

Personal Information

Osiac Mariana



Adress: Street Imparatul Traian, nr. 43, Bl. 1, Sc.1, Ap. 4, Craiova, Romania

+40 746 152 204

mariana71osiac@gmail.com

Female

Data of birth 22 October 1971

Nationality Roumanian

Professional experience

Period 1996-1999
Position Research assistant
The main activities Research
Name of the employer INFLPR, Magurele, strada Atomistilor 402, Romania

Period 1999-2002
Position PhD
The main activities Research
Name of the employer Ernst-Moritz-Armdt Greifswald University, Germany

Period 2003-2004
Position Postdoctoral
The main activities Research/Teaching
Name of the employer Ruhr University of Bochum, Germany

Period 2005-2009
Position Lecturer
The main activities Teaching/Research
Name of the employer University of Craiova, Romania

Period 2009-present
Position Reader
The main activities Teaching/Research
Name of the employer University of Craiova, Romania



EDUCATION

Period 1990-1995
 Qualification Degree in Physics
 Name of educational institution University of Bucharest, Romania

Period 1996-1997
 Qualification Advanced Studies
 Name of educational institution University of Bucharest, Romania

Period 1999-2002
 Qualification PhD
 Name of educational institution Ernst-Moritz-Arndt Greifswald University, Germany

Title of PhD thesis Spectroscopic studies of microwave plasmas generated in diboran and acetilene

AFFILIATES TO PROFESSIONAL AND SCIENTIFIC SOCIETIES

Romanian Society of Physics
 Romanian Society of Biophysics

Personal Skills

Native Language Romanian

Foreign Language

	UNDERSTANDING		SPEACHING		WRITING
	listening	reading	conversation	speech	
English	C1	C2	C2	C2	C1

Communication skills

- Good communication skills, team spirit



- Managerial skills
- Good project team and management experience as coordinator of national and international research projects
- Skills acquired at the workplace
- *The ability to organize and carry out experiments in the field of physics, spectroscopic studies, X-ray diffraction, thin film, optometry.*
- Other skills
- Microsoft Office, Corel, Origin, Adobe Photoshop

ERASMUS Internships

University of Lille 1, march 2010-2012
University of Granada, december 2018
University of Granada, June 2021
University of Plovdiv, September 2022
University of Adana, November, 2022
Matej Bel University Banska Bystrica, January 2023

Project mobilities

University of Kassel, november 2019

Organisational skills

Research Nigth, RNRscience escape from laboratory 609771 -2013
Research Nigth, RNR RoTalkScience 633311-2014
Research Nigth, RNR RoTalkScience 633311-2015

Others

Additional Information

Project director/Project manager research 8
Project director (international): 1
Responsabil for the science popularization project (Researcher Night):3
Scientific publication: 28
Author and co-author of scientific monographs/laboratory notebooks: 4
Conference participation: over 30/ oral speech 6
Referent to doctoral thesis: 7
Review: Ceramics International, Journal of optoelectronics and advanced materials, Applied Physics A
Citation over 200 in ISI journals Web of Science si Scopus



