Anexa 5.2

Extras din bazele de date NANOPROSPECT: Infrastructuri nano

Keywords: nano

Infrastructures

ORGANIZATION: Institutul National de Cercetare Dezvoltare pentru Microtehnologie

R&D GROUP: Centre of Nanotechnologies (affiliated to the Romanian Academy under the aegis of the Romanian Academy)

SPECIALIST: Dan DASCALU

Infrastructure name
Center for Micro-Nanofabrication

Infrastructure acronym
IMT-MINAFAB

Infrastructure entity type
Centre of services

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
Certified ISO 9001-2008

Infrastructure objectives (specify)
- represents an advanced technological interface of IMT-Bucharest for national and international collaborations, cooperation or services dedicated to industry
- plans to become an essential platform of interaction in nanoscience and nanotechnologies in a future national network for knowledge and technology transfer

Brief description (including a short list of relevant equipments, if necessary)
IMT-MINAFAB is a state of the art facility for interdisciplinary research in nanotechnologies, operating since September 2008.
The center offers complete technological flows: HPC and CAD tools, mask shop sector, nano-bio fabrication, analysis and characterization, reliability tests.
• Class 1,000 clean room (220 sqm effective) for the mask shop and the most demanding technological processes.
• Class 100,000 “grey area” clean room (200 sqm effective), mostly for advanced characterization equipments.
• Class 10,000 clean room (120 sqm effective) for thin films by CVD techniques, dry-etching, RTP, etc. (to become operational).
• Advanced laboratories for Rapid Prototyping, Reliability testing, and High-power computing.
Mostly relevant equipments in IMT-MINAFAB:

- Nanolithography: Electron beam lithography and nanoengineering workstation - e_Line (Raith, Germany); Dip Pen Nanolithography Writer - NSCRIPTOR (NanoInk, USA)
- Photolithography: Laser lithography system - DWL 66 fs (Heidelberg Instruments Mikrotechnik, Germany); Double Side Mask Aligner - MA6/BA6 (Suss MicroTec, Germany)
- Physical depositions: Electron Beam Evaporation an DC sputtering system - AUTO 500 (BOC Edwards,

UK)
- Chemical depositions: PECVD - LPX-CVD, with LDS module (STS, UK)
- Dry etching: ICP-RIE (Oxford Instruments, UK)
- Beam characterization: FEG-SEM - Nova NanoSEM 630 (FEI Company, USA); X-ray Diffraction System (triple axis rotating anode) - SmartLab (Rigaku, Japan)
- Scanned Probe characterization: NSOM - Witec alpha 300S (Witec, Germany); Nanomechanical characterization - Nano Indenter G200 - (Agilent, USA); Scanning Electrochemical Microscope - ElProScan (HEKA, Germany)
- Nano-bio: Micro-Nano Plotter - OmniGrid (Genomic Solutions Ltd., UK); Nanoparticle analyzer - DelsaNano (Beckman Coulter, USA)
- Spectrometry: HR Raman - LabRAM HR 800 (HORIBA Jobin Yvon, Japan)

Location
Contact Person: Dr. Radu Popa, radu.popa@imt.ro;
IMT-Bucharest - 126A Erou Iancu Nicolae, Bucharest 077190

Is this infrastructure part of a network ? Please explain
No

Contact person official function
CEO and President of the Board

Contact person
Prof. Dan DASCALU

Contact person e-mail
dan.dascalu@imt.ro

Contact person phone
+40-21-269.07.70

Available fax
+40-21-269.07.72

Dedicated web page (if any)
www.imt.ro/MINAFAB; http://www.imt.ro/MINAFAB/description.htm

ORGANIZATION: Institutul National de Cercetare Dezvoltare pentru Microtehnologie

R&D GROUP: Centre of Nanotechnologies (affiliated to the Romanian Academy under the aegis of the Romanian Academy)

SPECIALIST: Dan DASCALU

Infrastructure name
Centre For Technology Transfer In Microengineering

Infrastructure acronym
CTT-Baneasa

Infrastructure entity type
Technology Transfer and Innovation Centre

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
Accredited by the National Scientific Research Authority

Infrastructure objectives (specify)
The mission of the Center is to develop the micro- nanotechnologies domain, by stimulating the technological transfer and innovation at national level, and by interacting with European entities.
CTT Baneasa must assure a critical amount regarding knowledge and technological transfer in the field of micro and nano engineering, taking in consideration only the offers from Romanian research entities regarding this field.
CTT- Baneasa has a key role as intermediator regarding valorification of the research projects obtained results.

