



National R/D Institute for Non-ferrous and
Rare Metals



Nanorelated activities, success stories and future prospects in National R&D Institute for Non-ferrous and Rare Metals

Teodor Velea - General Director

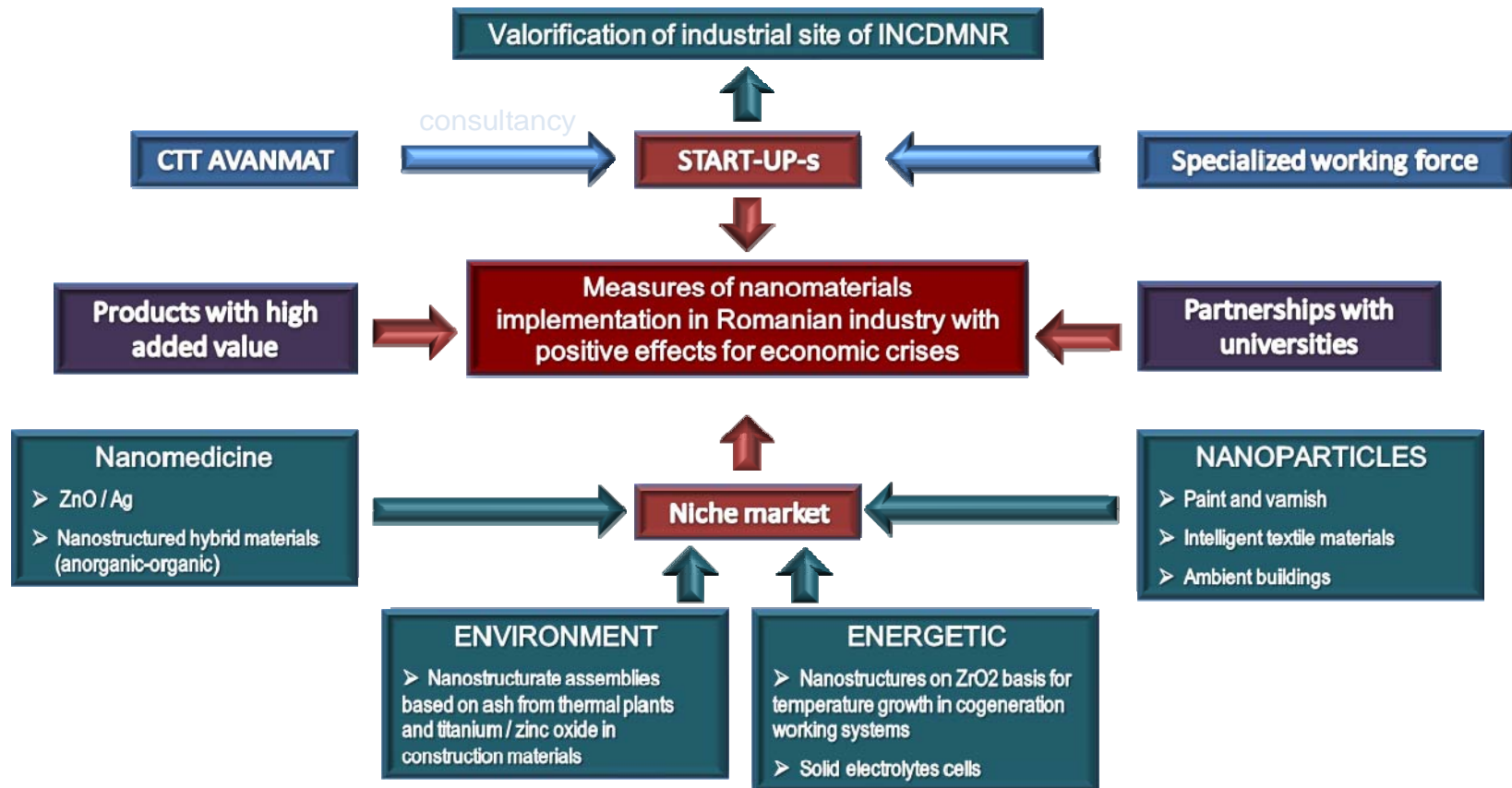
Roxana Mioara Piticescu - Scientific Director

