



Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **MIHAI IORDOC**

Telephone(s) +40 21.346.82.97 Mobile: +40 721.557.442

Fax(es) +40 21.346.82.99

E-mail mihai.iordoc@icpe-ca.ro ; m_iordoc@yahoo.com

Nationality ROMANIAN

Date of birth 11/09/1980

Gender MALE

Desired employment / Occupational field

**Research and Development /
Electrochemistry and Corrosion; Metallic biomaterials; Renewable energy;
Supercapacitors; Hydrogen and Fuel Cells; Batteries; Materials Science**

Work experience

Dates	2015 – present
Occupation or position held	Senior Scientific Researcher Grade III
Main activities and responsibilities	Electrochemical Measurements; Research in the field of Advanced and Ecological Energy Sources & Systems - Fuel Cell Technology, membrane-electrode assembly MEA, first and second generation batteries, supercapacitors, redox flow batteries
Name and address of employer	National Institute for Research and Development in Electrical Engineering INCDIE ICPE-Advanced Research, 313 Splaiul Unirii, 030138, District 3, Bucharest, ROMANIA
Type of business or sector	Research & Development
Dates	2010 – 2012
Occupation or position held	Associate Researcher
Main activities and responsibilities	Development and Characterization of Metallic Biomaterials; Supervisor of undergraduate and master students
Name and address of employer	University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Applied Physical Chemistry and Electrochemistry
Type of business or sector	Research & Development
Dates	2007 – 2015
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Electrochemical Measurements; Development and Characterization of Metallic Biomaterials; Research in the field of Advanced and Ecological Energy Sources & Systems - Fuel Cell Technology, membrane-electrode assembly MEA, nickel metal hydride NiMH batteries
Name and address of employer	National Institute for Research and Development in Electrical Engineering INCDIE ICPE-Advanced Research, 313 Splaiul Unirii, 030138, District 3, Bucharest, ROMANIA
Type of business or sector	Research & Development
Dates	2005 – 2007
Occupation or position held	Assistant Researcher
Main activities and responsibilities	Electrochemical Measurements; Development and Characterization of Metallic Biomaterials
Name and address of employer	National Institute for Research and Development in Electrical Engineering INCDIE ICPE-Advanced Research, 313 Splaiul Unirii, 030138, District 3, Bucharest, ROMANIA
Type of business or sector	Research & Development

Education and training

Dates	2005 – 2011
Title of qualification awarded	PhD
Principal subjects/occupational skills covered	Electrochemistry and Corrosion; Metallic Biomaterials
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Applied Physical Chemistry and Electrochemistry
Level in national or international classification	ISCED 6 (International Standard Classification of Education)
Dates	2004 – 2005
Title of qualification awarded	MSc
Principal subjects/occupational skills covered	Electrochemistry and Corrosion; Cathodic protection of underground pipe-lines and subway concrete steel structures
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Applied Physical Chemistry and Electrochemistry
Dates	1999 – 2004
Title of qualification awarded	BSc
Principal subjects/occupational skills covered	Electrochemistry and Corrosion; Corrosion inhibitors for “green batteries”
Name and type of organisation providing education and training	University POLITEHNICA of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Applied Physical Chemistry and Electrochemistry
Dates	1995 – 1999
Title of qualification awarded	Baccalaureate degree
Principal subjects/occupational skills covered	Intensive Software and Hardware courses (Turbo Pascal)
Name and type of organisation providing education and training	National College “OCTAV ONICESCU” of Bucharest, Class of Computer Science

Personal skills and competences

Mother tongue(s) **ROMANIAN**

Other language(s) **ENGLISH**

Self-assessment
European level ()*

Language

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent speaker	B2	Independent speaker	B2	Independent speaker	B2	Independent speaker	B2	Independent speaker

(*) [Common European Framework of Reference for Languages](#)

Social skills and competences Team spirit; Adaptability

Organisational skills and competences

- Project and team management skills (achieved by involvement and/or coordination of research projects)
- Pedagogy Certificate acquired within University POLITEHNICA of Bucharest after following the pedagogy courses and practical applications – 2004
- Assistant Manager Diploma conferred by Managerial Agency for Scientific Research, Innovation and Technology Transfer from Romania – 2006
- Management of Research Projects Diploma conferred by National School of Administrative and Political Studies – 2006
- Project Manager Diploma conferred by Managerial Agency for Scientific Research, Innovation and Technology Transfer from Romania – 2015