Brief description (including a short list of relevant equipments, if necessary)
The activities developed by CTT-Baneasa include:
- Assistance for companies in understanding and accessing the assets - innovation outcome, skills and expertise, and technology services – provided by IMT-Bucharest and by its national and international partners
- Assistance in "one-stop shop" services for companies involved in or interested to leverage on the modern opportunities offered by the micro/nano technology
- Consultancy for company representatives in identifying their technical and innovation needs and facilitation of adequate support linkages within the research agenda of IMT-Bucharest
- Providing assistance and consultancy in business, including feasibility and marketing studies, for start-ups, spin-offs and other innovative entities
- Facilitation of information exchange and partnerships (networking) by setting up a network of suppliers and users for the technology transfer and innovation in the micro- and nanotechnologies domain; maintaining an informatics infrastructure for dissemination, and establishing contacts and common activities over the internet
- Information, documentation and training; hands-on training in using technological and characterization

equipment or CAD/CAE platforms; specialized training in technological processing (individual technological processes and technology-flow design)
- Consultancy in market and technology forecasts, aiming to encourage and promote outcome-driven research and innovation efforts
- Developing the strategy and providing assistance and consulting on patents, inventions and licensing issues on behalf of a network of knowledge and technology transfer set up by IMT-Bucharest
- Marketing, licensing and selling of intellectual property on behalf of IMT-Bucharest
CTT-Baneasa provides part of the services from the IMT offer for SME's.
CTT-Baneasa is involved in the following activities:
- Information seminars (general or oriented to specific competitions) (home or abroad)
- The execution and dissemination of promoting informational materials (posters, flyers, calendars, notebooks …)
- Electronic communication (webpage, database, e-newsletter) and media activities (journalism, radio, TV)
- The consolidation of the knowledge and technology transfer network in micro and nanotechnology domain, including information dissemination and events
- Possibility of accessing European funds, gaining the IMT and his experienced partners support.

CTT-Baneasa has a major portfolio in product and technology patents, brands in MNT domain.
CTT-Baneasa drives a "transfer of knowledge and technology network" with over 60 groups of research or companies. The exchange of information between these entities is essential for exploiting all possibilities for cooperation and access to various financing sources.
CTT-Baneasa is developing activities complementary to the IMT-MINAFAB Micro- and Nanofabrication Center for services, became part of the IMT structure

Location
Contact Person: Eng. Ionica Miresteanu, ionica.miresteanu@imt.ro, info-ctt@imt.ro, 126A (32B) Erou Iancu Nicolae Street, R-077190, Voluntari, Ilfov or
P.O. BOX 38-160, 023573 Bucharest, ROMANIA

Is this infrastructure part of a network ? Please explain
CTT-Baneasa is member of ReNITT, National Network for Innovation and Technological Transfer.
CTT-Baneasa is the founding member of ARoTT, Romanian Association of Technology Transfer (AROTT)

Contact person official function
CEO and President of the Board

Contact person
Prof. Dan DASCALU

Contact person e-mail
dan.dascalu@imt.ro

Contact person phone
+40-21.269.07.71

Available fax
+40-21.269.07.71

Dedicated web page (if any)

ORGANIZATION: Institutul National de Cercetare Dezvoltare pentru Microtehnologie

R&D GROUP: Centre of Nanotechnologies (affiliated to the Romanian Academy under the aegis of the Romanian Academy)

SPECIALIST: Dan DASCALU

Infrastructure name
The Science and Technology Park for Micro and Nanotechnologies

Infrastructure acronym
MINATECH-RO

Infrastructure entity type
Science and Technology Park

Is this infrastructure a legal person ?
Yes

Infrastructure status (acreditation, ISO certified, etc.)
accredited by the National Scientific Research Authority

Infrastructure objectives (specify)
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

Brief description (including a short list of relevant equipments, if necessary)
The Science and Technology Park for Micro and Nanotechnologies MINATECH-RO (www.minatech.ro) establishment resources offered by the IMT-Bucharest (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 (Contact Person Dr. Sorin Mircea Axinte, sorin.axinte@minatech.ro, phone/fax 021-260.01.05).

