy

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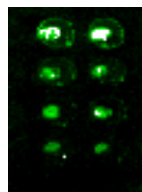
**FP7-NMP Project** (Large-scale integrating Collaborative project)

Development of reference methods for hazard identification, risk assessment and LCA of engineered nanomaterials – NanoValid (2011 – 2014)

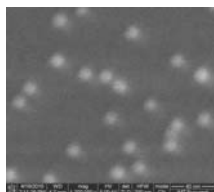
**FP7-NMP-ENV Project** (Collaborative Small or medium-scale focused research project) Development of sustainable solutions for nanotechnology based products based on hazard characterization and LCA – NanoSustain (2010-2013)

**FP7- ICT-STREP Project- Carbon nAnotube Technology for High-speed nExt-geneRation nano-InterconNEcts -CATHERINE-** (2008 -2010)

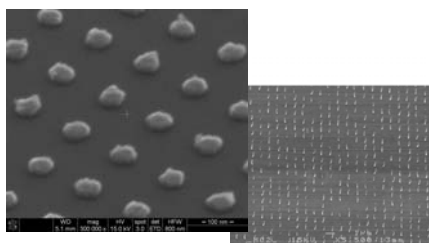
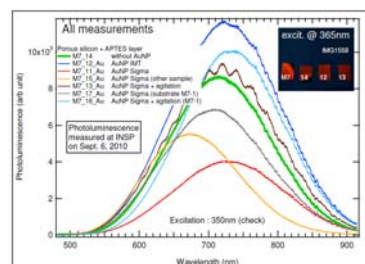
**Au/PS working as immunologic sensor in microarray technology**



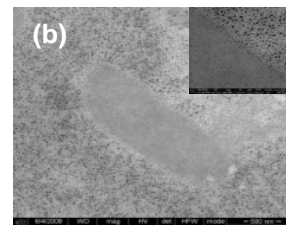
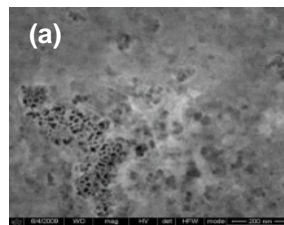
Scanned image with spotted antigen – labelled antibody reaction at different concentration of spotted protein and antibody.



SEM images of the PS surfaces with AuNPs deposited



SEM image of Ni nanodots

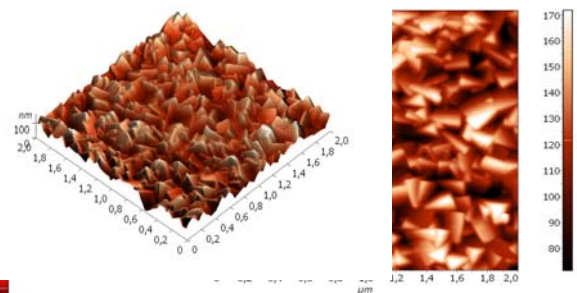
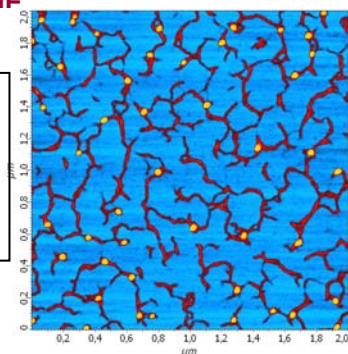


**Array of 70 nm Ni nanodots obtained at IMT** – Bucharest by nanolithography and lift-off and used as catalysts for CNTs growth by CVD (The CVD process was performed by Smoltek AB, Sweden) –

In the frame of FP7-CATHERINE Project ( 2008 -2010)- **Carbon nAnotube Technology for High-speed nExt-geneRation nInterconNEcts CATHERINE**

**SEM image of PS surface**  
a-after immobilization of CRP;  
b-after reaction with labeled antibody

Morphology of poly 3-hexyl thiophene (P3HT) chains on mica surface revealed by AFM scan



Nano-scale morphology of a thin PbS film examined by AFM