Technical skills and competences	<ul style="list-style-type: none"> • High experience in using, measuring and monitoring with equipments in electrochemistry and corrosion (“All-in-one” Electrochemical Combine VoltaLab 40 Radiometer Analytical with the following techniques: Cyclic Voltametry, Potentiodynamic polarization, Open Circuit Potential, Electrochemical Impedance Spectroscopy, ChronoAmperometry, ChronoPotentiometry, ChronoCoulometry) • Good experience in using, measuring and monitoring with equipments in coating technology for MEAs and contact angle (Prism Ultra Coat 300)
Computer skills and competences	<ul style="list-style-type: none"> • High operating experience with MS-OFFICE, Origin • Good programming experience with Turbo Pascal, MatLab • High experience in experimental data acquisition and processing with VoltaMaster 4, ImageJ, Zview, EC-Lab, IviumSoft, FlukeView
Other skills and competences	<ul style="list-style-type: none"> • Training in the field of the NiMH batteries fabrication, performed on the EC funded contract FP7-REGPOT-229906/2009, Kiev National University of Technologies & Design, Department of Electrochemical Power Engineering & Chemistry, Ukraine, Supervisor Prof. Viacheslav Barsukov – 2012 • Member in Staff Exchange Program, Coventry University, UK, Sonoelectrochemistry Department, performed on the EC funded contract FP7-REGPOT-229906/2009, Supervisors: Prof. Timothy Mason, Dr. Andrew Cobley and Dr. John Graves – 2012 • International Summer School on: PEM fuel cells applications and integration, 11–15 July 2011, Izmir, Turkey • Training in the field of the 1st and 2nd generation Li-ion batteries fabrication, performed on the EC funded contract FP7-REGPOT-229906/2009, Kiev National University of Technologies & Design, Department of Electrochemical Power Engineering & Chemistry, Ukraine, Supervisor Prof. Viacheslav Barsukov – 2010 • International Summer School “Fuel Cells – Fundamentals – Materials & Electrochemical Aspects” 17 - 20 July 2007, Sibiu, Romania • Supervisor of a student team which participated at Student Conference organized by University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science in 2008 and 2009 • Editorial board member at Journal of Chemical Engineering and Materials Science http://www.academicjournals.org/journal/JCEMS/editors • Editorial board member at American Journal of Energy Engineering http://www.sciencepublishinggroup.com/journal/editorialboard?journalid=168 • Editorial board member at Academic Journal of Ocean Sciences • Editorial board member at SCIREA Journal of Materials http://www.scirea.org/journal/EditorialBoard?JournalID=43000#1929 • Editorial board member at SCIREA Journal of Chemistry http://www.scirea.org/journal/EditorialBoard?JournalID=15000#1929 • Reviewer at Surface and Interface Analysis • Reviewer at ElectrochimicaActa • Reviewer at Journal of Applied Electrochemistry • Reviewer at Journal of Chemical Engineering and Materials Science • Reviewer at African Journal of Pure and Applied Chemistry • Reviewer at Thin Solid Films • Reviewer at Journal of Materials and Design • Member of professional associations: Romanian Society of Biomaterials; The Electrochemical Society, International Association of Scientists and Researchers • Member of International Scientific Committees at 2016 International Conference on Advanced Material Science and Mechanical Engineering (AMSME2016) March 20-21, 2016, Bangkok, Thailand http://www.amsme2016.org/com.htm • Reviewer at the 5th International Conference on Biomedical Engineering and Biotechnology (ICBEB 2016) August 1st - 4th, 2016, Hangzhou, China • Reviewer at Surface Review and Letters • Reviewer at Journal of Materials Engineering and Performance • Reviewer at Journal of Energy and Power Engineering • Reviewer at Acta Biomaterialia • Member of Technical Program Committee at The 2017 International Conference on Environmental Protection and Chemical Engineering (EPCE2017) September 8th - 10th, 2017, Shanghai, China http://www.epce2017.org/?op=committee

Additional information**Contact References**

Viacheslav BARSUKOV – Professor, Kiev National University of Technologies & Design, Head of Department of Electrochemical Power Engineering & Chemistry, Nemyrovych-Danchenko Str. 2, Kiev, Ukraine, E-mail: v-barsukov@i.ua

Timothy J. MASON - Professor of Chemistry, Director of the Sonochemistry Applied Research Centre, Biomolecular and Sport Science, FACULTY OF HEALTH AND LIFE SCIENCES, Coventry University, Priory Street, Coventry CV1 5FB, **Building:** James Starley Building, **Room:** JS225, E-mail: t.mason@coventry.ac.uk

Mihai V. POPA – Associate Professor, former *General Manager*, Romanian Academy of Science, Institute of Physical Chemistry "I.G. Murgulescu", 202 Splaiul Independentei St., P.O.Box 194, 060021 Bucharest - 12, Romania, Tel.: + 4021.316.7912, Fax: +4021.312.1147, E-mail: mppopa@icf.ro

Ioan STAMATIN, Professor of Fuel Cells and Material Science, University of Bucharest, Faculty of Physics, 3Nano-SAE Research Centre, Bucharest - Magurele MG-38, 405 Atomistilor Str., Postal code 077125, Romania, Phone : +40214574838, Email : istarom@3nanosae.org

Gimi A. RIMBU – PhD, *Deputy Head of Department for Efficiency in Energy Conversion and Consume (EECC) / Head of Fuel Cells Research Group / Senior Researcher Grade I*, National Institute for Research and Development in Electrical Engineering INCDIE ICPE-CA, Bucharest-3, 030138, Romania; Tel.: +4021 346 8297; Fax: +4021 346 8299; E-mail: gimi.rimbu@icpe-ca.ro