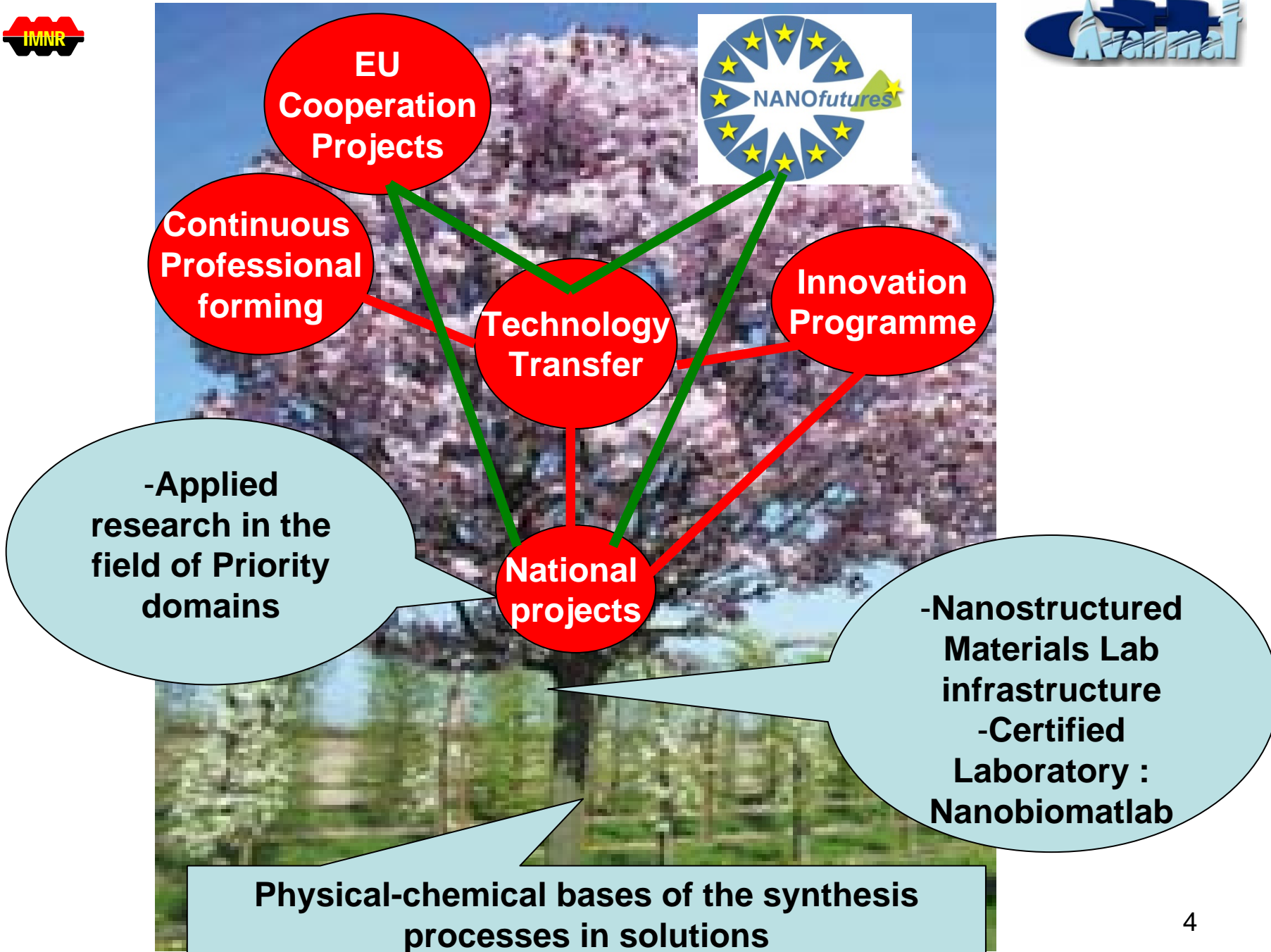
Radu R. Piticescu – Director Centre for Technology Transfer in Advanced Materials

