



Europass Curriculum Vitae



Personal information

First name / Surname

IOAN, IORDACHE

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Nationality

Romanian

Date of birth

28, Nov, 1976

Gender

male

Desired employment / Occupational field

**Doctor (PhD) in Chemistry and Industrial Engineering/
Scientific Researcher (CS I)**

Work experience

- 2007- present: **Ph.D.**, Dipl. Eng., **National Center for Hydrogen & Fuel Cell**, National R&D Institute of Cryogenics and Isotopic Technologies -ICSI, Rm. Valcea, ROMANIA,
- 2006-2007: **Project Manager**: R&D Department, OLTCHIM, Rm. Valcea, ROMANIA,
- 2003-2006: Chemist Dipl. Engineer, Researcher Center, OLTCHIM, Rm. Valcea, ROMANIA,
- 2001-2002: Technology teacher in pre-university school, Iasi, ROMANIA,
- 2000-2001: Chemist Dip. Engineer, Water treatment Department, OLTCHIM, Rm. Valcea, ROMANIA,
- 1997-2000: **Director of the Romanian National Reservation "Repedea Hill"**, Iasi, ROMANIA, voluntary activity.

Education

- 2010-2015: Ph.D., Industrial Engineering, Faculty of Entrepreneurship, Business Engineering and Management, University "POLITEHNICA" of Bucharest, ROMANIA
- 2001-2007: Ph.D., Chemistry, Faculty of Industrial Chemistry, Technical University "Gh. Asachi", Iasi, ROMANIA,
- 2000-2001: M.S., Department of Environmental Engineering, Faculty of Industrial Chemistry, Technical University "Gh. Asachi", Iasi, ROMANIA,
- 1997-2000: Pedagogical and Didactical College, Technical University "Gh. Asachi" Iasi, ROMANIA, as a *second specialization*.
- 1995-2000: B.S., Dipl. Eng., Department of Environmental Engineering, Faculty of Industrial Chemistry, Technical University "Gh. Asachi" Iasi, ROMANIA.

Training

- 2011, 9-10 March: Certificate of competence “MICROREACTIVITY Reference, training course for equipments”, PID Eng&Tech, Madrid, SPAIN.
- 2011, 14-25 February: Training Program “Handlungsorientierung in der beruflichen Bildung” International Institute for Vocational Training, An institute of the ministry of culture, youth and sport Baden-Wurttemberg, Mannheim, GERMANY.
- 2011, 15-30 January: Training program, Certificate of TRAINER (RO: Formator COR 24120), CNT Eduexpert, Craiova, ROMANIA
- 2010: Seminar and workshop: “The investigation, remediation and monitoring of soil and groundwater contamination; exchange of ideas and development of cooperative research projects”, Catholic University of Korea, 18-28 October, Seoul, S. KOREA
- 2008: Workshop: “The advanced treatment of water and wastewater with ultrasound”, Korea University, 3-8 November, Seoul, S. KOREA
- 2008: Workshop on *Regional Development And Hydrogen Projects* – organized by Roads2HyCom in co-operation with HyRaMP, 29 May, Royal Academy of Science, Brussels, BELGIUM
- 2007: *Global Wastewater Technology Summit*, London Business Conferences, 26 - 27 March, London, U.K.,
- **2005: Marie Curie Training Fellowship (European FP5 scholarship), Laboratoire de Physico-at Toxico-Chemie des Systèmes Naturels, University Bordeaux I, Talance, FRANCE,**
- **2004: Marie Curie Training Fellowship (European FP5 scholarship), Department of Chemistry, University of Oslo, Oslo, NORWAY,**

Society Memberships

- the States Representatives Group (SRG) of the Fuel Cells and Hydrogen Joint Undertaking (FCH JU), *European Commission*, Vice-chair, Romania Delegate,
- Romanian Association for Hydrogen Energy, Executive Director (CEO),
- Romanian Society of Chemistry, Member of Governing Committee,
- European Physical Society,
- Romanian Physical Society,
- The General Association of Engineers in Romania (AGIR).

Reviewer

(I have reviewed articles in:)

- International Journal of Hydrogen Energy,
- Journal of Hazardous Materials,
- Chemical Engineering Journal,
- Applied Catalysis B: Environmental,
- Sustainable Environment Research.

