

## Europass Curriculum Vitae



### Personal information

**First name(s) / Surname(s)** **Petre Osiceanu**  
**Telephone(s)** 0040748154486 **Mobile:** 0040748154486  
**Fax(es)** 0040213121147  
**E-mail** posic@icf.ro  
**Nationality** Romanian  
**Date of birth** 11.07.1949  
**Gender** male

### Work experience

**Dates** **1977-present** : Institute of Physical Chemistry "Ilie Murgulescu"-Bucharest, Romanian Academy, Surface Chemistry and Catalysis Laboratory  
**1973-1977** : Institute of Atomic Physics Bucharest –Magurele , Nuclear Reactions Laboratory  
**Occupation or position held** **Scientific researcher, senior scientist**  
**Main activities and responsibilities** Expertise in surface, interface and thin films analysis and leader of the XPS group involved in such activities at the Institute of Physical Chemistry – Bucharest, Romania  
 Nuclear research in U235 fission cross section with thermal neutrons at the Institute of Atomic Physics Bucharest – Magurele, Romania  
**Name and address of employer** Institute of Physical Chemistry "Ilie Murgulescu"-Bucharest, Romanian Academy, Spaiul Independentei 202, ZIP Code 060021, Bucharest - Romania

### Education and training

**Phd** in "Contributions to the surface study of some 3d transitions elements and their chemical compounds by electron spectroscopy", 1988  
**B.Sc.:** Bucharest University – Physics Department - "Atomic and Nuclear Physics" - 1973

**Dates** **Working stages and training sessions:**  
 - ICTP Trieste – Italia, "Synchrotron radiation and applications" 1991  
 - IMEC – Leuven Belgia "Methods for surface investigation", 1992  
 - IMEC Leuven – Belgia, Surface and interface investigation by XPS in clean room conditions – „Silicon based materials”, 1993  
 - Technological University – Eindhoven - Netherland , - Physics and Catalysis Department- "Complementary methods in surface science: XPS, LEED, ISS", 1994  
 - Institute for Solid State Physics – Bremen University - Germany  
 "Nanostructures II-VI for quantum systems with applications in LED devices", 2007  
 - Demo sessions on surface science and technology XPS equipments at the following Companies:  
 Thermo-Fisher VG Scientific – England, Kratos Shimadzu – England,  
 PHI- ULVAC – USA, (2009 – 2010)