Brief description of the organisation

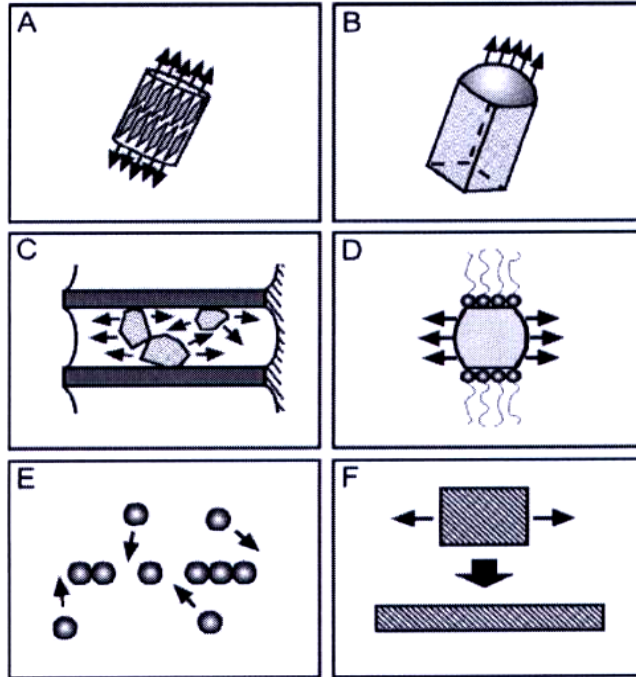


Laboratory of Nanostructured Materials – object of activity and results

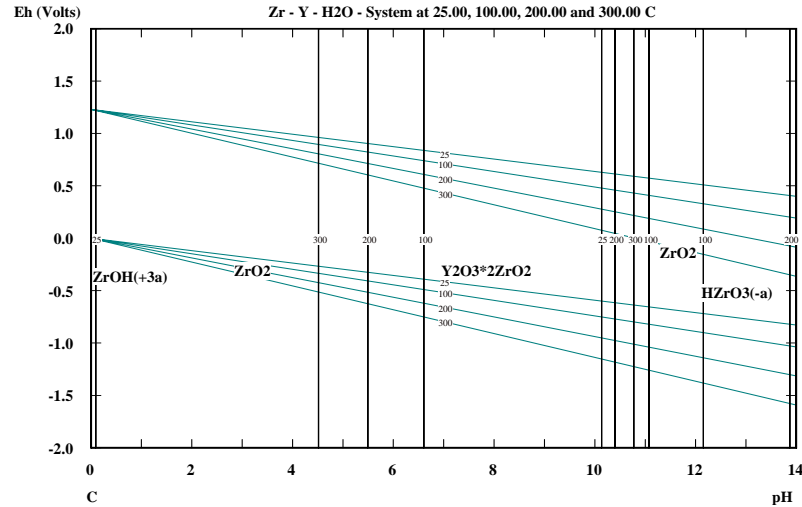
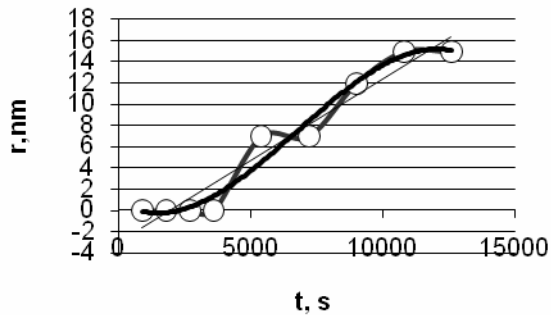




Physical-chemical bases of the synthesis processes in solutions

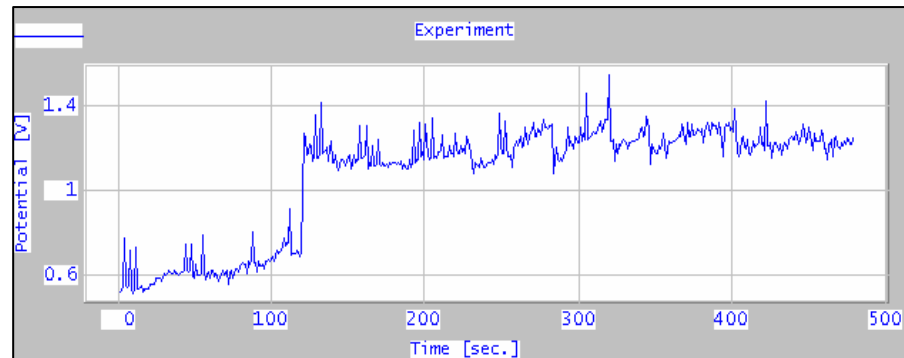


Kinetics modelling



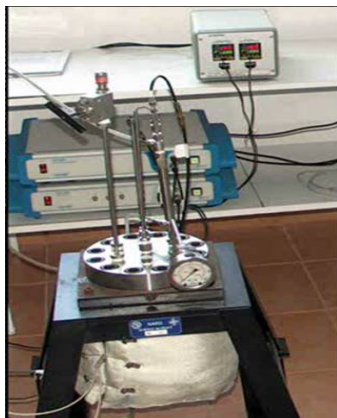
ELEMENTS	Molality	Pressure
Zr	4.700E-02	Variable
Y	5.200E-03	Variable

Thermodynamic modelling



Solvothermal-electrochemical deposition

Nanostructured Materials Lab Infrastructure Certified Laboratory : Nanobiomatlab



ASOCIAȚIA DE ACREDITARE DIN ROMÂNIA - RENAR

București, Str. Flăcăilor nr. 18, sector 4, cod 040443
CIF RO 4311980



CERTIFICAT DE ACREDITARE Nr. LI 827

Asociația de Acreditare din România – RENAR, fiind recunoscută ca Organism Național de Acreditare prin OMIR 354/12.06.2003, declară că:

Laborator de Analize Chimice și Fizice

Pantelimon, Bdul Biruinței nr. 102, cod poștal 077145, județul Ilfov

aparținând de

**Institutul Național de Cercetare Dezvoltare
pentru Metale Neferoase și Rare**

satisface cerințele **SR EN ISO/CEI 17025:2005** și este competent să efectueze activități de **ÎNCERCĂRI**, așa cum se detaliază în Anexa la prezentul certificat de acreditare.

Această acreditare este valabilă cu condiția îndeplinirii în mod continuu a criteriilor de acreditare stabilite de Asociația de Acreditare din România - RENAR

Data acreditării inițiale: 02.11.2009

Data expirării acreditării: 01.11.2013

Prezentul certificat este valabil numai însoțit de Anexă (1 pagină), parte integrantă a acestuia.