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

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.

Companies that activate in MINATECH-RO Park

• S.C. ROM-QUARTZ S.A. (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) 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;
• 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.

Location
126A (32B) Erou Iancu Nicolae Street, R-077190, Voluntari, Ilfov or
P.O. BOX 38-160, 023573 Bucharest, ROMANIA

Is this infrastructure part of a network ? Please explain
MINATECH-RO is member of ReNITT, National Network for Innovation and Technological Transfer.
MINATECH-RO is the founding member of ARoTT, Romanian Association of Technology Transfer (AROTT)

Contact person official function
CEO and President of the Board

Contact person
Prof. Dan DASCALU

Contact person e-mail
dan.dascalu@imt.ro

Contact person phone
021-260.01.05

Available fax
021-260.01.05

Dedicated web page (if any)
www.minatech.ro

ORGANIZATION: Institutul National de Cercetare – Dezvoltare pentru Fizica Tehnica – IFT Iasi
R&D GROUP: NOT DEFINED
SPECIALIST: Horia CHIRIAC

Infrastructure name

Laboratory for magnetic materials and devices measurements

Infrastructure acronym
-

Infrastructure entity type
Centre of services

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
RENAR accreditation certificate nr. LI 709/2008

Infrastructure objectives (specify)
Magnetic measurements and structural analysis

Brief description (including a short list of relevant equipments, if necessary)

Location
47 Mangeron Blvd. 700050 Iasi, ROMANIA

Is this infrastructure part of a network ? Please explain
No

Contact person official function
General Director

Contact person
Prof. Horia CHIRIAC

Contact person e-mail
hchiriac@phys-iasi.ro

Contact person phone
+ 40 232 430680

Available fax
+ 40 232 231132

Dedicated web page (if any)

-

ORGANIZATION: Institutul National de Cercetare – Dezvoltare pentru Fizica Tehnica – IFT Iasi
R&D GROUP: NOT DEFINED
SPECIALIST: Horia CHIRIAC

Infrastructure name
Clean room

Infrastructure acronym
-

Infrastructure entity type
Technical (e.g. clean room)

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
-

Infrastructure objectives (specify)
The facility is used for the following activities:
• deposition of single and multilayer metallic, oxide and composite thin films;
• fabrication of planar structures by electron beam nanolithografy, photolithography;
• deposition, exposure and processing (photo/e-) resist;
• chemical etching;
• design, manufacturing and assembling of electrical / electronic components.

Brief description (including a short list of relevant equipments, if necessary)
The clean room with a total area of 144 square meters (class ISO 5 and ISO7)will permit the development, in controlled working atmosphere (solid particles) and humidity, of activities related to material deposition, geometrical nanostructuring, structural and morphological characterization, development of electronic/electric circuits and interconnections at micro-and nanometer scale.

Location

47 Mangeron Blvd. 700050 Iasi, ROMANIA

Is this infrastructure part of a network ? Please explain
No

Contact person official function
General Director

Contact person
Prof. Horia CHIRIAC

Contact person e-mail
hchiriac@phys-iasi.ro

Contact person phone
+ 40 232 430680

Available fax
+ 40 232 231132

Dedicated web page (if any)
-

ORGANIZATION: Universitatea Tehnica Gheorghe Asachi din Iasi

R&D GROUP: NOT DEFINED

SPECIALIST: Ion GIURMA

Infrastructure name
Materials characterisation laboratory

Infrastructure acronym
MATEL-TEST

Infrastructure entity type
Centre of services

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
Final preparation for ISO-9001/2002 certification audit

Infrastructure objectives (specify)
- To perform up to date experimental investigations in order to fully exploit the potential of nano and bio structured materials
- To become a link between the designers of new materials and industrial players.

