





PERSONAL INFORMATION

Ioan Ovidiu Pana



 National Institute for R &D of Isotopic and Molecular Technologies, 67-103 Donat St., 400293 Cluj-Napoca, Romania
 0264584037
 ovidiu.pana@itim-cj.ro
 www.itim-cj.ro

Sex M | Date of birth 09/01/1954 | Nationality Romanian

WORK EXPERIENCE

- 2009-to date **Research Team Leader; 11-15 researchers**
- A. Nanostructures preparation by chemical methods and pulsed laser deposition (PLD);
- Nanocomposites based on semiconductor and magnetic materials, with adjustable composition and characteristics used in environmental protection;
 - Exchange coupled magnetic materials with applications in energy storage;
 - Semiconductor thin films used in electricity production by photovoltaic effect;
 - Biofunctionalized nanocomposites in various architectures with medical applications;
- B. Nanostructures characterization: Quantitative and qualitative elemental analysis by XPS, X-ray diffraction (particle and thin layers), magnetic characterization (VSM, SQUID), electron spin resonance, thermal treatments, photoluminescence spectroscopy, UV-Vis.
- C. Study of interface phenomena in composite nanostructured materials: charge and spin transfer, quantum coupling processes.
- 2009 **Senior Researcher I**
- 2008-to date **Head of Department: Physics of Nanostructured Systems**
- 2006-to date **Member of Scientific Council; 2007-to date: Member of Managing Committee**
- 1982-to date **researcher at National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania.**
- 1978-1982 **Physics Teacher, High school "Mihai Viteazul" Alba-Iulia, Romania**

EDUCATION AND TRAINING

- 1999 **Ph. D**
Faculty of Physics, Babes-Bolyai University Cluj-Napoca, Romania
- 1974-1978 **Bachelor of Science**
Faculty of Physics, Babes-Bolyai University Cluj-Napoca, Romania

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C2	C2	C2	C2	C2
English	C2	C2	C2	C2	C2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Organisational / managerial skills Research Team Leader; 11-15 researchers, Head of Department: Physics of Nanostructured Systems

Digital competence	SELF-ASSESSMENT				
	Information processing	Communication	Content creation	Safety	Problem solving
	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

PROGRAMMING

- Fortran, C, Origin, Mathematica, Matlab.

Driving licence B

ADDITIONAL INFORMATION

- Publications 55 ISI articles, h-index 13, 428 citations (Web of Science)**
1. *Structure, morphology and magnetic properties of Fe-Au core-shell nanoparticles*, [O. Pana](#), CM. Teodorescu, O. Chauvet, C. Payen, D. Macovei, R. Turcu, M.L. Soran, N. Aldea, L. Barbu, Surf. Sci. 601, 4352 (2007).
 2. *Polypyrrole coated magnetite nanoparticles from water based nanofluids*, R. Turcu, [O. Pana](#), A. Nan, I. Craciunescu, O. Chauvet, C. Payen, J Phys D-Appl Phys 41, 245002 (2008).
 3. *Microwave-Assisted Graft Polymerization of epsilon-Caprolactone onto Magnetite*, A. Nan, R. Turcu, I. Craciunescu, [O. Pana](#), H. Scharf, J. Liebscher, J Polym Sci A Polym Chem. 47, 5397(2009).
 4. *Synthesis and characterization of the core-shell Au covered LSMO manganite magnetic nanoparticles*, [O. Pana](#), R. Turcu, M.L. Soran, C. Leostean, E. Gautron, C. Payen, O. Chauvet, Synt. Met. 160, 1692(2010).
 5. *Comparative study of core-shell iron/iron oxide gold covered magnetic nanoparticles obtained in different conditions*, C. Leostean, [O. Pana](#), R. Turcu, M.L. Soran, S. Macavei, O. Chauvet, C. Payen, J. Nanopart. Res. 13, 6181(2011).
 6. *Interface charge transfer in polypyrrole coated perovskite manganite magnetic nanoparticles*, [O. Pana](#), M.L. Soran, C. Leostean, S. Macavei, E. Gautron, C.M. Teodorescu, N. Gheorghe, O. Chauvet, J. Appl. Phys. 111, 044309(2012).
 7. *Reversing chemoresistance of malignant glioma stem cells using gold nanoparticles*, Orza, O. Soritau, C. Tomuleasa, L. Olenic, A. Florea, [O. Pana](#), I. Bratu, et al. Int. J. Nanomedicine 8, 689(2013).
 8. *Synthesis and characterization of Fe-Pt based multishell magnetic nanoparticles*, [O. Pana](#), C. Leostean, M.L. Soran, M. Stefan, S. Macavei, S. Gutoiu, V. Pop, O. Chauvet, J. Alloys Compd. 574, 477(2013).