Conference committees

- **European Fuel Cell “Piero Lunghi” Conference & Exhibition, Rome, Italy**
(Scientific Committee)
- **Hydrogen Days Conference, Prague, Czech Republic**
(Honorary Committee)
- **Romanian National Chemistry Conference, Caciulata-Calimanesti, Romania**
(Local Committee)
- **Modern Science and Energy, SME, Cluj-Napoca, Romania**
(Scientific Committee)

Books	<p>Hydrogen in an International Context, Vulnerabilities of Hydrogen Energy in Emerging Markets Editor and co-Author: Iordache Ioan, Published by: River Publishers, 2017 ISBN 978-879-337-998-5</p> <p>The hydrogen, energy vector <i>(Romanian)</i> Authors: Iordache Ioan, Stefanescu Ioan, Gheorghe Adrian, Iordache Mihaela Published by: AGIR, Bucharest, Romania, 2016 ISBN 978-973-720-628-2</p> <p>The hydrogen production. Methods and processes <i>(Romanian)</i> Authors: Iordache Ioan and Stefanescu Ioan Published by: AGIR, Bucharest, Romania, 2011 ISBN 978-973-720-405-9</p> <p>Advanced technologies for water treatment and hydrogen separation <i>(Romanian)</i> Authors: Iordache Ioan and Stefanescu Ioan Published by: AGIR, Bucharest, Romania, 2010 ISBN 978-973-720-341-0</p> <p>Sonochemistry in energy-intensive wastewater treatment methods <i>(Romanian)</i> Authors: Iordache Ioan and Iordache Mihaela Published by: Casa Cartii de Stiinta, Cluj-Napoca, Romania, 2009 ISBN 978-973-133-611-4,</p>
Mother tongue(s)	Romanian
Other language(s)	English (good knowledge of spoken and written);
Social skills and competences	<p>Good communication and inter-personal skills and ability to work in a team. I have worked in various types of teams and projects from projection and building of environmentally industrial plants to scientifically research in the field of hydrogen, fuel cells or wastewater treatment.</p> <p>All teams involved a diversity of nationalities (e.g. Norwegian, Czechs, French, Italian, German, Belgian, American, Korean, etc.) and qualifications (chemist, physicist, electrician, economists, administrator, etc.)</p>
Organisational skills and competences	<p>I am a doctor (PhD) and chemical engineering which also involves organizing teams to carry out various work projects.</p>
Technical skills and competences	<p>Experience (two MC fellowships) in chemical technology and environmental analysis of pollutants (i.e. GC, GC-MS, GC-MS/MS, HPLC, microLC, FT-IR, UV_VIS, TOC).</p> <p>Practical skills in field of source apportionment methods, determine contributions of various pollution sources to a location of interest (e.g., outdoor, indoor, or personal exposure measurement).</p>
Computer skills and competences	MS Office (Word, Excel), MathCAD, Internet
Other skills and competences	Certificate in the emergency aid and fire prevention
Driving licence	B category (≤ 3500 kg, 1+ 8 Seats), I am a holder of a Romania Driving License.

International:

1. “HyLAW, Identification of legal rules and administrative processes applicable to Fuel Cell and Hydrogen technologies’ deployment, identification of legal barriers and advocacy towards their removal”, Fuel Cells and Hydrogen Joint Undertaking (‘FCH JU’) Project, Coordinator Hydrogen Europe, 2017-2019; Experience as **Romanian Coordinator**
2. “Strengthening Competencies in Hydrogen Technologies in V4”, International Visegrad Fund, Coordinator Czech Hydrogen Technology Platform, 2015-2016; Experience as **Romanian Coordinator**
3. “Upgrading Capacity to Develop and Implement the Technology for Tritium Removal from Heavy Water at the Cernavoda Nuclear Power Plant, ROM 2009”, 2012-2013, International Atomic Energy Agency (IAEA); Experience as **Project Manager**
4. “Assessment of the potential, the actors and relevant business cases for large scale and seasonal storage of renewable electricity by hydrogen underground storage in Europe (HyUnder)”, Fuel Cells and Hydrogen Joint Undertaking (‘FCH JU’) Project, Coordinator Fundación para el Desarrollo de las Nuevas Tecnologías del Hidrógeno en Aragón (FHa), 2012-2014; Experience as **Romanian Coordinator**
5. “Clean Hydrogen Production with Water Splitting Technologies”, Coordinator University of Ontario Institute of Technology (UOIT), Start date: 1 Jan. 2012, – Experience as **Romanian Coordinator**
6. “System Development of Wastewater Reuse and Biogas Production”, Coordinator Water Engineering & Consulting, Inc., Seoul, Korea, 2011-2012, – Experience as **Romanian Coordinator**
7. “The investigation, remediation and monitoring of soil and groundwater contamination; exchange of ideas and development of cooperative research project” (Korea-Romania), 2009-2011,- Experience as **Project Manager**
8. “The advanced Treatment of Water and Wastewater with Ultrasound”, (Korea-Romania), 2007-2009, Experience as **Romanian Coordinator**
9. “Organic Contaminants in the Environment” (FP5 contract number: HPMT-CT 2001-00393) - Experience as *PhD. Student, Marie Curie Training Fellowship* , Laboratoire de Physico-at Toxico-Chemie des Systèmes Naturels, University Bordeaux I, Talance, **FRANCE**, 2005
10. “Oslo Analytical Miniaturization Doctoral Training Site” (FP5 contract number: EVK-CT-2000-57121) - Experience as *PhD. Student, Marie Curie Training Fellowship*, Department of Chemistry, University of Oslo, Oslo, **NORWAY**, 2004