Annexes

See Annex 1 to 5

Date: 20.02.2018

Dr. Mihai IORDOC



Annex 1. List of publications

Published papers in ISI journals

1. R. Vasilescu-Mirea, A. Bara, A. Bondar, **M. Iordoc**, I. Iordache, M. Codescu, "CoCrTi and TiAlNb carbon coated alloys used in medical applications", Romanian Journal of Materials, vol. 38, nr. 2, (2008), pp. 134-142.
2. I.V. Branzoi, **M. Iordoc**, M. Codescu "Electrochemical studies on the stability and corrosion resistance of new zirconium-based alloys for biomedical applications", Surf. Interface Anal., (2008), nr. 40, pp. 167-173. (Impact factor: 1.272)
3. I. V. Branzoi, **M. Iordoc**, F. Branzoi "Evaluation of Electrochemical Behaviour and Surface Properties for Oxinium-like Zr-Nb Biomedical Alloys", Key Engineering Materials, Vol. 415, (2009), pp. 13-16.
4. I.V. Branzoi, **M. Iordoc**, F. Branzoi, R. Vasilescu-Mirea, G. Sbarcea, "Influence of Diamond-like Carbon coating on the corrosion resistance of the NITINOL shape memory alloy", Surf. Interface Anal., (2010), nr. 42, pp. 502-509. (Impact factor: 1.247)
5. I. V. Branzoi, **M. Iordoc**, F. Branzoi, G. Sbarcea, V. Marinescu, "Surface characterization and electrochemical behavior of new biomedical Zr-based metal/ceramic composite in fetal bovine serum", Rev. Roum. Chim., (2010), 55(9), pp. 585-597. (Impact factor: 0.311)
6. Gimi RIMBU, **Mihai IORDOC**, Radu VASILESCU-MIREA, Ioan STAMATIN, Iulian IORDACHE, Traian ZAHARESCU "Polyaniline rod-like structure as self-electrocatalyst for hydrogen oxydation reactions", Optoelectronics and Advanced Materials, R. C., (2008), 2 (12), pp. 876-880. (Impact factor: 0.224)
7. Carmen CRISTESCU, Adriana ANDRONIE, Stefan IORDACHE, Serban N. STAMATIN, Livia Maria CONSTANTINESCU, Gimi A. RIMBU, **Mihai IORDOC**, Radu VASILESCU-MIREA, Iulian IORDACHE, and Ioan STAMATIN "PANI TiO₂ nanostructures for fuel cell and sensor applications", Journal of Optoelectronics and Advanced Materials, (2008), vol.10, nr.11, p. 2985-2987. (Impact factor: 0.577)
8. Gimi RIMBU, **Mihai IORDOC**, Radu VASILESCU-MIREA, Ioan STAMATIN, Traian ZAHARESCU "Electrochemical deposition of polianiline thin films on carbonic substrates for utilization as hydrogen mediator and self catalyst in fuel cells" Revista de Chimie, (2009), Vol. 60, nr. 12, pp. 1285-1287. (Impact factor: 0.552)
9. I. V. BRANZOI, **M. IORDOC**, F. BRANZOI, G. RIMBU, V. MARINESCU, „Synthesis and Characterization of High Voltage Electrodeposited Diamond-like Carbon Protective Coating on TiAlV Biomedical Substrate”, Surface and Interface Analysis, (2012), Vol. 44, Issue 8, pp 1193-1197. (Impact factor: 1.22)
10. I. V. BRANZOI, **M. IORDOC**, F. BRANZOI, G. RIMBU „Growth and Characterization of Zirconia Ceramic Film Formed by Plasma Electrolytic Oxidation on Biomedical ZrTa Alloy”, Surface and Interface Analysis, (2012), Volume 44, Issue 8, pp 914-918. (Impact factor: 1.22)
11. Prioteasa P., Ilie C., Popa M., **Iordoc M.**, Sbârcea B.G. "ELECTRODEPOSITION OF NICKEL FOR FABRICATION OF MICROFLUIDIC PUMPS", Revista de Chimie, (2013), vol. 64, nr. 3, pp.275-280. (Impact factor: 0.677)
12. Božidar Cekic, Katarina Ciric, **Mihai Iordoc**, Smilja Markovic, Miodrag Mitric, Dragica Stojic, "Kinetics of hydrogen absorption in Zr-based alloys", Journal of Alloys and Compounds, (2013), vol. 559, pp. 162-166. (Impact factor: 2.726)
13. **MIHAI IORDOC**, ADELA BARA, PAULA PRIOTEASA, ALEXANDRU TEIȘANU, VIRGIL MARINESCU, "Electropolymerization of Conducting Polypyrrole on Carbon Nanotubes / Silicon Composite for Supercapacitor Applications", REV-CHIM Bucharest, (2015), vol. 66, no. 2, pp. 196-200. (Impact factor: 0.810)
14. PAULA PRIOTEASA, VIRGIL MARINESCU, ADELA BARA, **MIHAI IORDOC**, TEISANU ARISTOFAN, CRISTINA BANCUIU, VIORICA MELTZER, Electrodeposition of polypyrrole on carbon nanotubes/Si in the presence of Fe catalyst for application in supercapacitors, REV-CHIM Bucharest, (2015), vol. 66, no. 6, pp. 820-824. (Impact factor: 0.810)
15. D. Conic, A. Gradisek, J. Radakovic, **M. Iordoc**, M. Mirkovic, M. Cebela, K. Batalovic, "Influence of Ta and Nb on the hydrogen absorption kinetics in Zr-based alloys", International Journal of Hydrogen Energy, Vol. 40, Iss. 16, (2015), 5677-5682. (Impact factor: 3.313)
16. Paula BARBU, Mirela Maria CODESCU, **Mihai IORDOC**, Virgil MARINESCU, Eugen MANTA, Cristinel ILIE, Marius POPA, "Electrodeposition of CoNiMnP Thick Films for Micromachined Magnetic Device Applications", in press REV-CHIM Bucharest, (2018), vol. 69, no. 6. (Impact factor: 0.810)
17. Radu MIREA, **Mihai IORDOC**, Gabriela OPRINA, Gimi RIMBU "Processing of Iridium doped carbonic materials and experimental investigations of their hydrogen adsorption capacity", in press REV-CHIM Bucharest, (2018), vol. 69, no. 6. (Impact factor: 0.810)