9. *Evidence by EPR of ferromagnetic phase in Mn-doped ZnO nanoparticles annealed at different temperatures*. D. Toloman, A. Mesaros, A. Popa, O. Raita, T.D. Silipas, S.B. Vasile, O. Pana, L.M. Giurgiu, J. Alloy. Compd. 551, 502(2013).
10. *Properties of Eu doped TiO₂ nanoparticles prepared by using organic additives*, C. Leostean, M. Stefan, O. Pana, A.I. Cadis, R.C. Suci, T.D. Silipas, E. Gautron, J. Alloys Compd. 575, 29(2013).
11. *Synthesis and characterization of Fe₃O₄@ZnS and Fe₃O₄@Au@ZnS core-shell nanoparticles*, M. Stefan, C. Leostean, O. Pana, M.L. Soran, R.C. Suci, E. Gautron, O. Chauvet, Appl. Surf. Sci. 288, 180(2014).
12. *Synthesis and characterization of Fe₃O₄-TiO₂ core-shell nanoparticles*, M. Stefan, O. Pana, C. Leostean, C. Bele, D. Silipas, M. Senila, E. Gautron, J Appl Phys 116, 114312 (2014).
13. *A valence states approach for luminescence enhancement by low dopant concentration in Eu-doped ZnO nanoparticles*, A. Mesaros, D. Toloman, M. Nasui, R.B. Mos, T. Petrisor, B.S. Vasile, V.A. Surdu, I. Perhaita, A. Biris, O. Pana, J Mat Sci 50, 6075 (2015).
14. *Interface charge transfer process in ZnO:Mn/ZnS nanocomposites*, M. Stefan, D. Toloman, A. Popa, A. Mesaros, O.R. Vasile, C. Leostean, O. Pana, J Nanopart Res 18, 59 (2016).
15. *Magnetic recoverable Fe(3)O(4)-TiO(2):Eu composite nanoparticles with enhanced photocatalytic activity*, M. Stefan, C. Leostean, O. Pana, D. Toloman, A. Popa, I. Perhaita, M. Senila, O. Marincas, L. Barbu-Tudoran, Appl Surf Sci 390, 248 (2016).
16. *New properties of Fe₃O₄@SnO₂ core shell nanoparticles following interface charge/spin transfer*, C. Leostean, O. Pana, M. Stefan, A. Popa, D. Toloman, M. Senila, S. Gutoiu, S. Macavei, Appl Surf Sci 427, 192 (2018).
17. *Fe₃O₄-TiO₂: Gd nanoparticles with enhanced photocatalytic activity and magnetic recyclability*, A. Popa, M. Stefan, D. Toloman, O. Pana, A. Mesaros, C. Leostean, S. Macavei, O. Marincas, R. Suci, L. Barbu-Tudoran, Powder Tech 325, 441 (2018).

Book chapters:

1. R. Turcu, O. Pana, A.Nan, L.M. Giurgiu, *Nanostructured Polypyrrole and Composites*, in: "Polymeric Nanostructures and Their Applications", Ed. H.S. Nalwa, American Scientific Publishers, 2006, ISBN: 1-58883-068-3
2. C. Mijangos, D. López, O. Pana, R. Turcu, *Magnetic nanoparticles and nanostructured polymer based magnetic composites*, in Nanofun-Poly White Book: "Polymer Nanoscience and Nanotechnology, an European Perspective", Ed. Morphema, 2008, Science, Terni, Italy, ISBN-10: 8896051002, ISBN-13: 9788896051009
- 3 O. Pana, *Excitatii neliniare in materiale cvasidimensionale*, Casa Cartii de Stiinta, Cluj-Napoca, 2009, pp 1-115, ISBN: 978-973-133-568-1.

Presentations
Invited talks: 10, including 2 plenary lectures.

Projects

(2006-2018) as Project leader
 CEEX -59/2006, 970000lei, "Core-shell magnetic nanoparticles covered with noble metals, and conducting polymers: synthesis , characterization and applications". 10 people research team; 3 articles
 Grant CNCSIS 1486(3)/2006, 197500lei, "Polaron like nonlinear excitations involved in charge transport properties in nanostructured systems" 5 people research team; 1 article
 PN II-71-119/2007, 2000000lei, „Ordered configurations of ferromagnetic and super-ferromagnetic nanoparticles”, own 11 people research team plus 2 other teams; 3 articles
 PCE ID119/2011, 1500000lei, Core-shell composite nanoparticles based on Fe and Pt having adjustable magnetic, dispersive and functional properties”, 8 people research team; 4 articles
 RO-F -Bilateral Project Brancusi, 2009 – 2010, 2500000 lei– "Hivyd systems based on magnetic particles and conducting polymers" Laboratoire de Physique des Matériaux et Nanostructures, Institut des Matériaux Jean Rouxel (IMN), Nantes France; 3 articles
 RO-AU Bilateral/2014-2015, 284000lei, 5 people research team; articles in preparation

Memberships

2002-2008: Romanian Society of Material Science - Crystal growth,
 Romanian Society of Magnetic and Superconducting Materials.
 European Society of Material Research, 2007-to date
 Romanian Physical Society (RPS): 2010-2014 President of the Cluj Branch and main founder of RPS-Cluj Branch as legal entity; 2014-to date Vice President of RPS Cluj Branch.

Reviewer

Journal of Magnetism and Magnetic Materials, Chemistry of Materials, Synthetic Metals,

Materials Letters, J. Phys. D: Applied Physics, Journal of Nanoparticle Research.

05.07.2019