DIRECTOR GENERAL

Cristian Dorin NICHITA

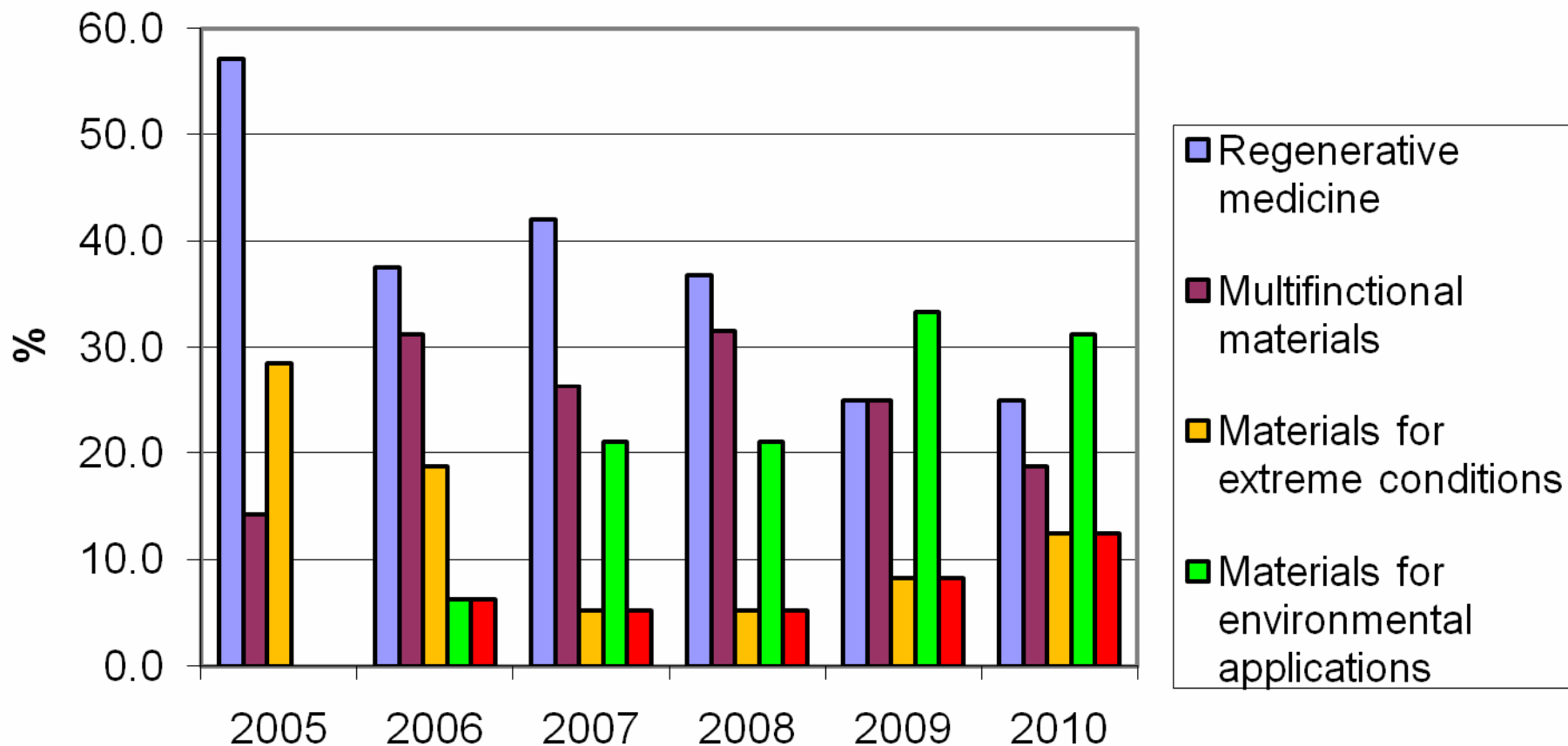
PREȘEDINTE AL CONSILIULUI DE ACREDITARE

prof. univ. dr. ing. Ioan POPESCU

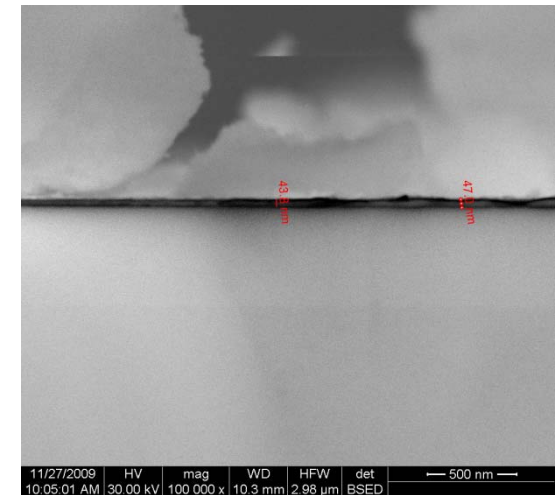
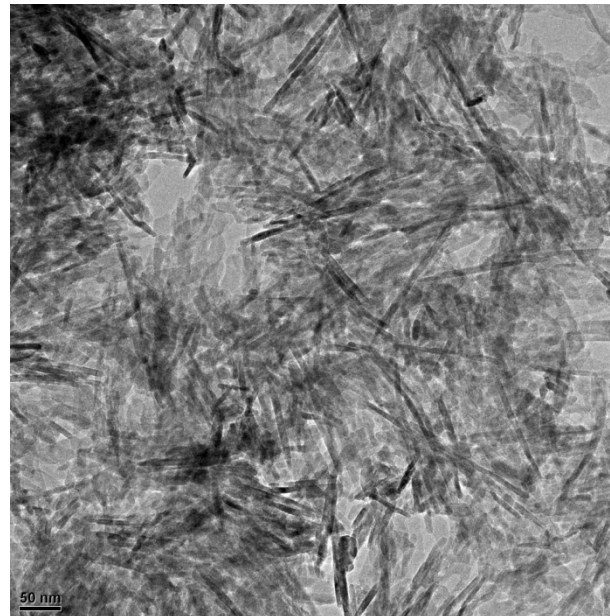
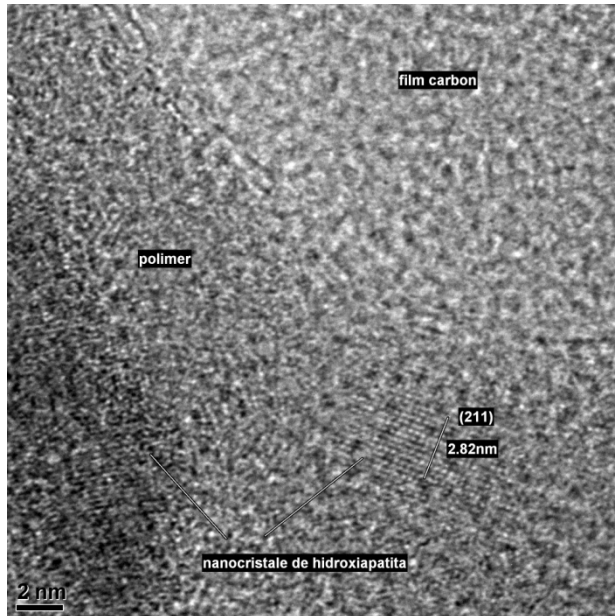