Title of qualification awarded	- <b>PhD degree</b> - <b>Romanian Academy Award</b> "N.Teclu"1996 for contributions in the field: "Surface composition and stoichiometry of some 3d transition elements and silicon compounds"																																								
Principal subjects/occupational skills covered	<b>Fundamental and applied research</b> in surface physics, chemistry and technology <b>Training and teaching courses</b> for Phd and Post-doc students: - „Modern methods for surface, interface and thin film characterisation” held at the Institute of Physical Chemistry Bucharest – Romania - <i>Intensive training</i> in the electron spectroscopy field for non-expert scientists and engineers																																								
<b>Personal skills and competences</b>																																									
Mother tongue(s)	<b>Romanian</b>																																								
Other language(s)	<b>English, French</b>																																								
Self-assessment <i>European level (*)</i>	<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Understanding</th> <th colspan="4">Speaking</th> <th colspan="2">Writing</th> </tr> <tr> <th colspan="2"></th> <th>Listening</th> <th>Reading</th> <th colspan="2">Spoken interaction</th> <th colspan="2">Spoken production</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td><b>Language</b></td> <td>C2</td> <td>English</td> <td>C2</td> <td>C2</td> <td></td> <td>C2</td> <td></td> <td>C2</td> <td></td> </tr> <tr> <td><b>Language</b></td> <td>C2</td> <td>French</td> <td>C2</td> <td>C2</td> <td></td> <td>C2</td> <td></td> <td>C2</td> <td></td> </tr> </tbody> </table>			Understanding		Speaking				Writing				Listening	Reading	Spoken interaction		Spoken production				<b>Language</b>	C2	English	C2	C2		C2		C2		<b>Language</b>	C2	French	C2	C2		C2		C2	
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	(*) <a href="#">Common European Framework of Reference for Languages</a>																																								
Social skills and competences	<ul style="list-style-type: none"> <li>• Friendly, versatile, able to work in either team or independently</li> <li>• Capabilities to continuously learn, teach and cooperate</li> <li>• Communication skills</li> </ul>																																								
Organisational skills and competences	<b>Scientific management, assistance and support</b> - <i>Scientific management</i> - <i>European Programme „INFRANANOCHEM”</i> at the Institute of Physical Chemistry – Romanian Academy, Bucharest, Romania (2007-2010) Scientific and managerial activity for the Project: „XPS-LAB Multitechniques” Scientific and managerial activity for the Project „Scanning Electron Microscopy-SEM” - <i>Assistance and scientific support</i> to the „Macromolecular Chemistry Department”, Polytechnical University Bucharest: the project for surface investigation by XPS method using the equipment VG-Kalpha and to the Institute „Petre Poni” Iasi – Romanian Academy for a similar equipment (2009 – 2010) - <i>Reviewer</i> for scientific journals: “Applied Surface Science” – ELSEVIER, “The European Physical Journal – Applied Physics” (EPJAP)/EDP Sciences, “Thin Solid Films” - ELSEVIER																																								
Technical skills and competences	<ul style="list-style-type: none"> <li>- <b>Home made Appearance Potential Spectrometer</b> for surface and thin film investigations involving deep knowledge of fundamentals, engineering and design.</li> <li>- <b>Scientific and managerial leading of the tender</b> for acquiring an XPS equipment (600.000 Euros) in the frame of the EU project INFRANANOCHEM.</li> </ul>																																								
Computer skills and competences	- <b>Multimedia tools</b> - <b>Software development</b> for the study of the DoS in the Conduction Band - <b>Data processing and interpretation</b> software in XPS – Auger fields																																								
Other skills and competences	- <b>Interdisciplinary physics , literature and arts</b>																																								
	<b>P. Osiceanu</b> „ <i>Eminescu and the fundamental concepts of the modern physics: Time, Space, Univers</i> ” (in Romanian) <i>Electronic Edition(2010) on the web site</i> <a href="http://www.icf.ro/groups/xps/index.html">http://www.icf.ro/groups/xps/index.html</a>																																								

**Additional information** **Member in International Organisations**

National representative of the European Council of the Synchrotron Radiation Society (1990-1992)

National representative in IUVSTA –Applied Surface Science Division (1992-1998)

Contact person: ISO-TC201"Surface Chemical Analysis"

**Member in national societies** of physics and chemistry**Relevant recent work:****1. P. Osiceanu****"Short and extended guides for practical surface, interface and thin film analysis by XPS"****Revised Electronic Edition(2013) on the web site**<http://www.icf.ro/groups/xps/index.html>