Published papers in B+ journals

1. I.V. Branzoi, **M. Iordoc**, M.M. Codescu "Corrosion behavior of CoCrMo and CoCrTi alloys in simulated body fluids", UPB Sci. Bull., Series B+, Vol. 69, No.4, (2007).
2. I.V. Branzoi, **M. Iordoc**, F. Branzoi "Surface Characterization and Corrosion Behaviour of Ti Based Alloys in Fetal Bovine Serum", U.P.B. Sci. Bull., Series B+, Vol. 71, Iss. 4, (2009), pp 31-40.
3. **M. Iordoc**, E. Petrache, G. Ionita, E.V. Stoian "Electrochemical Surface Characterization of Diamond-like Carbon Deposited on Biomedical 316L Stainless Steel", U.P.G. Sci. Bull., Technical Series, Vol. 62, Iss. 1, (2010), pp 25-30.
4. M. Lungu, N. Stancu, V. Tsakiris, **M. Iordoc**, A. Teisanu "ALIAJE ECOLOGICE PE BAZĂ DE STANIU PENTRU APLICAȚII ÎN INDUSTRIA ELECTROTEHNICĂ", Buletinul AGIR, (2011), nr. 3.

Papers presented at national and international conferences

1. **M. Iordoc**, I. Lingvay "Comparative study on the anodic behavior of Fe-Si alloys used in making injection anodes for cathodic protection – Studiu comparativ privind comportarea anodică a unor aliaje Fe-Si folosite la confecționarea anozilor de injecție aferenți locațiilor de protecție catodică", in Proceedings of 5th International Conference Study and Control of Corrosion in the Perspective of Sustainable Development of Urban Distribution Grids, Targu Mures, May 18-20, (2006), p 248 – 252.
2. **M. Iordoc**, I.V. Branzoi, F. Branzoi, C. Țârdei, F. Grigore "Electrochemical behavior of titanium and titanium alloys in different simulated bio-liquids", in Proceedings of 2nd International Conference "Biomaterials & Medical Devices" BiomMedD'2006, 5th General Meeting of Romanian Society for Biomaterials Iasi, 09-11th November, (2006).