ANEXE

ISI Journals

1. **M. Osiac**, J. Roepcke, P. Davies, Infrared laser spectrum of the fundamental band of the boron monoxide free radical, *Chemical Physics Letters*, 344, 1-2, 92-96, 2001
2. J. Roepcke, G. Revalde, **M. Osiac**, K. Li, J. Meichsner, Tunable diode laser absorption studies of hydrocarbons in RF plasmas containing hexamethyldisiloxane, *Plasma Chemistry and Plasma Processing*, 22, 1, 137-157, 2002.
3. **M. Osiac**, BP Lavrov, J. Roepcke, Intensity distributions in R and P branches of (0-0) band of the A(1)Pi-X(1) Sigma (+) electronic transition of the BH molecules and determination of the gas temperature in non-equilibrium plasmas, *Journal of Quantitative Spectroscopy and Radiation Transfer*, 74, 4, 471-491, 2002.
4. BP. Lavrov, **M. Osiac**, AV Pipa, J. Roepcke, On the spectroscopic detection of neutral species in a low-pressure plasma containing boron and hydrogen, *Plasma Sources Science and Technology*, 12, 4, 576-589, 2003.
5. T. Gans, **M. Osiac**, D. O'Connell, VA Kadetov, U. Czarnetzki, T. Schwarz-Selinger, H. Halfmann, P. Awakowicz, Characterization of stationary and pulsed inductively coupled RF discharges for plasma sterilization, *Plasma Physics and Controlled Fusion*, 47, A353-A360, 5A, 2005.
6. **M. Osiac**, T. Schwarz-Selinger, D. O'Connell, B. Heil, ZL Petrovic, MM Turner, T. Ganz, U. Czarnetzki, Plasma boundary sheath in the afterglow of a pulsed inductively coupled RF plasma *Plasma Sources Science and Technology*, 16, 2, 355-363, 2007.
7. E. Osiac, S. Kuch, I. Sokolska, **M. Osiac**, G. Huber, Upconversion avalanche processes in Ho³⁺-Yb³⁺: YLF crystal, *Romanian Reports in Physics*, 60, 4, 937-945, 2008.
8. **M. Osiac**, N. Scarisoreanu, M. Dinescu, AlN thin film deposition using a radio-frequency beam assisted pulsed laser deposition, *Journal of Optoelectronic and Advanced Materials*, 10, 8, 2068-2070, 2008.
9. **M. Osiac**, CC Surdu-Bob, M. Badulescu, CP Lungu, Optical emission spectroscopy diagnostics of a Ni thermionic vacuum arc (TVA) plasma, *Journal of Optoelectronic and Advanced Materials* 10, 8, 2007-2010, 2008.
10. D. Rasleanu, V. Ionescu, G. Prodan, V. Ciupina, CP Lungu, C. Surdu-Bob, **M. Osiac**, O. Pompilian, M. Badulescu, AM Lungu, Nanostructured PZT type thin films prepared by thermionic vacuum arc method, *Journal of Optoelectronic and Advanced Materials*, 10, 11, 3041-3047, 2008.
11. OG Pompilian, **M. Osiac**, GE Iacobescu, CP Lungu, Layer coatings of Re and Re-NiCr obtained by thermionic vacuum arc technique, *Journal of Optoelectronic and Advanced Materials*, 11, 11, 1779-1782, 2009.
12. V. Ionescu, CP Lungu, **M. Osiac**, V. Ciupina, Silver containing carbon amorphous nanocomposites films deposited by thermionic vacuum arc technique, *Romanian Journal of Physics*, 55, 1-2, 119-126, 2010.
13. V. Ionescu, **M. Osiac**, CP Lungu, OG Pompilian, I. Jepu, I. Mustata, GE Iacobescu, Morphological and structural investigations of Co-MgF₂ granular thin films grown by thermionic vacuum arc, *Thin Solid Films*, 518, 14, 3945-3948, 2010.
14. S. Georgescu, AM Voiculescu, O. Toma, S. Nastase, C. Matei, **M. Osiac**, Luminiscence of Eu-doped langanite nanopowders synthesized by a citrate sol-gel method, *Journal of Alloys and Compounds*, 507, 2, 470-474, 2010.

