



## THE SCIENCE AND TECHNOLOGY PARK FOR MICRO AND NANOTECHNOLOGIES (MINATECH-RO)

**The main objective** of MINATECH-RO is to *facilitate the access of the small companies to advanced technologies (including start up companies/ incubation)*.

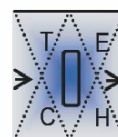
The Park was created in April 2004 and received institutional funding during 2004-2005 through the national INFRATECH Program.

### The specific objectives of MINATECH-RO:

- Technological transfer;
- Designing of prototypes, demonstrators or experimental models;
- Small scale/pilot production after realizing (fabrication) the prototype;
- Incubation;
- Technological services, micro-physical characterization, simulation and computer aided design;
- Learning/training by preparation of courses and stages (with practical training) in the microsystems, micro- and nanotechnologies and microengineering domains;
- Assistance and consultancy activities for SMEs and small innovative enterprises:
  - Information in micro-engineering, microsystems, micro- and nanotechnologies, access to databases, documentation, etc;
  - Technological consultancy;
  - Brokerage (for the domain services);
  - Feasibility studies;
  - Facilitating the access of Romanian innovative SMEs to European networks and partnerships
- Dissemination of information (organizing conferences, workshops, editing publications, etc.)
- Research & Development

### Companies that activate in MINATECH-RO Park

- S.C. ROM-QUARTZ S.A. ( [www.minatech.ro/romquartz](http://www.minatech.ro/romquartz) ) studies and scientific researches regarding some BAW devices fabrication (bulk acoustic wave) and SAW (surface acoustic wave) based alternative piezoelectric materials (lithium niobate, lithium tantalite langasite and gallium orthophosphate );
- S.C. SITEX 45 SRL ( [www.microsisteme.ro](http://www.microsisteme.ro) ) manufactures 50 Pa – 100 kPa pressure sensors (rapid prototyping) and ceramic capacitive



transducers for low pressure, ceramic diaphragm and dedicated ASIC integrated circuits;

R&D activity: sensors, optoelectronic devices, transducers, pressure sensors, materials, MEMS; is offering solutions regarding RFID identification: tags, cards;

- EUROPEAN BUSINESS INNOVATION & RESEARCH CENTER SA

R&D activity: micro/nanotechnology for aeronautics and space applications, clean energy applications, precision agriculture applications, active screening systems, protection against space residues and electromagnetic turbulences;

- S.C. ROMES S.A.

- OPTOTECH SRL–active electronic devices experience (photodiodes, photothyristors, (photo)transistors;

- TELEMEDICA SA–R&D activity for bio applications;

- DDS DIAGNOSTIC SRL– produces other chemical reagents, R&D in physics and natural science;

Expertise: application research for in-vitro diagnostic medical devices, design kits for in-vitro diagnostic, market studies for in-vitro diagnostic kits.

## Research and industry interaction

- Access to the MINATECH-RO incubator, scientific and technological park (IMT in collaboration with UPB), park resident companies.
  - Companies that collaborates with the consortium and/or offer services in park have priority;
  - Consultancy services are included
- Access to scientific and technology services (local and abroad SMEs)
- Complex technologic assistance trough CTT-Baneasa ([www.imt.ro/ctt](http://www.imt.ro/ctt))

## Development of bio-micorosystems for genomic analysis (for health and life quality development ) – IMT collaboration with one of the park resident companies (DDS DIAGNOSTIC)

This experiment was possible due to the new equipments: **Omni Grid Micro Plotter** and **UC4 Scanner** that are inside **NanoBioLab** from IMT Bucharest. These equipments allow **obtaining diagnostic chips**, on glass or silicon, and also, the results interpretation. This microarray chips obtained involve multidisciplinary research in microtechnology, chemistry, biology, physics and pharmacology.

Lavinia Ruta, farmacist,  
DDS DIAGNOSTIC



## Research institutes cooperation

- Access to new equipment, especially trough technologic networks that have laboratories inside IMT, so in contact with the park.
- Working point in technology area.



Monica Simion, si Teodora Ignat, in incinta  
NanoBioLab, IMT-Bucuresti

- Common scientific and technological services offer (park benefit in the first place)
- Possible strategic partnership with various domains institutes, in association with MINATECH-RO consortium.

### Universities cooperation

- Access in institute for masters and PhD students
- Common offer for education and training
  - Various partnership with Romanian universities
- Contact points in universities
  - Partnership with Polytechnic University of Bucharest
- Systematic cooperation (organize of a framework and a “interaction space” in park)
  - Possible “spin-off” from universities.



In park are located:

- **Common laboratories for RO-NANOMED, NANOSCALE-CONV and RTN-NANOEL networks.** The laboratories are financed trough complex projects from CEEX program.
- National contact points for ENIAC, NANOMEDICINE, PHOTONICS 21 European technological platforms.
- Contact points for German networks (IVAM, NANOBIIONET and MST Network Rhein Main) and for **Romanian-German Micro- and Nanotechnologies Center.**

The Science and Technology Park for Micro and Nanotechnologies MINATECH-RO ([www.minatech.ro](http://www.minatech.ro)) establishment resources offered by the IMT-Bucharest ([www.imt.ro](http://www.imt.ro)) and the “Politehnica” University of Bucharest (PUB) in a national consortium that created the park (open in June 2006). The Park is administrated by SC MINATECH ADMINISTRATOR SRL.

MINATECH-RO is participating to technological transfer dedicated actions (informing, exhibitions, innovation road show, debate-seminars in this domain).



At Research Salon 2008 the resident companies, their competence and their offer were promoted. For the company representatives was offered the opportunity to meet the interest peoples and establish partnerships. The first edition of the Research Excellency Top has brought first place and a gold medal for MINATECH-RO –Scientific and Technologic Park for Micro and Nanotechnologies, IMT-Bucharest and UPB ( Polytechnic University of Bucharest) being part of it. A first place at the section Innovative SME from

the Research Excellency Top was took by SC SITEX 45 SRL, a resident company in MINATECH-RO Park.

### **Interactions in infrastructures developed by IMT-Bucharest**

Access to technological and characterization services for the partners from research, education and industry are made trough IMT-MINAFAB, Micro- and Nanofabrication Center (IMT-Centre for Micro- and NAnoFABrication) where IMT (INCD-Microtehnologie) is offering its services for partners from research, education and industry domain. Details [www.imt.ro/MINAFAB](http://www.imt.ro/MINAFAB)

A part of the MINATECH-RO specific objectives, linked to the technology transfer and services providing (including training and consultancy), is implemented trough CTT-Baneasa, a TTI entity that autonomous acts inside IMT.

CTT-Baneasa provides services (consultancy, dissemination etc.) for Park companies, and facilitates access to the services offered by IMT. These companies can contribute to the diversification of the IMT technical services offer.

### **Estimated benefits for the potential beneficiary**

The companies, that have direct benefits from the facilities offered by the Park and the coordinator consortium also, have access to last technology for micro- and nanofabrication, characterization techniques, simulation, modelling and computer aided design. The companies can install equipments in technology area and can develop microproduction activities. The access to high technology is offering to innovative SMEs the advantage to create competitive products and also, the possibility to successfully access the public funds designated for RDI. Park cooperation facilitates companies for internal and international partnership.

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