National projects (Romanian):

1. “New boranes and hydrides for hydrogen storage”, *The National Project Code: PN 2 72-195/2008-2011*
- Experience as collective coordinator,
2. “The research and the development of a membrane reactor for ultrapure hydrogen production that supply the fuel cells”, *The National Project Code: PN 2 21-004/2007-2010*
- Experience as PhD. chemist coordinator,
3. “Innovative System Energy Production by Acetic Acid Steam Reforming using High Temperature Proton Exchange Membrane Fuel Cells”, *The National Project Code: PN 2 22-079/2008-2011*
- Experience as PhD chemist coordinator,
4. “Architectural Design and Development of Regenerative Electrolyser-Fuel Cell Energy Converter”, *The National Project Code: PN 2 21-030/2007-2010*
- Experience as PhD chemist researcher,
5. “Low cost hydrogen production through proton exchange membrane electrolysis”, *The National Project Code: MENER 703/2006-2008*
- Experience as PhD chemist researcher,
6. “Isotopes for hydrogen energy - Towards the understanding of the specifics of reactions involved in the Hydrogen Fuel Cell integrated system using Steady-State Isotope Transient Kinetic Analysis” - Proof-of-concept for a hydrogen fuel cell power station/RomHyIso, Contract no. 119/02.06.2010, (Instrumente Structurale), 2010-2012
- Experience as PhD chemist researcher,
7. “AUTO-FORM - The increasing of the Romanian competitiveness in the field of automotive education, teachers formations at European standard”, Contract no. POSDRU/87/1.3/S/61991, 2011-2013
- Experience as trainer.