15. N. Georgescu, CP Lungu, AR Lupu, **M. Osiac**, Atomic oxygen maximization in high-voltage pulsed cold atmospheric plasma jets, *IEEE Transaction on Plasma Science*, 38, 11, 3156-3162, part 2, 2010.
16. **Osiac**, GE Iacobescu, V. Ionescu, T. Tudor, Simultaneously thermionic vacuum arc discharges in obtaining ferromagnetic thin films, *Romanian Reports in Physics*, 63, 3, 804-816, 2011.
17. CP Lungu, A. Marcu, C. Porosnicu, I. Jepu, AM Lungu, P. Chiru, C. Luculescu, R. Banici, D. Ursescu, R. Dabu, ID Feraru, CEA Grigorescu, G. Iacobescu, **M. Osiac**, J. Kavac, V. Nemanic, I. Hinkov, S. Farhat, A. Giquel, O. Brinza, Terawatt laser system irradiation of carbon/tungsten bilayers, *Physica Status Solidi (A) Applications and Materials Science*, 209, 9, 1732-1737, 2012.
18. V. Ionescu, CP Lungu, **M. Osiac**, Deposition of tin containing carbon amorphous composite films by thermionic vacuum arc technique, *Optoelectronics and Advanced Materials-Rapid Communications*, 6, 5-6, 592-596, 2012.
19. V. Ionescu, CP Lungu, I. Jepu, **M. Osiac**, GE Iacobescu, Characterization of thermionic vacuum arc deposited Co-MgF₂ granular thin films using X-ray diffraction and microscopy techniques, *Romanian Reports in Physics*, 65, 4, 1390-1397, 2013.
20. **M. Osiac**, V. Tiron, GE Iacobescu, G. Popa, A comparative study of GeSb₂Te₄ films deposited by radiofrequency and pulsed direct current and magnetron sputtering high power impulse magnetron sputtering, *Digest Journal of Nanomaterials and Biostructures*, 9, 2, 451-457, 2014.
21. **M. Osiac**, V. Tiron, GE Iacobescu, The effect of nitrogen on the structure of GeSb₂Te₄ film, *Journal of Optoelectronic and Advanced Materials*, 17, 7-10, 1471-1475, 2015
22. M. Jigau, **M. Osiac**, GE Iacobescu, Influence of the annealing temperature on GeSb₂Te₄ thin film prepared by pulsed laser deposition, *Journal of Optoelectronic and Advanced Materials*, 19, 5, 395-399, 2017.
23. P. Nica, S. Gurlui, **M. Osiac**, M. Agop, M. Ziskind, C. Focsa, Investigation of the femtosecond laser-produced plasma from various metallic targets using the Langmuir probe characteristic, *Physics of Plasmas*, 14, 10, 103119, 2017.
24. **M. Osiac**, The electrical and structural properties of nitrogen GeSb₃Te₄ thin film, *Coatings*, 8, 4, 117, 2018.
25. **M. Osiac**, N. Cioatera, MT Udristioiu, The synthesis of the Tungsten oxide thin film used for gas sensor applications, Conference: 18th Physics Conference (TIM), TIM 18 Physics Conference, Book Series: AIP Conference proceedings volume 2071 article number: UNSP, 040015, 2019
26. **M. Osiac**, N. Cioatera, M. Jigau, Structural, Morphological, and Optical Properties of Iron Doped WO₃ Thin Film Prepared by Pulsed Laser Deposition, *Coatings*, 2020, 10(4), 412
27. E. Osiac, S. I. Mitran, C.N. Manea, A. Cojocaru, G.C. Rosu, **M. Osiac**, D.N. Pirici, A.T. Bălșeanu, B. Cătălin, Optical coherence tomography microscopy in experimental traumatic brain injury, *Microscopy Research and technique*, 2020 Oct 3.
28. N. Levinta, MC Corobea, Z. Vuluga, CA Nicolae, AR Gabor, V. Raditoiu, **M. Osiac**, GM Teodorescu, M Teodorescu, Bio-Based Polyamide 1010 with a Halogen-Free Flame Retardant Based on Melamine-Gallic Acid Complex, *Polymers* 12, 7, 1482, 2020
29. J. Ivic, A. Petritz, CV Irimia, B. Kahraman, Y. Kanbur, M. Bednorz, C. Yumusak, MA Aslam, A. Matkovic, K. Saller, C. Schwarzinger, W. Schuhly, Al. Smeds, Y. Salinas, M. Schiek, F. Mayr,

Cl Xu, C, Teichert, **M. Osiac**, NS Sariciftci, B. Stadlober, M. Irimia-Vladu, *Pinaceae fir resins as natural dielectrics for low voltage operating, hysteresis-free organic field effect transistors*, Advanced sustainable systems, vol. 6, issue 10, 2200234, 2022.

30. M. Osiac, I. Boerasu, MS Radu, M. Jigau, I. Tirca, Influence of the iron as a dopant on the refractive index of WO₃, Materials, Vol.14, Issue 19, 5845, 2021.