Brief description (including a short list of relevant equipments, if necessary)
MATEL-TEST is a state of the art facility offering experimental characterisation services for innovative materials.
Some of our equipments:
Novocontrol dielectric spectroscopy system
SkyScan 1174, X-Ray Micro-CT
Novocontrol TDSC (together with HVB-300 and BDS1200 HV)
Impedance Analyzer E4991A
Omicron CPC100
Atomic spectrometer Analytik Jena ZEEnit 700
QUATRO Cryosystem (temperature range -160 °C ... +400 °C)
Fluke 9100 Calibrator

Location
B-dul Mangeron, 53
Iasi, 700050

Is this infrastructure part of a network ? Please explain
No

Contact person official function

Rector

Contact person
Prof. Ion GIURMA

Contact person e-mail
rectorat@mail.tuiasi.ro

Contact person phone
+40278680 int 1278

Available fax
+40232237627

Dedicated web page (if any)
-

ORGANIZATION: Institutul de Chimie Macromoleculara "Petru Poni"
R&D GROUP: Department of Polymer Structure and Characterization
SPECIALIST: Bogdan Simionescu

Infrastructure name

Center for Advanced Research of Biopolymers and Bionanoconjugate

Infrastructure acronym
IntelCentru

Infrastructure entity type
Other

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
IntelCentru – ID 88; Nr. 03/01.03.2009; CodSMIS – CNRS 2213

Infrastructure objectives (specify)
-

Brief description (including a short list of relevant equipments, if necessary)
- Department of chemical synthesis and biosynthesis: three fully equipped laboratories, with standard ISO 17025 CD. Equipments: PCS-ELS - DELSA NANO system
- Department of scientific imaging and instrumental analysis: 5 laboratories 'clean room 100 000' and 2 laboratories 'lean room 1000'. Equipments:Multi mode microscope SEM- STEM- TEM; Atomic force microscope coupled with RAMAN spectrometer; Simultaneous thermal analysis system DSC-TGA-DTA; Spectrometer - XPS; Circular dichroism spectrometry system coupled with HPLC chromatography and UV-vis
- Department - Tissue engineering and non-viral genetics vectors: 5 laboratories "Class Dclean cleen room" and a laboratory "Class C
clean room". equipments: Inverted fluorescence microscope;Fluorescence spectoscopie system with TCSPC; System for preparing cell cultures and preparation culture media (laminar flow hood, incubators, autoclaves, bioreactor, cryostat, electrophoresis)
- Biochemistry laboratory equipped with the microtome, coloring station, a system for inclusion in paraffin, tissue processor, freeze
- Molecular Chemical Modeling Laboratory: Cluster - Molecular Simulation

Location
"Petru Poni" Institute of Macromolecular Chemistry,Iasi

Is this infrastructure part of a network ? Please explain

-

Contact person official function

-

Contact person

Prof. Bogdan Simionescu

Contact person e-mail

bcsimion@icmpp.ro

Contact person phone

0232-217454

Available fax

-

Dedicated web page (if any)

www.icmpp.ro

ORGANIZATION: Institutul de Chimie Macromoleculara "Petru Poni"
R&D GROUP: Department of Polymer Structure and Characterization
SPECIALIST: Bogdan Simionescu

Infrastructure name

Laboratory for the characterization of micro-and nanostructures

Infrastructure acronym
LAMINAST

Infrastructure entity type
Other

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
accredited according to standard 17025/2005

Infrastructure objectives (specify)
-

Brief description (including a short list of relevant equipments, if necessary)
MASTERSIZER 2000, ZETASIZER NANO ZS, NIR SisuCHEMA System, Electrokinetic Analyzer SURPASS

Location
"Petru Poni" Institute of Macromolecular Chemistry, Iasi

Is this infrastructure part of a network ? Please explain
-

Contact person official function
-

Contact person
Prof. Bogdan Simionescu

Contact person e-mail
bcsimion@icmpp.ro

Contact person phone
-

Available fax

-

Dedicated web page (if any)
www.icmpp.ro

ORGANIZATION: Institutul National de Cercetare-Dezvoltare Chimico-Farmaceutica - ICCF Bucuresti
R&D GROUP: Microbial Biopolymers
SPECIALIST: Misu Moscovici

