

PERSONAL INFORMATION

**STEFAN MARIA VIORICA**



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Sexul Feminin | Data nașterii 18/06/1979 | Naționalitatea Romana

**WORK PLACE**

National Institute for Research and Development for Isotopic and Molecular Technologies, Cluj-Napoca (Romania)

**WORK EXPERIENCE**

**2010- prezent Scientific Researcher III, II**

National Institute for Research and Development for Isotopic and Molecular Technologies, , Str. Donat nr. 67-103, 400293 Cluj-Napoca (Romania)

- Nanostructured composite materials: synthesis, characterisation, properties, applications in environmental protection and medicine;
- Preparation of materials based on transition metals and rare earth doped metal oxides by sol-gel, polyol, inverse micelle, precipitation;
- Interface studies in magnetic-semiconductor core-shell composite materials;
- Deposition of thin films by PLD;
- Photocatalysis using different composite materials;
- Investigation techniques of advanced materials. Documentation for research projects

Activity type: research

**2007- 2013 Scientific Researcher III**

“Raluca Ripan” Institute for Research in Chemistry, Cluj-Napoca (România) ; National Institute for Research and Development for Isotopic and Molecular Technologies , Cluj-Napoca (România)

Scientific Researches in solid state chemistry, physico-chemistry of luminescent and oxidic materials, deposition of metal chalcogenide (ZnS, CdS) and oxide (ZnO, TiO<sub>2</sub>) thin films by chemical methods: chemical bath deposition, spin coating) metal oxide based materials doped with transitional metal and rare earth , high purity inorganic reagents, separation of noble metals from industrial wastes.

Activity type: research, microproduction

**2003-2007 Scientific researcher**

“Raluca Ripan” Institute for Research in Chemistry, Cluj-Napoca (România) ;

Solid-state chemistry, chemical deposition of metal chalcogenide thin films

Activity type: research

**2002-2003 Researcher Assistant**

“Raluca Ripan” Institute for Research in Chemistry, Cluj-Napoca (România) ;

Nanostructured catalysts, chemical deposition of metal chalcogenide thin films

Activity type: research

**EDUCATION AND TRAINING**

- 2003 - 2007 **PhD in chemistry**  
"Babes-Bolyai" University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca (Romania)
- 2002 - 2003 **MSc Degree- Applied Electrochemistry**  
"Babes-Bolyai" University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca (Romania)
- 1998 - 2002 **University Degree**  
Babes-Bolyai" University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca (Romania)
- 1994- 1998 **Bachelor Degree** 4 EQF  
National Colegium „Vasile Lucaciu" Baia Mare

**PERSONAL SKILLS**

**Mother tongue(s)** Romanian

**Foreign language(s)**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	B2
French	B1	B1	B1	B1	B1

**Communication skills** Perseverance, ability to organize and work in team, good team spirit, communication skills, organized, working, creative, adaptable to multicultural environments

- Managerial skills**
- Good organizer
  - Managerial skills gained from projects where I was project director

SELF-ASSESSMENT

**Digital skills**

Information processing	Communication	Content creation	Safety	Problem-solving
Independent user	Independent user	Independent user	Basic user	Basic user

Adobe Photoshop, Paint, Chemwin, ACD See, documentare Internet, Corel Draw, LC Solution, Wincats

**Other competence**

- Reviewer at international journals: Mat. Sci. Semicond. Proc., Sensors and Actuators, J. Nanopart. Res., Powder Technol.

**ADDITIONAL INFORMATION**

**Teaching activity** Thermodynamics problems solving and labs with students from the 2<sup>nd</sup> and 3<sup>th</sup> year of study from Faculty of Chemistry and Chemical Engineering, "Babes-Bolyai" University

**Publications, Conferences, Patents** >1 book >35 ISI papers >10 non-ISI papers >over 80 **communications at international conferences**; > 3 technologies; >8 preparation methods of composite materials ; 2 patents (advanced materials for optoelectronics and photocatalysis).

**Citations** 233

**h-index** 10

**Specialization** Visiting researcher – Technical University of Graz, July 2015

- Courses**
- Training course for operating **TriStar II 3020-Micromeritics** custom built for determination of surface area and porosity materials (Josef Eidler, Micromeritics Europa)- **february 2009**;
  - Training course for operating **Pulsed Laser Deposition (PLD)** custom built (TSST Netherlands) -**april 2016**.

**Projects** **Project manager at two projects won by competition:**

1. Thin films of metal chalcogenide with special properties, **Grant CNCISIS Td 52/2005 (2005-2007)**
2. Composite nanoparticles with core-shell structure based on magnetite and semiconductors with predetermined properties (**PN2-RU-PD54/20011**) (**2011-2013**)
  - Active member in **21** national projects and in **1** POC project (2016-2021) – Knowledge Transfer Partnerships.

*Selected papers:*

1. Fe<sub>3</sub>O<sub>4</sub>-TiO<sub>2</sub>: Gd nanoparticles with enhanced photocatalytic activity and magnetic recyclability, A. Popa, **M. Stefan**, D. Toloman, O. Pană, A. Mesaroş, C. Leostean, S. Macavei, O. Marincas, R. Suci, L. Barbu-Tudoran, *Powd. Technol.* 325 (2018) 44-451.
2. Efficient photocatalytic removal of RhB using magnetic Fe<sub>3</sub>O<sub>4</sub>-SnO<sub>2</sub> nanocomposites containing Sn<sup>2+</sup> interstitial impurities, M. Stefan, A. Popa, O. Pană, C. Leostean, D. Toloman, D. Lazar, F. Pogăcean, S. Macavei, S. Gutoiu, *J. Mat. Sci.: Mater. Electron.* 29 (2018) 14132-14143.
3. Magnetic recoverable Fe<sub>3</sub>O<sub>4</sub>-TiO<sub>2</sub>:Eu composite nanoparticles with enhanced photocatalytic activity, M. Stefan, C. Leostean, O. Pana, D. Toloman, A. Popa, I. Perhaita, M. Senilă, O. Marincas, L. Barbu-Tudoran, *Appl. Surf. Sci.* 390, 2016, 248-259. (IF-3.150).
4. Synthesis and characterisation of Fe<sub>3</sub>O<sub>4</sub>@ZnS and Fe<sub>3</sub>O<sub>4</sub>@Au@ZnS core-shell nanoparticles, M. Stefan, C. Leostan, O. Pana, M. L. Soran, R. C. Suci, E. Gautron, O. Chauvet, *Appl. Surf. Sci.* 288 (2014) 180-192. (IF-2.538)
5. Synthesis and characterisation of Fe<sub>3</sub>O<sub>4</sub>-TiO<sub>2</sub> core-shell nanoparticles, M. Stefan, O. Pana, C. Leostean, C. Bele, D. Silipas, M. Senila, E. Gautron, *J. Appl. Phys.*, 116 (2014) 114312(1-11). (IF-2.185)

Cluj-Napoca,  
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