31. A. Stamate, R. Zavoianu, OD. Pavel, R. Birjega, A. Matei, M. Dumitru, I. Brezestean, **M. Osiac**, IC Marcu. The influence of the preparation method on the physic-chemical properties and catalytic activities of Ce-modified LDH structures used as catalysts in condensation reaction. Molecules, vol. 26, Issue 20, 6191, oct. 2021.

32. I. Tirca, I. Boerasu, MS Radu, **M. Osiac**, Refractive index of WO₃ thin films grown under various temperatures determined by the Swanepoel method, Physica B- Condensed matter, vol. 620, 413266, Nov. 2021

33. M. Mureseanu, V. Chivu, V, **M. Osiac**, M. Ciobanu, C. Bucur, V. Parvulescu, N. Cioatera, New photoactive mesoporous Ce-modified TiO₂ for simultaneous wastewater treatment and electric power generation, Catalysis Today, vol. 366, 164-176, 2021

Publication in journals and conferences journals with Referees (selected)

1. **M. Osiac**, T. Schwarz-Selinger, D. O'Connell, B. Heil, T. Ganz, U. Czarnetski, Investigations of the plasma boundary sheath dynamics in the afterglow of a pulsed inductively coupled rf plasma in hydrogen, Seventeenth European Conference on Atomic & Molecular Physics of Ionized Gases, 1-5 September 2004.
2. **M. Osiac**, N. Scarisoreanu, M. Dinescu, Optical emission spectroscopy of radio-frequency beam assisted pulsed laser deposition, 14TH Conference on Plasma Physics and Applications, 14-18 Septembrie 2007, Brasov, Romania.
3. **M. Osiac**, C.C. Surdu-Bob, M. Badulescu, C.P. Lungu, Optical emission spectroscopy diagnostics of a Ni Thermionic Vacuum Arc (TVA) plasma, 14th Conference on Plasma Physics and Applications, 14-18 Septembrie 2007, Brasov, Romania.
4. **M. Osiac**, C.C. Surdu-Bob, C. Iacob, C.P. Lungu, Optimisation of the Re TVA plasma parameters used for deposition, 18th International Symposium on Plasma Chemistry, Kyoto, Japan, August 26th-31st, 2007.
5. C.P. Lungu, A.M. Lungu, C.C. Surdu-Bob, **M. Osiac**, Diagnostic Thermionic of the vacuum arc plasma produced in pure chromium vapors, 18th International Symposium on Plasma Chemistry, Kyoto, Japan, August 26th-31st, 2007.
6. **M. Osiac**, GO Pompilian, S. Gurlui, C. Focsa, Langmuir probe investigations of transient plasma plumes generated by ultrafast laser ablation of various metallic targets, The 4th National Conference of Applied Physics, 19-20 November, 2010.
7. **M. Osiac**, N. Scarisoreanu, V. Ion, M. Dinescu, Thin Film Growth by Radio-Frequency Beam Assisted Pulsed Laser Deposition, COLA 2007, Septembrie 20-27, Spania.
8. C.P. Lungu, C. Porosnicu, I. Jepu, A. M. Lungu, P. Chiru, A. Marcu, C. Luculescu, R. Banici, D. Ursescu, R. Dabu, I. D. Feraru, C. E. A. Grigorescu, G.E. Iacobescu, **M. Osiac**, J. Kovač, V. Nemanič, Nanocomposite Tungsten-Carbon Film Formation by Terawatt Laser System Irradiation, E-MRS 2012 Spring Meeting - The European Material Conference, 2012, Strasbourg, France.
9. **M. Osiac**, V.Tiron, GE Iacobescu, G. Popa, A comparative study of Ge₁Sb₂Te₄ films deposited by radiofrequency and pulsed direct-current and magnetron sputtering high power impulse magnetron sputtering, 16th International Conference on Plasma Physics and Applications, June 20-25, 2013, Magurele, Bucharest, Magurele.
10. I. Jepu, D. Paul, O. G. Pompilian, C. Porosnicu, C. P. Lungu, C. Luculescu, G. Iacobescu, **M. Osiac**, V. Kuncser, Laser influence on multilayer Ag/Ni and Ag/Ce magnetic thin film structures prepared by Thermionic

Vacuum Arc technology, Advanced Workshop in Nanophysics and Solar Energy Conversion, September 1-3, 2014, Magurele – Bucuresti, Romania.