Infrastructure name
Cell Culture

Infrastructure acronym
CCL

Infrastructure entity type
Technical (e.g. clean room)

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
preparing for accreditation

Infrastructure objectives (specify)
In vitro studies for biocompatibility, efficacy and safety of biomaterials, nanomaterials and chemicals

Brief description (including a short list of relevant equipments, if necessary)
Equipment: laminar flow hood, CO2 incubateor, inverted microscope, Flow-cytometer, Multi-mode micro-plate reader Chameleon, Agilent 2000 Bio-Analyzer, Liquid Nitrogen Storage.
Organized in Clean-room (Class C) environment.

Location
112 Vitan Avenue, Bucharest

Is this infrastructure part of a network ? Please explain
no

Contact person official function
General manager

Contact person
Dr. Misu Moscovici

Contact person e-mail
mmisu@ncpri.ro

Contact person phone
+40-21-3212117

Available fax

+40-3222917

Dedicated web page (if any)
Not yet available

ORGANIZATION: INSTITUTUL NATIONAL DE CERCETARE DEZVOLTARE PENTRU STIINTE BIOLOGICE BUCURESTI

R&D GROUP: NOT DEFINED

SPECIALIST: MANUELA ELISABETA SIDOROFF

Infrastructure name
BIOANALYSIS Centre

Infrastructure acronym

-

Infrastructure entity type

Technical (e.g. clean room)

Is this infrastructure a legal person ?

No

Infrastructure status (acreditation, ISO certified, etc.)

-

Infrastructure objectives (specify)

Chemical analysis of of biomaterials, nanomaterials and chemicals

Brief description (including a short list of relevant equipments, if necessary)

It consists mainly in four units, the MALDI TOF chamber, the Chromatography (HPLC) chamber, the Spectrometry (UV-VIS-NIR and Spectrofluorimeter) and FT-IR chamber and Electrochemical characterization (QCM) chamber.

Mostly relevant equipments in Bioanalysis Centre:
MALDI TOF Mass Spectrometer AXIMA CFR for application to the field of proteomics and other high throughput biochemical applications such as combinatorial chemistry.
Chromatograph HPLC SHIMADZU with DAD detection coupled with MS for analyze of vitamins, flavonoids, polyphenols, organic acids etc.
Spectometer FT-IR Tensor 27 (Bruker) - used for measurements in the mid-infrared wavelength range.
Spectrometer UV-VIS-NIR Ocean Optics (Ultra violet– visible-near infrared) spectrophotometer is used for optical absorbance and reflectance measurements in the wavelength range (200-2000 nm).
Spectrofluorimeter Perkin-Elmer - used on fluorescence based biassays.
Quartz Crystal Microbalance QCM 922 used for affinity biosensors

Location

INCDSB, Bucharest, 296 Spl.Independentei

Is this infrastructure part of a network ? Please explain

-

Contact person official function
chief center Gabriel Lucian RADU; rglucian2000@yahoo.com;

Contact person
Prof. MANUELA ELISABETA SIDOROFF

Contact person e-mail
manuelasidoroff@yahoo.com

Contact person phone
+40.21.220.09.00

Available fax
+40.21.220.09.00

Dedicated web page (if any)
www.bioanaliza.ro

ORGANIZATION: SC OPTOELECTRONICA-2001 SA

R&D GROUP: NOT DEFINED

SPECIALIST: TEODOR NECSOIU

Infrastructure name

Dedicated software for nanotehnologies

Infrastructure acronym

-

Infrastructure entity type

Other

Is this infrastructure a legal person ?

No

Infrastructure status (acreditation, ISO certified, etc.)