Annexes- ARTICLES

1. "Sonochemical enhancement of cyanide ions degradation from wastewater in the presence of hydrogen peroxide", I. Iordache, M. Nechita, N. Aelenei, I. Rosca, G. Apostolescu, M. Peptanariu, Polish journal of environmental studies [ISSN 1230-1485], Vol. 12, No. 6 (2003), 735-737.
2. "Sonoelectrochemical degradation of cyanide ions from wastewater", I. Iordache, M. T. Nechita, N. Aelenei, D. Sutiman, M. Peptanariu, Journal of Balkan Ecology [ISSN 1311-0527, (www.ecobalk.hit.bg)], v. 6, No. 3 (2003), 316-319.
3. "The sonochemical degradation of cyanide ions using atmospheric oxygen as oxidising agent", I. Iordache, M. Nechita, N. Aelenei, I. Rosca, M. Peptanariu, Environmental Engineering and Management Journal [ISSN 1582-9596], 2, 2 (2003), 131-136.
4. "Sonochemical enhancement of cyanide oxidation methods", M. Nechita, I. Rosca, I. Iordache, Environmental Engineering and Management Journal [ISSN 1582-9596], 4, 2 (2003), 333-344.
5. "pH influence on sonochemical degradation of cyanides with H₂O₂ and O₂", Ioan Iordache, Mircea Teodor Nechita, Nicolae Aelenei, Gabriela Apostolescu, Ioan Rosca, Environmental Engineering and Management Journal [ISSN 1582-9596], 2, 3 (2004), 95-100.
6. "Ultrasound Assisted Electrochemical Degradation of Cyanides: Influence of Electrode Type", I. Iordache, M. Nechita, I. Rosca, N. Aelenei, Turkish Journal of Engineering and Environmental Sciences, 28, (2004), 377-380.
7. „Cercetări privind obținerea radiolitică a nano-particulelor de aur depuse pe suport de carbon” (The obtain of gold nano-particles using the radiolysis synthesis), G. A. Apostolescu, M. T. Nechita, M. Vizitiu, I. Iordache, Analele Universității "Aurel Vlaicu" Arad, (1-5), 2004, ISSN 1582-3415.
8. "Epurarea sonoelectrochimică a apelor ce conțin cianuri" (Sonoelectrochemical removal of cyanide ions from wastewater), I. Iordache, M. T. Nechita, C. Cojocar, Analele Universității "Aurel Vlaicu" Arad, (301-306), 2004, ISSN 1582-3415.
9. "Nitrous oxide decomposition over Fe-ZSM-5 catalysts prepared by different methods", M. T. Nechita, I. Rosca, D. Sutiman, G. Apostolescu, I. Iordache, Environmental Engineering and Management Journal [ISSN 1582-9596], 4, 4 (2005) 429-436.
10. "Cyanide treatment in sonic field", Nechita Mircea Teodor and Ioan Iordache, Bulletin of Polytechnic Institute of Iasi, tom L (LV), 5 (2006), 147-152.
11. "Comparison of Fenton and sono-Fenton BPA degradation", Iordache Ioan, Steven Wilson, Elsa Lundanes, Aelenei Neculai, Journal of Hazardous Materials, 142 (2007), 559-563.
12. "The electrochemical behaviour of some unnooble alloys in Fusayama artificial saliva", Sutiman Dan, Mareci Daniel, Nechita Mircea Teodor, Iordache Ioan, Julia Claudia Mirza Rosca, Macedonian Journal of Chemistry and Chemical Engineering [ISSN 1857-5552], Vol 26, No 1 (2007), 57-63.
13. "Corrosion behavior of some low-carbon steels in organic environment in the presence of succinic and adipic acids", Daniel Sutiman, Mircea Teodor Nechita, Daniel Mareci, Ioan Iordache, Environmental Engineering and Management Journal [ISSN 1582-9596], 7, 1, (2008) 69-72.
14. "Removal of Bis(1-chloro-2-propyl)ether from wastewater using sonodegradation and biodegradation", Mihaela Iordache, Vasile Lucian Pavel, Lim Myunghee, Ioan Iordache, Environmental Engineering and Management Journal [ISSN 1582-9596], 8, 2, (2009) 201-206.
15. "The fenton and sono-fenton processes applied for pesticide degradation", Ioan Iordache, Steven Wilson, Elsa Lundanes, Mihaela Iordache, Vasile Lucian Pavel, Neculai Aelenei, Environmental Engineering and Management Journal [ISSN 1582-9596], 9, 4, (2010) 519-525.
16. "Development of the membrane permeator for hydrogen production to ICIT - Rm. Valcea", Iordache Ioan, Raceanu Mircea, Curuia Marian, Cho Jong Soo, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPO, GALE, INSPEC, INIS Romania], 13, 2, (2010) 79-87.
17. "Mesoporous SBA-15 supported platinum catalysts for alcohols oxidation", Violeta Niculescu, Ramona Ene, Ioan Iordache, Viorica Parvulescu, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPO, GALE, INSPEC, INIS Romania], 14, 2, (2011) 95-101.
18. "The hazardous substance environmental impact in the industrial area of Rm. Valcea", Iordache Mihaela, Branzoi Ioan Viorel, Iordache Ioan, Dobre Georgeta, Totea Georgeta, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPO, GALE, INSPEC, INIS Romania], 15, 1, (2012) 79-87.
19. "Hybrid materials obtained by nickel immobilization on mesoporous MCM-41 and their application in alcohols oxidation", Violeta Niculescu, Ramona Ene, Ioan Iordache, Viorica Parvulescu, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPO, GALE, INSPEC, INIS Romania], 15, 1, (2012) 37-43.