3. F. Grigore, Ch. Tardei, E. Andronescu, M. S. Hodoroagea, **M. Iordoc** „*Synthesis and characterization of beta-tcp nanopowders (β -TCP)*”, in Proceedings of 2nd International Conference “Biomaterials & Medical Devices” BiomMedD’2006 5th General Meeting of Romanian Society for Biomaterials Iasi, 09-11th November, (2006).
4. L. ANICAI, A. PETICA, G. HRISTEA, P. PRIOTEASA, **M. IORDOC** “*Graphite Intercalation Compounds-GICs, as Materials for Bipolar Plates in PEM Fuel Cells*”, in Proceedings of The 5th Conference “New Research Trends in Material Science” ARM-5, (2007), Vol. II, p 554.
5. **M. Iordoc**, M. M. Codescu, D. Raducanu “*Corrosion Tests on Alloys for Biomedical Applications*”, in Proceedings of The 5th Conference “New Research Trends in Material Science” ARM-5, (2007), Vol. I, p 247-251.
6. I.V. Branzoi, **M. Iordoc**, M. Codescu “*Electrochemical studies on the stability and corrosion resistance of new zirconium-based alloys for biomedical applications*”, in Proceedings of the 12th European Conference on Applications of Surface and Interface Analysis, ECASIA’07, Brussels - Belgium, September 9-14, (2007).
7. I.V. Branzoi, **M. Iordoc**, M. Codescu “*Surface Characterization and Electrochemical Behavior of Heat Treated ZrTa Alloy in Fetal Bovine Serum*”, Junior EUROMAT 2008, Lausanne, July (2008), oral and poster presentation.
8. I.V. Branzoi, **M. Iordoc**, F. Branzoi “*The influence of alloying elements amount on the corrosion behavior of some new zirconium – based alloys in simulated body fluid*”, oral presentation and in Proceedings at NACE 17th International Corrosion Congress Corrosion Control in the Service of Society!, ICC-2008, Las Vegas, Nevada, October 06-10, (2008).
9. I.V. Branzoi, **M. Iordoc**, R. Vasilescu-Mirea, S. Hodoroagea “*Electrochemical behaviour of diamond-like carbon (DLC) deposited via magnetron sputtering on biomedical alloys in the simulated body fluid environment*”, in Proceedings of THE EUROPEAN CORROSION CONGRESS EUROCORR 2008, September 07-11, (2008), Edinburgh.
10. R. Vasilescu-Mirea, **M. Iordoc**, F. Radulescu, E. Manta, A. Iorga “*Diamond-like carbon coating of 316l stainless steel for pitting corrosion protection*”- 3rd International Conference “Biomaterials and Medical Devices” (BiomMedD’2008), November 13-16th, (2008), Bucharest, Romania.
11. **M. Iordoc**, R. Vasilescu-Mirea, E. Petrache, C. Groza “*Electrochemical Behavior of Commercial Metallic Biomaterials for Total Joint Replacement*” – Annual Congress of Romanian Medical Association, April 9-11, (2009), Romanian Academy of Science.
12. I.V. Branzoi, **M. Iordoc**, F. Branzoi, R. Vasilescu-Mirea, G. Sbarcea “*Influence of Diamond-like Carbon coating on the corrosion resistance of the NITINOL shape memory alloy*”, in Proceedings of the 13th European Conference on Applications of Surface and Interface Analysis, ECASIA’09, Antalya - Turkey, October 18-23, (2009).
13. **M. Iordoc**, G. Rambu, R. Vasilescu-Mirea, I. Stamatin “*Metal-Doped Conductive Polymer for Hydrogen Storage*”, Junior EUROMAT 2010, Lausanne, July (2010), oral and poster presentation.
14. L.N. Leonat, G. Rambu, **M. Iordoc**, G. Sbarcea “*Porosity Measurements for Carbon Nanotubes Doped with Some Transitional Metals*”, Junior EUROMAT 2010, Lausanne, July (2010), oral and poster presentation.
15. I.V. Branzoi, **M. Iordoc**, F. Branzoi, A. Teisanu, L. Lungu “*Electrodeposition of Diamond-like Carbon Films on Biomedical 316L Stainless Steel*”, 218th ECS Meeting - Las Vegas, NV, October 10 - 15, (2010).
16. I.V. Branzoi, **M. Iordoc**, F. Branzoi, G. Sbarcea, V. Marinescu “*Surface Characterization and Electrochemical Behavior of New Biomedical Zr-based Metal/Ceramic Composite in Fetal Bovine Serum*”, 218th ECS Meeting - Las Vegas, NV, October 10 - 15, (2010).
17. Ioan Viorel BRANZOI, **Mihai IORDOC**, Florina BRANZOI, “*Influence of Alloying Elements Amount on Growth of Zirconia Ceramic Film Formed by Plasma Electrolytic Oxidation on Biomedical ZrNbTa Ternary Alloys*”, in the Proceedings of 18th International Corrosion Congress, 20-24 November, (2011) Perth, Australia.
18. Florina BRANZOI, Ioan Viorel BRANZOI, **Mihai IORDOC** and Angela STANCA, “*Inhibition effect of the new friendly environment inhibitors for anticorrosion protection of Cooling Water Systems*”, in the Proceedings of 18th International Corrosion Congress, 20-24 November, (2011) Perth, Australia.
19. Paula Prioteasa, Cristinel Ilie, Marius Popa, **Mihai Iordoc**, Teodor Visan, “*ELECTRODEPOSITION OF NICKEL FOR FABRICATION OF MICROFLUIDIC PUMPS*”, The 3rd Regional Symposium on Electrochemistry – S-E Europe (RSE-SEE3), 13-17 May (2012), Bucharest, Romania.
20. Branzoi, F., Branzoi, V., **Iordoc, M.** and Pahom, Z. “*CORROSION INHIBITION OF CARBON STEEL IN COOLING WATER SYSTEMS BY NEW ORGANIC POLYMERS AS GREEN INHIBITORS*” ECS Meeting, Honolulu PRIME 2012, MA2012-02 October 7 - 12, (2012), Honolulu, Hawaii, US.
21. Florina Brânzoi, Viorel Brânzoi, Cătălina Păcurețu, Zoia Pahom and **Mihai Iordoc**, “*Nanocomposite based on carbon nanotubes and conducting polymers with different dopants for obtaining of modified electrodes*”, 15th International Conference ROMPHYSICHEM, September 11-13, (2013), Bucharest, Romania
22. Florina Brânzoi, Viorel Brânzoi, Cătălina Păcurețu, **Mihai Iordoc** and Angela Stanca, “*Inhibition effect of the new friendly environment inhibitors for anticorrosion protection on carbon steels in different aggressive media*”, 15th International Conference ROMPHYSICHEM, September 11-13, (2013), Bucharest, Romania
23. G. Hristea, C. Paraschiv, **M. Iordoc**, “*ALTERNATIVE APPROACHES FOR ZnO-GRAPHENE NANOCOMPOSITES DESIGNED FOR SUPERCAPACITORS*”, 5th EuCheMS Chemistry Congress 2014 on August 31-September 4, (2014), Istanbul, Turkey
24. F. Branzoi, V. Branzoi and **M. Iordoc**, “*Inhibition of Carbon Steel in Cooling Water Systems by Nicotinamide*”, 226th Meeting of the Electrochemical Society, October 5-10, (2014), Cancun, Mexico.
25. **M. Iordoc**, A. Teisanu, “*Coin cell-type symmetric supercapacitors*”, Workshop on Nanostructured Materials for Energy Storage and Biomedical Applications, 30th - 31st October (2014), University of Cyprus, Nicosia, Cyprus.
26. A. Teisanu, **M. Iordoc**, “*Sodium adducts flow battery designed for grid storage integration of renewable energy sources with variable output*”, Workshop on Nanostructured Materials for Energy Storage and Biomedical Applications, 30th - 31st October (2014), University of Cyprus, Nicosia, Cyprus.
27. F. Branzoi, V. Branzoi, **M. Iordoc**, A. Stanca, “*Corrosion Inhibition of Carbon Steel by Using New Organic Polymers as Green Inhibitors for Cooling Water System*”, 19th International Corrosion Congress November 2- 6, (2014), International Convention Center Jeju, Korea.
28. Mirea, R., Oprina, G., Rambu, G., **Iordoc, M.**, Stamatin, I., “*Research regarding the adsorption of hydrogen in platinum doped nanostructured carbonic materials*” International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM2015, 16-25th June (2015), Albena, Bulgaria.