Ioan Popescu

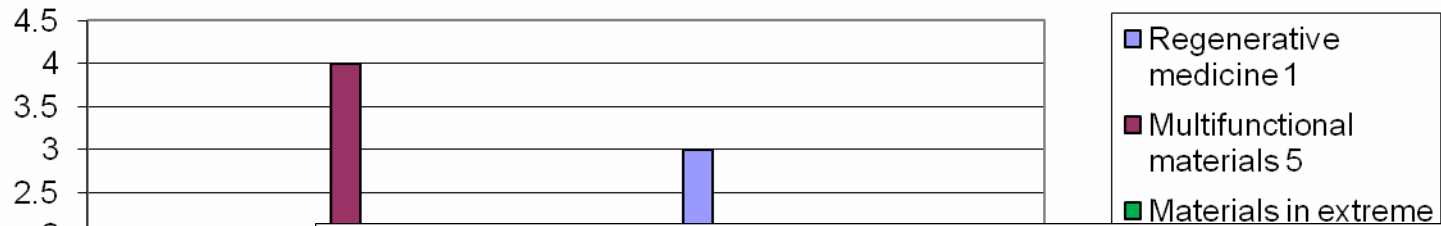
MAIN RESEARCH DOMAINS IN NATIONAL FUNDED PROJECTS



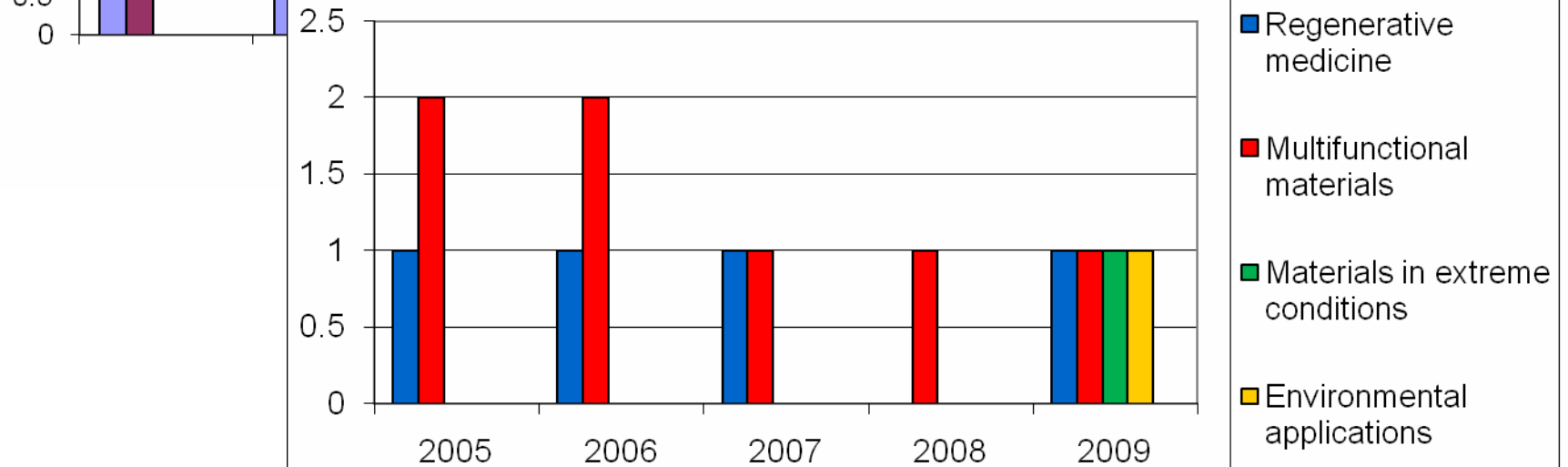
Examples from 2-nd National R&D&I Programme	Acronim	Adresa pagina WEB
Hibrid nanostructured materials for sensors for potential applications in diagnosis and therapy	HINAMASENS	www.hinamasens.imnr.ro
Graded materials based on micro & nanostructured zirconia graded materials for energy and aerospace structures	GRAZIR	www.imnr.ro/grazir
New technological concepts regarding the development of nanomaterials with low environmental risk	TECNANOECO	www.imnr.ro/tecnanoeco