11. **M. Osiac**, V. Tiron, GE Iacobescu, The $\text{Ge}_1\text{Sb}_2\text{Te}_4$ doped nitrogen film deposited by high power impulse magnetron sputtering, ESCAMPIG XXIV-2014, 15-20 iulie, Greifswald, Germania.
12. M. Jigau, GE Iacobescu, **M. Osiac**, Thin films of $\text{Ge}_1\text{Sb}_2\text{Te}_4$ prepared by pulsed laser deposition, Physics Conference TIM-14, 2014, Timisoara, Romania.
12. **M. Osiac**, V. Tiron, GE Iacobescu, The effect of $\text{Ge}_1\text{Sb}_2\text{Te}_4$ film doped with nitrogen, Physics Conference TIM-14, 2014, Timisoara, Romania.
13. **M. Osiac**, GE Iacobescu, V. Tiron, M. Jigau, Chalcogenide thin films deposited by high power impulse magnetron sputtering and pulsed laser deposition, 9th International Physics Conference of the Balkan Physical Union (BPU-9), 2015, Istanbul, Turcia.
14. **M. Osiac**, V. Tiron, G.E. Iacobescu, Phase change behaviour in nitrogen-doped $\text{Ge}_1\text{Sb}_2\text{Te}_4$, 32nd-International conference on phenomena in ionized gases (ICPIG), 26-23 July, 2015, Iasi, Romania.
15. **M. Osiac**, M. Jigau, G.E. Iacobescu, N. Cioatera, The $\text{Ge}_1\text{Sb}_2\text{Te}_4$ thin film prepared by pulsed laser deposition, 32nd-International conference on phenomena in ionized gases (ICPIG), 26-23 July, 2015, Iasi, Romania.
16. **M. Osiac**, V. Tiron, The $\text{Ge}_1\text{Sb}_2\text{Te}_4$ thin film prepared by pulsed laser deposition, 16th International Balkan Workshop on Applied Physics and Materials Science IBWAP 2016, 7-9 iulie Constanta.
17. **M. Osiac**, G.E. Iacobescu, M. Jigau, Effects of nitrogen and Ti dopants on the electrical properties of $\text{Ge}_1\text{Sb}_2\text{Te}_4$ films, 13th International Conference on Nanosciences & Nanotechnologies (NN16), 2016, Salonic, Greece.
18. M. Jigau, **M. Osiac**, G.E. Iacobescu, N. Cioatera, The Ti doped $\text{Ge}_1\text{Sb}_2\text{Te}_4$ thin films prepared by pulsed laser deposition, 11th International Conference On Physics Of Advanced Materials (ICPAM-11), 2016, Cluj.
19. **M. Osiac**, N. Cioatera, M. Jigau, Structural, Morphological, and Optical Properties of Iron Doped WO_3 Thin Film Prepared by Pulsed Laser Deposition, ICAAS 3th Conference on Applied Surface Science, 17-20 iunie, 2019, Pisa, Italia.

Articles published in national journals with referees

1. C.P. Lungu, V. Ionescu, **M. Osiac**, C. Cotarlan, O. Pompilian, A.M. Lungu, V. Ciupina, Thermionic vacuum arc deposited Al-doped amorphous carbon nanocomposite coatings, Journal of Non-Oxide Glasses 1/2, 90-96, 2009.
2. V. Ionescu, C. P. Lungu, **M. Osiac**, C. Cotarlan, O.G. Pompilian, A. M. Lungu, V. Ciupina, Carbon-copper amorphous composite coatings grown by thermionic vacuum arc method, Ovidius University Annals of Chemistry, Volume 20, Number 2, pp.193-198, 2009.
3. A.E. Stamate, R. Zavoianu, O.D. Pavel, A. Cruceanu, M.C. Corobea, **M. Osiac**, N. Cioatera, LDH-GO composites as catalysts for the oxidative removal of indigo carmine dye from wastewater, Romanian Journal of Ecology and Environmental Chemistry, Vol.2, No.2, 2020.