1. S. Somacescu, N. Cioatera, **P. Osiceanu**, J. M. Calderon-Moreno, C. Ghica, F. Neațu, M. Florea Bimodal mesoporous NiO/CeO<sub>2</sub>- $\delta$ -YSZ with enhanced carbon tolerance in catalytic partial oxidation of methane - potential IT-SOFCs anode, Applied Catalysis B: Environmental, Volume 241, February 2019, Pages 393-406
2. Stanoiu, A. Piticescu, R.M., Simion, C.E., Rusti-Ciobota, C.F., Florea, O.G., Teodorescu, V.S., **Osiceanu, P.**, Sobetskii, A., Badilita, V., *H<sub>2</sub>S selective sensitivity of Cu doped BaSrTiO<sub>3</sub> under operando conditions and the associated sensing mechanism*, Sensors and Actuators, B: Chemical Volume 264, 1 July 2018, Pages 327-336
3. Simion, C.E., Somacescu, S., Teodorescu, V.S., **Osiceanu, P.**, Stanoiu, A. *H<sub>2</sub>S sensing mechanism of SnO<sub>2</sub> -CuWO<sub>4</sub> operated under pulsed temperature modulation*, Sensors and Actuators, B: Chemical 259, pp. 258-268
4. Cora Vasilescu, **Petre Osiceanu**, Jose Maria Calderon Moreno, Silviu Iulian Drob, Silviu Preda, Monica Popa, I. Dan, Maria Marcu, M. Prodana, I. A. Popovici, D. Ionita, Ecaterina Vasilescu, *Microstructure, surface characterization and long-term stability of new quaternary Ti-Zr-Ta-Ag alloy for implant use*, Materials Science and Engineering: C, Volume 71, 1 February 2017, Pages 322-334
5. Cora Vasilescu, Silviu Iulian Drob, **Petre Osiceanu**, Jose Maria Calderon Moreno, M. Prodana, D. Ionita, I. Demetrescu, Maria Marcu, I. A. Popovici and Ecaterina Vasilescu, *Surface Characterization and Electrochemical Behavior of New Ti-Zr-Ta-Ag Alloy in Simulated Human Electrolyte*, Metall. Mater. Trans. A, Volume: 48A Issue: 1, Pages: 513-523, DOI: 10.1007/s11661-016-3774-2 Published: JAN 2017
6. Tanta Spataru, Takeshi Kondo, Crina Anastasescu, Ioan Balint, **Petre Osiceanu**, Cornel Munteanu, Nicolae Spataru, Akira Fujishima, *Silica Veils-Conductive Diamond Powder Composite as a New Propitious Substrate for Platinum Electrocatalysts*, Journal of Solid State Electrochemistry, 21(4), 1007-1014
7. Adelina Stanoiu, Cristian E.Simion, Jose Maria Calderon-Moreno, **Petre Osiceanu**, Mihaela Florea, Valentin S.Teodorescu, Simona Somacescu, *Sensors based on mesoporous SnO<sub>2</sub>-CuWO<sub>4</sub> with high selective sensitivity to H<sub>2</sub>S at low operating temperature*, Journal of Hazardous Materials, Volume 331, 5 June 2017, Pages 150-160