20. "Variation of the Olt River Quality Into the Industrial Complex Area of Ramnicu Valcea", Mihaela lordache, Ioan Viorel Branzoi, Ioan lordache, Luisa Popescu, Maria Taralunga, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 15, 2, (2012) 65-71.
21. "Development of an experimental model based simulation on nanostructured hydrides for hydrogen storage", Ioan lordache, Gabriel Rasoi, Vasile Anghel, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 16, 1, (2013) 35-43.
22. "Potential studies of ultrasounds effects in fuel cells", Dorin Schitea, Gheorghe Amza, Ioan lordache, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 16, 1, (2013) 25-34.
23. "The efficient catalytic conversion of glycerol into valuable chemicals", Adriana Marinou, Elena Carcadea, Claudia Cobzaru, Ioan lordache, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 16, 1, (2013) 43-50.
24. "Towards a hydrogen economy in Romania: statistics, technical and scientific general aspects", Ioan lordache, Adrian Gheorghe, Mihaela lordache, International Journal of Hydrogen Energy, 38 (2013) 12231-12240.
25. "Hydrogen and Fuel Cell R&D Programs and Projects in Romania Between 2000 and 2012", Ioan lordache, Alexandru Rizoiu, Mihai Balan, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 16, 2, (2013) 29-38.
26. "Hazardous substances in water and Sediments of Olt river, downstream from Rm. Valcea", Mihaela lordache, Ioan lordache, Luisa Roxana Popescu, Diana Costinel, Progress of Cryogenics and Isotopes Separation - ISSN 1582-2575 [indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 16, 2, (2013) 117-126.
27. "Evaluation of the Soil Mercury Pollution Induced by the Chloro-Alkany Activities in Chemical Industrial Areas", Luisa-Roxana Popescu, Eleonora Mihaela Ungureanu, Mihaela lordache, Georgiana-Anca Inel, Ioan lordache, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 16, 2, (2013) 127-133.
28. "PEM Fuel Cells in Automotive Applications - Realizations and Perspective within ICSI Rm. Valcea", Ioan lordache, Mihai Culcer, Mariana Iliescu, Mircea Răceanu, Adrian Enache, Maria Simona Mosteanu, Mihai Varlam, Ioan Stefanescu, Electromotion [ISSN 1223-057X; indexed in IET (Institution of Engineering and Technology) – INSPEC, UK], 20, 1-4, (2013) 109-112.
29. "Evaluation of Contamination with Priority Hazardous Substances of Water and Sediment of the Olt River on the industrial platform of Ramnicu Valcea", Mihaela lordache, Aurelia Meghea, Silvia Neamțu, Luisa Roxana Popescu, Ioan lordache, Revista de Chimie (Rev. Chim. Bucharest), 65, 1, (2014) 87-93.
30. "Romania's participation to Fuel Cell and Hydrogen Joint Undertaking projects and calls", Ioan lordache, Dorin Schitea, Mihaela Ramona Buga, Mihai Balan, Progress of Cryogenics and Isotopes Separation - ISSN 1582-2575 [indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 17, 1, (2014) 5-14.
31. "A comparative simulation and sensitivity analysis study of hydrogen production by steam methane reforming", Mihaela Buga, Mihai Balan, Ioan lordache, Mihai Varlam, Progress of Cryogenics and Isotopes Separation - ISSN 1582-2575 [indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 17, 1, (2014) 15-22.
32. "Carbon dioxide reusing for methane fuel obtaining over heterogeneous catalysts as a possible source of energy", Adriana Marinou, Elena Carcadea, Roxana Ionete, Mircea Răceanu, Claudia Cobzaru, Ioan lordache, Constantin Teodorescu, Adrian Enache, Progress of Cryogenics and Isotopes Separation - ISSN 1582-2575 [indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 17, 1, (2014) 23-30.
33. "The Application of Pollution Indexes in the Assessment of Heavy Metal Pollution in Sediments", Mihaela lordache, Luisa Roxana Popescu, Ioan lordache, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPPIO, GALE, INSPEC, INIS Romania], 17, 2, (2014) 129-141.
34. "Hydrogen underground storage in Romania, potential directions of development, stakeholders and general aspects", Ioan lordache, Dorin Schitea, Adrian Gheorghe, Mihaela lordache, International Journal of Hydrogen Energy, 39 (2014) 11071-11081.
35. "A new approach for optimizing the main components for PEM fuel cell", Adriana Marinou, Dorin Schitea, Claudia Cobzaru, Irina Petreanu, Ioan lordache, Simona Mosteanu and Laurentiu Pătularu, Bulletin of The Polytechnic Institute of Iasi [ISSN: 0254 – 7104, Ranked B+ by CNCSIS], Tomul LX (LXIV), Fasc. 1, 2014, 9-17.