MAIN RESEARCH DOMAINS IN INTERNATIONAL FUNDED PROJECTS



Funded projects (FP6, FP7, ESF-COST)



Examples of Successful International projects

- PC5 G1RD-CT2000-00195 “Microscale fabrication of graded materials” – Micromaking – 2002-2004
- PC5 CRAFT G5ST-CT-2002-50358 “Metal-ceramic composites compacts and coatings based on ceramic coated metal powders - METMICOATED -2003-2005
- Thematic network G5RT-CT-2001-05024 “POLAR ELECTROCERAMICS” (2003-2007)
- COST D 30 “High Pressure Tuning of Chemicals and Biochemicals Processes” (2003-2007)
- COST 525 “Advanced Electroceramics: Grain boundary engineering” (2004-2007)
- Egide-Econet “Modelling electrochemical and electronic properties of functional nanomaterials -Fun Nanos (2005-2006)

FP6 – FP7	Acronym	Period	WEB
Ultraprecise Direct Manufacturing (FP6 – NMP2-CT-2006-026467)	MANUDIRECT	2006-2010	www.manudirect.eu
SUPERSONIC deposition of nanostructured surfaces (FP7-228814-2)	SUPERSONIC	2009-2013	Under construction

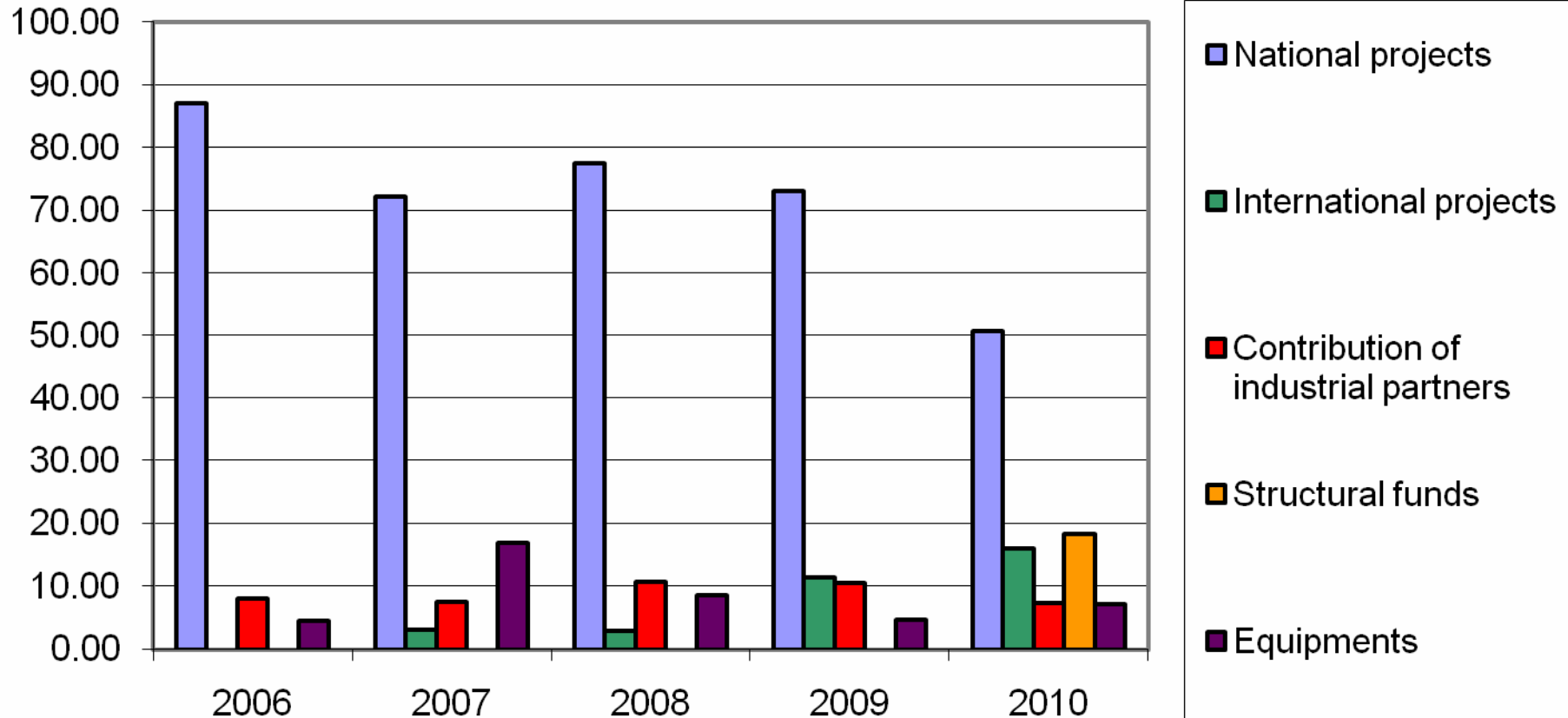
COST TD0802: „*Dendrimers in Biomedical Applications*” (2009-2013)