8. Loredana Preda, Takeshi Kondo, Tanta Spataru, Mariana Marin, Mihai Radu, **Petre Osiceanu**, Akira Fujishima, Nicolae Spataru, *Enhanced Activity for Methanol Oxidation of Platinum Particles Supported on Iridium Oxide Modified Boron-Doped Diamond Powder*, *ChemElectroChem*, vol 4(8), 1908–1915
9. M. F. Ijaz, Cora Vasilescu, Silviu Iulian Drob, **Petre Osiceanu**, Maria Marcu, H. Y. Kim, S. Miyazaki, D. M. Gordin, T. Gloriant, *Electrochemical characterization of the superelastic (Ti-Zr)-Mo-Sn biomedical alloy displaying a large recovery strain*, *Mater Corros.* DOI: 10.1002/maco.201709484
10. Tanța Spătaru, Loredana Preda, **Petre Osiceanu**, Cornel Munteanu, Maria Marcu, Cecilia Lete, Nicolae Spătaru, Akira Fujishima, *Electrochemical Deposition of Pt–RuO<sub>x</sub>·nH<sub>2</sub>O Composites on Conductive Diamond and Its Application to Methanol Oxidation in Acidic Media*. *Electrocatalysis*, 7(2), 2016, 140-148.
11. Alexandru Ioan Caciuleanu, Tanta Spataru, Loredana Preda, Mihai Anastasescu, **Petre Osiceanu**, Cornel Munteanu, Rodica Daniela Baratoiu, Alina Aurelia Iovescu, Nicolae Spataru, *Platinum–carbon electrocatalytic composites via liposome-directed electrodeposition at conductive diamond*, *International Journal of Hydrogen Energy* Volume 41, Issue 47, 21 December 2016, Pages 22529–22537.
12. R. Ion, Silviu Iulian Drob, M. F. Ijaz, Cora Vasilescu, **Petre Osiceanu**, D. M. Gordin, A. Cimpean, T. Gloriant, *Surface Characterization, Corrosion Resistance and in Vitro Biocompatibility of a New Ti-Hf-Mo-Sn Alloy*, MDPI (Materials (ISSN: 1996-1944)), *Materials* 2016, 9(10), 818; doi:10.3390/ma9100818
13. Cora Vasilescu, Silviu Iulian Drob, Paula Drob, **Petre Osiceanu**, Jose Maria Calderon Moreno, Silviu Preda, Ecaterina Vasilescu, *Surface analysis, microstructural, mechanical and electrochemical properties of new Ti-15Ta-5Zr alloy*, *Met. Mater. Int.* 21(2) 242-250 2015
14. Cora Vasilescu, Silviu Iulian Drob, **Petre Osiceanu**, Jose Maria Calderon-Moreno, Paula Drob, Ecaterina Vasilescu, *Characterisation of passive film and electrochemical behaviour of a new Ti-Ta-Zr alloy in artificial oral media: in time influence of pH and fluoride ion content*, *Mater. Corros.* 66(9), 971-981, 2015
15. Cora Vasilescu, Silviu Iulian Drob, Jose Maria Calderon Moreno, **Petre Osiceanu**, Monica Popa, Ecaterina Vasilescu, Maria Marcu, Paula Drob, *Long-term corrosion resistance of new Ti-Ta-Zr alloy in simulated physiological fluids by electrochemical and surface analysis methods*, *Corros. Sci.* 93, 310-323, 2015
16. Z.D., Dohcevic-Mitrovic, N.Paunović, B. Matović, **P. Osiceanu**, R. Scurtu, S. Aškrić, M. Radović, *Structural dependent room-temperature ferromagnetism in yttrium doped HfO<sub>2</sub> nanoparticles*, *Ceramics International* Volume 41, Issue 5, 1 June 2015, Pages 6970-6977, 2015
17. V. Mitran, Cora Vasilescu, Silviu Iulian Drob, **Petre Osiceanu**, Jose Maria Calderon-Moreno, M. C. Tabirca, D. M. Gordón, T. Gloriant, A. Cimpean, *Biological behaviour and enhanced anticorrosive performance of the nitrided superelastic Ti-23Nb-0.7Ta-2Zr-0.5N alloy*, *BioMed Res. Int.* 2015, article ID 261802

18. Silviu Iulian Drob, Cora Vasilescu, Jose M. Calderon Moreno, **Petre Osiceanu**, P. Neacsu, A. Cimpean, D. M. Gordin, T. Gloriant, *Multifunctional "gum metal" Titanium-Based Alloy: Its Long-Term Electrochemical Behavior and Macrophage Response*, Int. J. Electrochem. Sci., 10, 10738-10755
19. Simon Somacescu, **Petre Osiceanu**, Jose Maria Calderon-Moreno, Andrea. Sackmann, Cristian E, Simion, A.delina Stanoiu, *Mesoporous  $Sn_{0.9-x}In_{0.1}Cu_x(I)O_2-\delta$  gas sensors with selectivity to  $H_2S$  working under humid air conditions*, Microporous and Mesoporous Materials, Volume 197, October 2014, Pages 63–71
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21. Cora Vasilescu, Silviu Iulian Drob, **Petre Osiceanu**, Mihai Anastasescu, Jose Maria Calderon Moreno, Paula Drob, Ecaterina Vasilescu, *The morpho-structural, compositional and electrochemical characterization of electrodeposited nanolayers on a new Ti-15Ta-5Zr alloy*, J. Nanomater., Volume 2014, Article ID 369034, 12 pages, 2014
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