29. G. Hristea, C. Stefanescu, **M. Iordoc**, "Graphene Oxide Based Nanocomposites Designed for Energy Applications", Third International Conference on Advanced Complex Inorganic Nanomaterials, ACIN (2015), Namur, Belgium.
30. **M. Iordoc**, P. Barbu, A. Teisanu, M.V. Lungu, I. Iordache "Effect of ZrO₂ coating on the electrochemical behavior and surface properties of 316L stainless steel", 10th International Conference on Photoexcited Processes and Applications, August 29 – September 2, (2016), Brasov, Romania.
31. M. V. Lungu, A. Sobetkii, A.A. Sobetkii, N. Mihăilescu, D. Pătroi, L. Leonat, E. M. Lungulescu, **M. Iordoc**, L. E. Radu, N. Stancu, M. Lucaci, C. D. Cîrstea, I. Ion, V. Tsakiris, M. C. Chifiriuc "Enhanced ZnO and Ag-ZnO Nanostructured Coatings Grown on Stainless Steel for Medical Applications", 10th International Conference on Photoexcited Processes and Applications, August 29 – September 2, (2016), Brasov, Romania.
32. **Iordoc Mihai**, Paula Barbu, Aristofan Teisanu, Sorin Vizireanu, Adela Bara, "Advanced electrodes for vanadium redox flow cells based on modified carbon nanowalls", 2nd INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SCIENCE AND TECHNOLOGY, ICOEST (2016), Belgrad, SERBIA.
33. Aristofan Teisanu, Paula Barbu, **Iordoc Mihai**, "Comparative study regarding power density in redox flow cell versus electrolyte composition", 2nd INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SCIENCE AND TECHNOLOGY, ICOEST (2016), Belgrad, SERBIA.
34. Paula Barbu, **Iordoc Mihai**, Aristofan Teisanu, "Study regarding proton exchange membrane efficiency in vanadium redox flow cell", 2nd INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SCIENCE AND TECHNOLOGY, ICOEST (2016), Belgrad, SERBIA.
35. G. Hristea, C. Paraschiv, **M. Iordoc**, "Graphene hybrids designed for energy storage applications", 16th International Conference of Physical Chemistry ROMPHYSICHEM-16, September 21 - 24, (2016), Galați – ROMANIA.
36. **Mihai IORDOC**, Aristofan TEISANU, Paula BARBU, Sorin VIZIREANU, Gimi RIMBU, Adela BARA, "Advanced electrodes for supercapacitors based on aligned graphenes", 20th Romanian International Conference on Chemistry and Chemical Engineering Poiana Brasov, ROMANIA - September 6-9, (2017).
37. Aristofan TEISANU, Antonela BANCUI, **Mihai IORDOC**, Paula BARBU, Gimi RIMBU, Adela BARA, "Organic electrolyte based supercapacitors designed for higher voltage", 20th Romanian International Conference on Chemistry and Chemical Engineering Poiana Brasov, ROMANIA - September 6-9, (2017).
38. Antonela BANCUI, Paula BARBU, **Mihai IORDOC**, Aristofan TEISANU, Gimi RIMBU, Adela BARA, "Gel electrolyte based supercapacitors with low self discharge effect", 20th Romanian International Conference on Chemistry and Chemical Engineering Poiana Brasov, ROMANIA - September 6-9, (2017).
39. **M. Iordoc**, A. Teisanu, S. Vizireanu, P.Barbu, A. Bara, G. Rimbu, "Noble metal decorated carbon nano-walls / polypyrrole (CNWs/PPy) modified electrode for asymmetric supercapacitor application", The 5th Nano Today Conference (Nano Today 2017), December 6-10, (2017), Waikoloa Beach Marriott, Hawaii, USA.
40. A. Teisanu, **M. Iordoc**, S. Vizireanu, P.Barbu, A. Bara, G. Rimbu, "Nanostructured thin layer copper/nickel oxide composites on carbon nano walls substrate for supercapacitor application", The 5th Nano Today Conference (Nano Today 2017), December 6-10, (2017), Waikoloa Beach Marriott, Hawaii, USA.
41. Mirea, R., **Iordoc, M.**, Rimbu, G., Oprina, G., "Comparative research regarding hydrogen adsorption capacity of metal doped poly-aniline" International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM2017, 27th June - 6th July (2017), Albena, Bulgaria.

Annex 2. List of patents

1. Title: Tin alloy for soft soldering and manufacturing procedure

Patent application No. A/00366/26.04.2010

Inventor(s): FAUR M; **IORDOC M N**; STANCU N, et al.

PATENT GRANTED (registered at OSIM No. 125857 / 30.03.2016)

2. Title: Tin alloy for corrosion proof plating and manufacturing procedure

Patent application No. A/00365/26.04.2010

Inventor(s): FAUR M; **IORDOC M N**; LUNGU M V, et al.

PATENT GRANTED (registered at OSIM No. 125773 / 30.03.2016)

3. Title: 5kW co-generation system based on fuel cells

Patent application No. A/01360/17.12.2010

Inventor(s): RIMBU G A; BORBATH I; BOROS T F; IORDACHE I; TEISANU A A; VASILESCU-MIREA R; **IORDOC M N**, et al.

4. Title: Electroconductive material based on epoxy and conductive fillers for fuel cells

Patent application No. A/01361/17.12.2010

Inventor(s): RIMBU G A; BORBATH I; BOROS T F; IORDACHE I; TEISANU A A; VASILESCU-MIREA R; **IORDOC M N**, et al.

PATENT GRANTED (registered at OSIM No. 127059 / 30.04.2014)

5. Title: Material for orthopaedic implant

Patent application No. A/00308/18.04.2013

Inventor(s): **IORDOC M N**; CODESCU M M; TEISANU A A; PRIOTEASA P.