Dr. Roxana M. Piticescu member in management committee

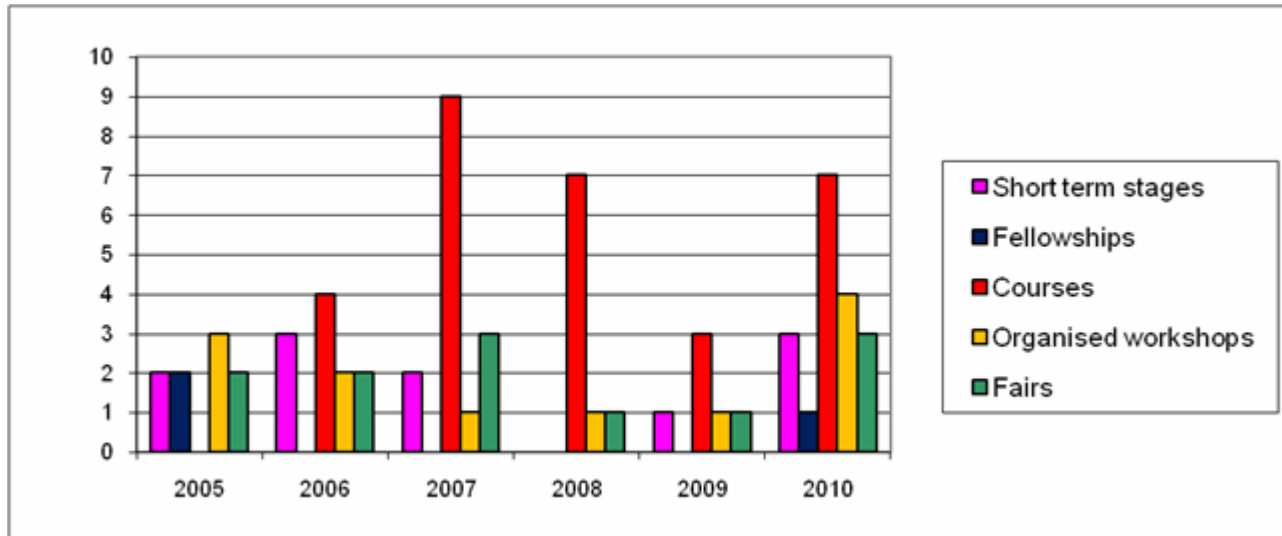
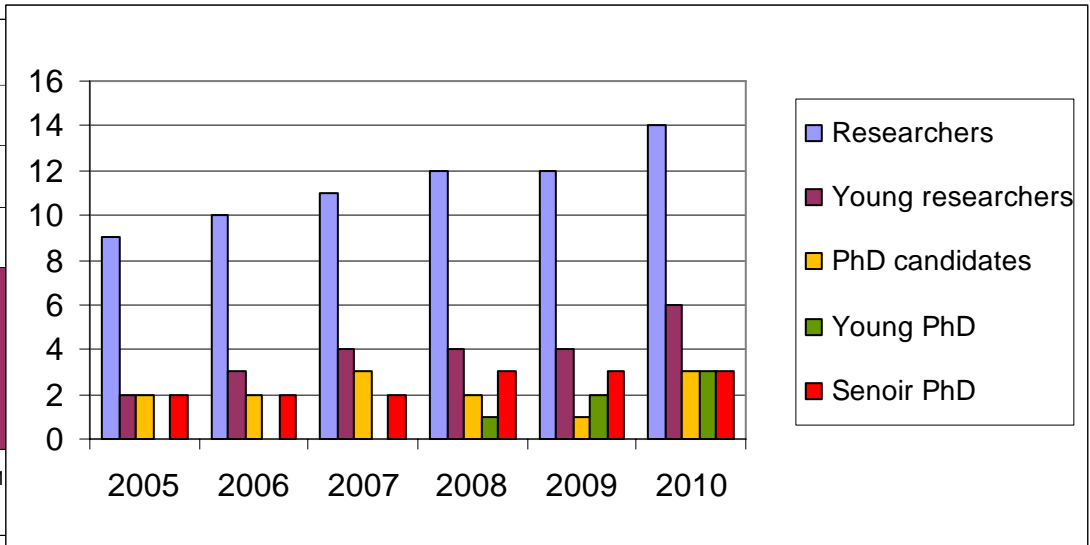
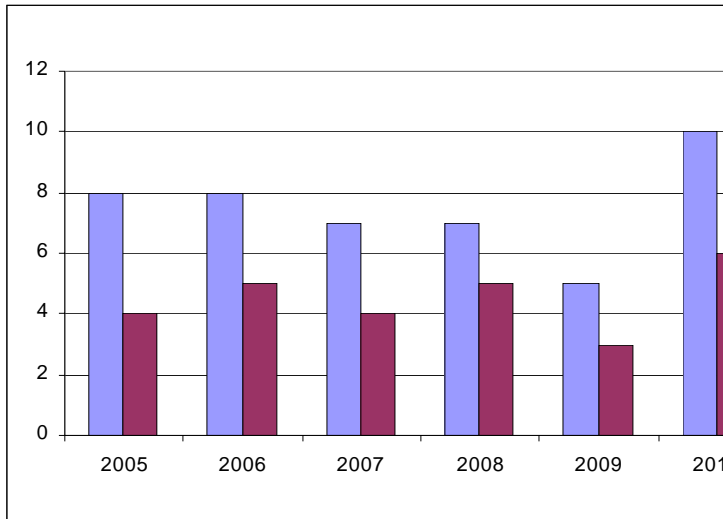
COST TU0802 „*Next generation cost effective phase change materials for increased energy efficiency in renewable systems in buildings*” (2009-2013)