-

Infrastructure objectives (specify)

-

Brief description (including a short list of relevant equipments, if necessary)

Dedicated software for nanotehnologies:
design and simulation software RSoft with 2 modules DiffractMod and Fullwave

Location

Optoelectronica 2001 S.A.
409 Atomistilor Street, 077125 Magurele, Ilfov county

Is this infrastructure part of a network ? Please explain

-

Contact person official function

General Manager

Contact person

Dr. TEODOR NECSOIU

Contact person e-mail

tnecsoiu@optoel.com

Contact person phone

+4021 4574498

Available fax

+4021 4574204

Dedicated web page (if any)
www.optoel.ro

ORGANIZATION: Institutul National de Cercetare Dezvoltare pentru Fizica Materialelor

R&D GROUP: NOT DEFINED

SPECIALIST: Lucian Pintilie

Infrastructure name
Cleanroom

Infrastructure acronym
Cleanroom

Infrastructure entity type
Technical (e.g. clean room)

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
No

Infrastructure objectives (specify)
Fabrication of devices

Brief description (including a short list of relevant equipments, if necessary)
The cleanroom, necessary for preparation and characterization of samples of nanostructured materials, is fitted with the necessary infrastructure for top performance.
The cleanroom is designed, built and run according to the international standards specific to the field, especially ISO EN 14644, concerning the classification of such a construction after the characteristic parameters as temperature, humidity and number of small particles in the volume unit of air.
The cleanroom at INCDFM is comprised of two sections: one section class 100 for photolithography and the other one, class 1000, is dedicated to technological operations as wet etching and thin film deposition, and also for preparing materials samples in equipments as specialized SEM (Scanning Electron Microscope) with facilities for nanolithography with electron and ion beams. These equipments allow also for a preliminary characterization of the sample.s surface.
Main facilities of the cleanroom are the realized according to the standards for cleanliness and environment parameters. For this, the crucial facility is the system for filtering and conditioning the air, which is introduced in the cleanroom through the ceiling and it is extracted close to the floor level. This provides a vertical laminar flow of air.
It is also pictured the entrance for cleanroom users where a shash is fitted with an air shower to remove even the tiniest traces of dust from the users coveralls before entering the cleanroom.
Other facilities in the cleanroom comprise:
• PC controlled system for monitoring the cleanroom parameters as temperature and humidity;
• Fume hood for working with photoresists in the class 100 section
• Fume hoods for working with solvents and for wet etching in the class 1000 section
• Distribution systems for vacuum, compressed air and work high purity gases
• generator and distribution system for de-ionized water;

The cleanroom comprise:
Mask aligner with NanoImprint Lithography (NIL)
Scanning Electron Microscope (SEM) with NanoLithography

Location
NIMP

Is this infrastructure part of a network ? Please explain
No

Contact person official function
Director

Contact person
Dr. Lucian Pintilie

Contact person e-mail
pintilie@infim.ro

Contact person phone
+40

Available fax
+40

Dedicated web page (if any)
www.infim.ro

ORGANIZATION: Institutul National de Cercetare Dezvoltare pentru Fizica Materialelor
R&D GROUP: NOT DEFINED
SPECIALIST: Lucian Pintilie

Infrastructure name
High-resolution transmission electron microscopy laboratory

Infrastructure acronym
HRTEM

Infrastructure entity type
Technical (e.g. clean room)

Is this infrastructure a legal person ?
No

Infrastructure status (acreditation, ISO certified, etc.)
No

Infrastructure objectives (specify)
Materials characterization at nanoscale

Brief description (including a short list of relevant equipments, if necessary)
Comprise: i)high-resolution transmission electron microscopy (atomic resolution, 0,8Ångström) Jeol JEM ARM 200F type and (ii) in ion-focused beam sample processing set-up, monitoring by scanning electron microscopy (TESCAN), (iii) a complex system for scanning microscopy SPM (AFM, MFM, STM, CFM, EFM, nanoindentation) operating in
vacuum and at variable temperature (NT-MDT).

Location
NIMP

Is this infrastructure part of a network ? Please explain
No

Contact person official function
Director

Contact person
Dr. Lucian Pintilie

Contact person e-mail
pintilie@infim.ro

Contact person phone
+40

Available fax
+40

Dedicated web page (if any)
www.infim.ro