6. Title: Magnetizer by pulse with analogue control

Patent application No. A/01026/20.12.2013

Inventor(s): TEISANU A A; IORDACHE I; STANCU N; **IORDOC M N**.

7. Title: Planar clutch based on Eddy currents

Patent application No. A/01025/20.12.2013

Inventor(s): TEISANU AA; IORDACHE I; STANCU N; **IORDOC M N**.

8. Title: Composite material for supercapacitors

Patent application No. A/00643/21.08.2014

Inventor(s): BARA A; **IORDOC M N**; PRIOTEASA P I; TEISANU A A.

9. Title: Obtaining procedure for self-assembled films

Patent application No. A/00929/28.11.2014

Inventor(s): HRISTEA G; **IORDOC M N**; PRIOTEASA P I.

10. Title: Supercapacitor with gel electrolyte

Patent application No. A/00931/28.11.2014

Inventor(s): **IORDOC M N**; TEISANU A A; BARA A; PRIOTEASA P I; BANCUI C A.

11. Title: Composite material for the spacecraft structure elements with screening properties against ionizing and electromagnetic radiation

Patent application No. A/01019/17.12.2015

Inventor(s): TEISANU A A; BARA A; **IORDOC M N**; BARBU P I; CARAMITU A R; MITREA S A; BANCUI C A.

12. Title: 1.5kW stack based on redox-type cells in continuous recirculation

Patent application No. A/00956/05.12.2016

Inventor(s): **IORDOC M N**; TEISANU A A; BARBU P I.

13. Title: Carbonic sensor for carbendazime detection

Patent application No. A/00606/30.08.2017

Inventor(s): HRISTEA G; **IORDOC M N**; OVEZEA D; BARBU P I; LIPCINSKI D; STEFANESCU C A; SUCIU G.

14. Title: Supercapacitor with electroactive material electrodes based on graphene like materials

Patent application No. A/00994/28.11.2017

Inventor(s): **IORDOC M N**; ION I; TEISANU A A; BARBU P I; BARA A; BANCUI C A.

Annex 3. National and international awards

1. **BRONZE MEDAL** at the 14th edition of the International Trade Show for Inventions, Scientific Research and New Technologies "INVENTIKA-(2010)", Bucharest, Romania for patent entitled "*Tin alloy for soldering, contains antimony, bismuth, iron, copper, lead, zinc, aluminum and tin*"
2. **BRONZE MEDAL** at the 14th edition of the International Trade Show for Inventions, Scientific Research and New Technologies "INVENTIKA-(2010)", Bucharest, Romania for patent entitled "*Tin alloy for corrosion proof plating, comprises tin, copper and titanium*"
3. **SILVER MEDAL** at 18th International Corrosion Congress, 20-24 November, (2011) Perth, Australia for paper entitled "*Inhibition effect of the new friendly environment inhibitors for anticorrosion protection of Cooling Water Systems*".
4. **SILVER MEDAL** at the 40th International Exhibition of Inventions of Geneva 18th-22nd April (2012), Geneva, Switzerland for patent entitled "*5kW co-generation system based on fuel cells*"
5. **SILVER MEDAL** at the 40th International Exhibition of Inventions of Geneva 18th-22nd April (2012), Geneva, Switzerland for patent entitled "*Electroconductive material based on epoxy and conductive fillers for fuel cells*"
6. **SILVER MEDAL** at The Belgian and International Trade Fair for Technological Innovation, Brussels Eureka, 17th November (2012), Brussels, Belgium for patent entitled "*5kW co-generation system based on fuel cells*"
7. **GOLD MEDAL** at The Belgian and International Trade Fair for Technological Innovation, Brussels Eureka, 17th November (2012), Brussels, Belgium for patent entitled "*Electroconductive material based on epoxy and conductive fillers for fuel cells*"
8. **GOLD MEDAL** at The Belgian and International Trade Fair for Technological Innovation, Brussels Eureka, 15th November (2014), Brussels, Belgium for patent entitled "*Material for orthopaedic implant*"
9. **GOLD MEDAL** at the 13th International Exhibition of Research, Innovation and Inventions PRO INVENT, Cluj-Napoca, 25-27th March (2015), Cluj-Napoca, Romania for patent entitled "*Material for orthopaedic implant*"
10. **SILVER MEDAL** at the 43rd International Exhibition of Inventions of Geneva 15th-19nd April (2015), Geneva, Switzerland for patent entitled "*Material for orthopaedic implant*"
11. **GOLD MEDAL** at the 14th International Exhibition of Research, Innovation and Inventions PRO INVENT, Cluj-Napoca, 25-27th March (2016), Cluj-Napoca, Romania for patent entitled "*Composite material for supercapacitors*"
12. **GOLD MEDAL** at the 14th International Exhibition of Research, Innovation and Inventions PRO INVENT, Cluj-Napoca, 25-27th March (2016), Cluj-Napoca, Romania for patent entitled "*Tin alloy for corrosion proof plating, comprises tin, copper and titanium*"
13. **SILVER MEDAL** at the 45rd International Exhibition of Inventions of Geneva 29th March - 2nd April (2017), Geneva, Switzerland for patent entitled "*Supercapacitor with gel electrolyte*"
14. **GOLD MEDAL** at the 15th International Exhibition of Research, Innovation and Inventions PRO INVENT, Cluj-Napoca, 22-24th March (2017), Cluj-Napoca, Romania for patent entitled "*Composite material for the spacecraft structure elements with screening properties against ionizing and electromagnetic radiation*"
15. **GOLD MEDAL** at the 15th International Exhibition of Research, Innovation and Inventions PRO INVENT, Cluj-Napoca, 22-24th March (2017), Cluj-Napoca, Romania for patent entitled "*Supercapacitor with gel electrolyte*"
16. **DIPLOMA OF EXCELLENCE** awarded by the Technical University of Moldova for patent entitled "*Obtaining procedure for self-assembled films*"
17. **DIPLOMA OF APPRECIATION** awarded by the The Government of Romania, The Ministry of Research and Innovation at National Grant of Romanian Inventions, Bucharest, 20th June (2017).