Dr. Radu R. Piticescu member in management committee

Participation in European Research Area (in terms of funding %)



Participation in European Research Area (human resources)





MISSION

Development of advanced nanomaterials in Romania by valorisation of R&D results by technology transfer toward enterprises (mainly SMEs including start-ups)

SUCCESES PROJECTS

- Institutional development of CTT AVANMAT, 2004-2005, ctr. 09/2004, General Services for technology transfer in biomaterials field - Ctr. 3062006-2007), Specific technology transfer contract 410/2006
- Innovation cluster, ctr. PN II 92-096 CLUSTINOVA (2008-2011)
- **INNOVATION ctr.202/2008 PANSAG** “Patches embedded with triglycerides and Ag-doped ZnO nanoparticles for treatment of wounds with high infection risk”, beneficiary S.C.VELFINA SA Campulung, jud. Arges
- **Major Structural Funds-Human Resources Project** in the field of Forming and support for enterprises and employees to promote adaptability **for using advanced materials with applications in mechanics and mecatronics-PROFMEC”**

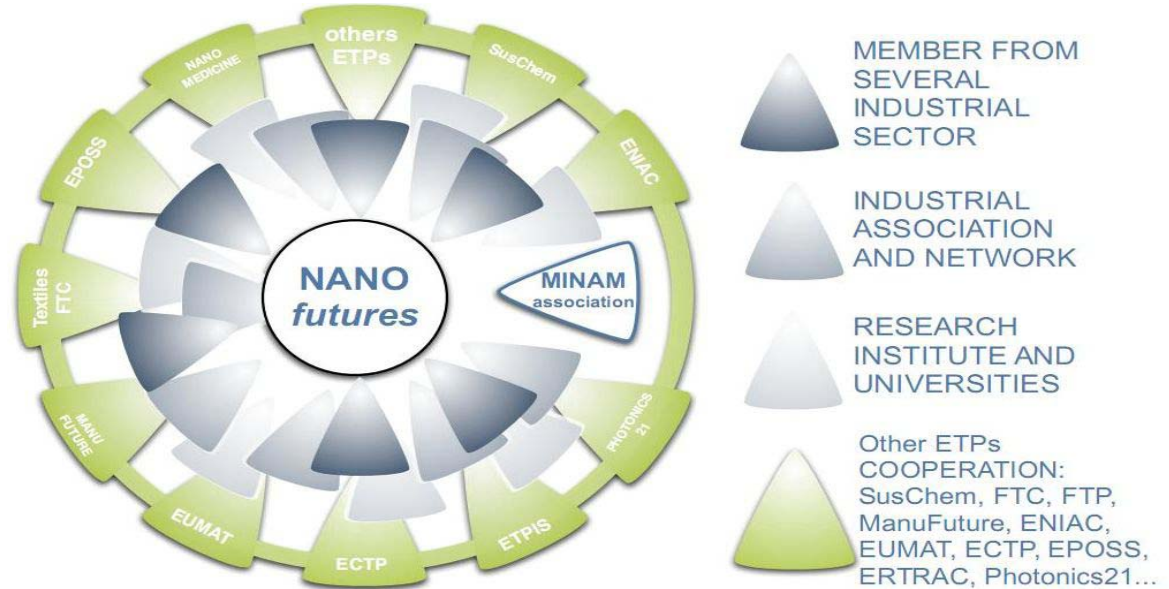
PARTICIPATION IN THE ACTIVITIES OF EUROPEAN TECHNOLOGY PLATFORMS

IMNR IS member of:

- ETP Nanomedicine (Group for regenerative medicine);
- ETP Rapid Manufacturing (Additive Manufacturing)



NANOFutures Initiative:
IMNR-CTT AVNMAT
 nominated to represent
 and disseminate the
 Initiative in Romania



IMNR will be involved in completing the institutional input for the Impact Assessment of the New Nano Action Plan considering also the point of view of the SMEs partners

THANK YOU FOR YOUR ATTENTION

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Director CTT AVANMAT Dr. Radu R. Piticescu

E-mail: rpiticescu@imnr.ro