Books and chapters

1. **M. Osiac**, Spectroscopic studies of microwave plasmas containing diborane and acetylene, Shaker, Germania, ISBN 3-8322-1548-4
2. E. Osiac, T.A. Balseanu, B. Catalin, **M. Osiac**, Tomografie optica coerenta-Aplicatii speciale in medicina, SITECH

Craiova, 978-606-11-4061-9, 2014

3. **M. Osiac**, Fizica Plasmei, Universitaria Craiova, 2008, 129 pagini, ISBN 978-606-510-207-1
4. **M. Osiac**, M.T. Udristoiu, Optica Lucrari de laborator, Universitaria Craiova, 2017, 103 pagini ISBN 978-606-14-1324-9

PROJECTS WON THROUGH THE COMPETITION

A. International projects

1. III-V Compunds (like AlN, InN, GaN) and Related Materials
NATO CBP.EAG.RIG. 982008,
Type: Research NATO
Period: 2006-2009
Project Director

B. National Projects

1. Depuneri ale compusilor III-V si materialele acestora
Nr. 1481/ 07.04.2006,
Type: CEEX modulul II
Period: 2006-2009
Project Director
2. Centru de cercetare fundamental si aplicativa in plasma de pulverizare magnetic pulsate de inalta putere,
Nr. 180CPI/03.09.2008
Period: 2009-2010
Type: **PNII-CAPACITIES, Mod I** Period: 2008-2010
Project Director
3. Process and device for thin films deposition in highly ionized pulsed plasma,
Nr. 174/2012
Type: Parteneriate PCCA II
Period: 2013-2017
Project Responsible
4. Tehnologii emergente pentru valorificarea industrială a structurilor 2D grafenice si nongrafenice,
Nr. 80 PCCDI/30.03.2018
Type: Consortii PCCDI
Period: 2018-2021
Project Responsible
5. Fabricarea calibrarea si testarea de sisteme integrate avansate de senzori pentru aplicatii in Securitate sociala:
proiect P4-tehnologii pentru membrane active ale senzorilor pe baza de trioxid de wolfram dopat,
Nr. 15PCCDI/01.03.2018
Type: Consortii PCCDI
Period: 2018-2021
Project Responsible
6. Research Nighth, RNR Science escape from laboratory 609771
Period: 2013
Horizon 2020, Maria Sklodowska Curie Actions, Project funded by the European Commission
Project Responsible
7. Research Nighth, RNR RoTalkScience 633311
Perioada: 2014

Horizon 2020, Maria Sklodowska Curie Actions, Project funded by the European Commission
Project Responsable

8. Research Nighth, RNR RoTalkScience 633311

Period: 2015

Horizon 2020, Maria Sklodowska Curie Actions, Project funded by the European Commission

Project Responsible

9. Proiect de mobilitate - LIBS cu aplicatii in medicina

Period: 2019, Universitatea din Kassel

Project Director

10. Tehnologii si materiale avansate pentru aplicatii in optoelectronica

Type: PNII-CAPACITATI, Modulul I

No/year: 126/2007

MCT-ANCS

Member

11. TEHNOPLAT OLTENIA. Platforma de cercetare-inovare interdisciplinara, formare si transfer de cunostinte

Type: Platforma tehnologica

No/year: 39C/2006

CNCSIS: 107/2006

CNCSIS-MEC

Member

12. Super resistant Metallic Covering at high temperature using Thermionic Vacuum Arc

Type: CEEX-PD

No/year: 1535/07.04.2006

Project Director C.P. Lungu

Member

13. New high-voltage pulsed structures, generating cold atmospheric plasma jets, with bio-medical applications,

Type **PN II IDEI**

No/year: 19/28.09.2007

Project Director N. Georgescu

Member