Annex 4. Representative projects

Programme/Project	Position	Period: from... to...
PN-III-P1-1.1-MC-2017-0074 Mobility for Researchers "The 5th Nano Today Conference (Nano Today 2017), December 6-10, 2017 Waikoloa Beach Marriott, Hawaii, USA"	Project Manager	2017
Romanian Space Agency (ROSA) STAR 614/2016 "Pulse Operated, High Efficiency Thermoelectric Generator based on ultrafast thermal charging supercapacitors useful as power source for launchers"	Assistant Manager	2017 - 2019
PN-II-PT-PCCA-2013-4-2066 220/2014 "Quick Charging Redox Battery as a primary energy source for electric vehicles"	Project Manager	2016 - 2017
Project ESA 40/2014 "PLANAR HEATER BASED ON ELECTROCONDUCTIVE CARBON FIBRES DESIGNED FOR SATELLITE THERMAL MANAGEMENT"	Research team member	2014 - 2016
PN-II-PT-PCCA-2013-4-2066 220/2014 "Quick Charging Redox Battery as a primary energy source for electric vehicles"	Key person	2014 - 2016
PN-II-PT-PCCA-2013-4-1292 "Nanostructured materials and coatings with the innovative antimicrobial activity for medical applications"	Key person	2014 - 2016
7-035/2012 (4282/2012) MNT-ERA NET "Mini-supercapacitors technology, based on hybrid CNT/CNF - electroactive polymer networks"	Research team member	2012 - 2014
MIS ETC CODE 128 - "Joint study regarding an electro-generator system powered by water turbine for cross-border ecological electrical transport system"	Research team member	2011 - 2013
FP7-REGPOT-229906/2009 "ICPE-HYFC (Developing RTD potential of INCDIE ICPE-CA in the field of hydrogen and fuel cell technologies)"	Research team member	2009 - 2011
PN II PDT 1100/2007 "INNOVATIVE METHOD OF GENERATING 3D NANO-SURFACES WITHOUT THE MASK FOR HIGH PRECISION INDUSTRIAL APPLICATIONS"	Project Responsible	2007 - 2010
PN II-034/2007 "5kW integrated power module based on fuel cells"	Research team member	2007 - 2010
PNCDI 2-IDEI: 222/2007 "New nanostructured materials for hydrogen storage"	PhD student	2007 - 2009
FP6-2004-ACC-SSA-2 "Strengthening of the RDI potential for advanced materials and composites to enhance the performance of the electrical industry " - INDUMAT INCO-CT-2005-017240	Young researcher	2005 - 2008

Annex 5. Invited speaker

1. **4th Annual World Congress of Nanoscience & Technology (NanoS&T-2014)**, October 29 to 31, **(2014)**, Qingdao, **China**.
2. **EMN/Ceramics Meeting 2015**, Orlando FL **USA**, Jan.26 to 29, **(2015)**.
3. **The 5th Annual World Congress of Nano Science & Technology-2015 (Nano S&T-2015), Session 604: Nanotech for Fuel Cell and Solar Cell**, with the theme of "*Small Size, Big World*", Nano S&T-2015, Xi'an, **China**, Sep. 24-26, **(2015)**.
4. **EMN Meeting on Ceramics 2016**, January 25 to 28, **(2016)**, Eaton Hotel, Hong Kong, **China**.
5. **6th Annual World Congress of Nano Science & Technology - 2016 (Nano S&T-2016)**, **Singapore**, October 26-28, **(2016)**.
6. **6th Annual World Congress of Advanced Materials (WCAM-2017)**, June 14-16, **(2017)**, Xi'an, **China**
7. **3rd Annual World Congress of Smart Materials (WCSM-2017)**, Mar 16-18, **(2017)**, Bangkok, **Thailand**.
8. **International Conference on Functional Materials and Biomaterials (CFMB2017)** November 17-19, **(2017)**, Yichang, Hubei, **China**.
9. **5th International Conference on Mapping and Remote Sensing (ICMRS 2017)**, November 10-11, **(2017)**, Lushan, Jiangxi, **China**.
10. **The 2nd Annual Advanced Materials Research and Application (AMRA2017)**, November 10th-12th, **(2017)**, Wuhan, **China**.
11. **EMN Meeting on Ceramics 2018**, February 25 - March 1, **(2018)**, SOUTH POINT HOTEL, CASINO & SPA, Las Vegas, **USA**.
12. **5th Global Conference on Polymer and Composite Materials (PCM 2018)**, Kitakyushu, **Japan**, April 10-13, **(2018)**.
13. **8th Annual World Congress of Nano Science & Technology-2018 (Nano S&T-2018)** Potsdam, **Germany**, October 24-26, **(2018)**.
14. **7th Annual World Congress of Advanced Materials (WCAM-2018)**, September 13-15, **(2018)**, Xiamen, **China**.