36. "Study about the development of a portable fuel cell system containing an integrated hydrogen generator", Adriana Marinoiu, Claudia Cobzaru, Simona Mosteanu, Irina Petreanu, Mircea Raceanu, Cătălin Capris and Ioan Iordache, Bulletin of The Polytechnic Institute of Iasi [ISSN: 0254 – 7104, Ranked B+ by CNCSIS], Tomul LX (LXIV), Fasc. 1, **2014**, 17-29.
37. "Evaluation of the quality of environmental factors, soil and water in the Parang Mountains, Romania", Mihaela Iordache, Luisa Roxana Popescu, Florentina Pascu, Carol Lehr, Silvia Neamțu, Ioan Iordache, Revista de Chimie (Rev. Chim. Bucharest), 66, 7, **(2015)** 1009-1015.
38. "The environmental risk assessment in sediments from Jiu River, Romania", Mihaela Iordache, Luisa Roxana Popescu, Luoana Florentina Pascu, Ioan Iordache, Revista de Chimie (Rev. Chim. Bucharest), 66, 8, **(2015)** 1247-1252.
39. "Estimated transfer of volatile organochlorine substances in the ecosystems water, sediment, biota using the concept of fugacity", Mihaela Iordache, Luisa Roxana Popescu, Luoana Florentina Pascu, Ioan Iordache, Progress of Cryogenics and Isotopes Separation [ISSN 1582-2575; indexed in: Contemporary Science Association (CSA), EBSCO, ULRICH'S, SCIPRO, GALE, INSPEC, INIS Romania], 18, 1, **(2015)** 99-114.
40. "Numerical analysis of Cu and Ni based catalysts in the hydrogenation process of glycerol", Adriana Marinoiu, Claudia Cobzaru, Elena Carcadea, Mircea Raceanu, Catalin Capris, Vasile Tanislav, Constantin Teodorescu, Ioan Iordache, Environmental Engineering and Management Journal, 14, 9, **(2015)** 2201-2211.
41. "Insights, perspectives and general aspects for renewable hydrogen development in Romania", Dorin Schitea, Ioan Iordache, Adrian Gheorghe, Gabriel Dumitru, Gabriel Iacobescu, U.P.B. Sci. Bull. (Series D), 78, 1, **(2016)** 221-232 .
42. "Evaluation of heavy metal pollution into a complex industrial area from Romania", Mihaela Iordache, Ioan Viorel Branzoi, Luisa Roxana Popescu, Ioan Iordache, Environmental Engineering and Management Journal, 15, 2 **(2016)**, 389-394.
43. "Progress of the IAHE Nuclear Hydrogen Division on international hydrogen production programs", A. Odukoya, G.F. Naterer, M. Roeb, C. Mansilla , J. Mougine, B. Yu , J. Kupecki, Ioan Iordache, J. Milewski, International Journal of Hydrogen Energy, 41, 19 **(2016)** 7878–7891.
44. "Assessment of pollution with organochlorine substances in the accumulation lakes on the Olt River, using the Fugacity Model", Mihaela Iordache, Luisa Roxana Popescu, Silvia Neamtu, Luoana Florentina Pascu, Ioan Iordache, Revista de Chimie (Rev. Chim. Bucharest), 67, 6, **(2016)** 1186-1190.
45. "Hydrogen refueling station infrastructure roll-up, an indicative assessment of the commercial viability and profitability", Ioan Iordache, Dorin Schitea, Mihaela Iordache, International Journal of Hydrogen Energy, 42 **(2017)** 4721-4732.
46. "Ultrasonic irradiation a chlorinated organic compounds (Tetrachlorethylene, Tetrachloroethene, 1, 1, 2 Trichloroethane) from water", Mihaela Iordache, Luisa Roxana Popescu, Luoana Florentina Pascu, Ioan Iordache, Adriana Marinoiu, Revista de Chimie (Rev. Chim. Bucharest), 68, 5, **(2017)**, 1019-1022.
47. "Hydrogen refuelling station infrastructure roll-up, an indicative assessment of the commercial viability and profitability in the Member States of Europe Union", Mihaela Iordache, Dorin Schitea, Ioan Iordache, International Journal of Hydrogen Energy, 42 **(2017)**, 29629-29647.
48. "Mathematical modeling of the glycerol hydrogenolysis using copper chromite catalysts. The effect of additional bases", Adriana Marinoiu, Claudia Cobzaru, Elena Carcadea, Mircea Raceanu, Adrian Enache, Mihai Varlam, Ioan Iordache, Environmental Engineering and Management Journal – **in Press**, accepted for publication.
49. "Chemical sonoreactors in environmental applications", Ioan Iordache, Dorin Schitea, Mihaela Iordache, Gheorghe Amza, Jong Soo Cho, Environmental Engineering and Management Journal – **in Press**, accepted for publication.
- 50.

Annexes- CONFERENCES

1. "Denocivisation cyanides wastewater which organic substances", I. Iordache, N. Aelenei, I. Cretescu, The 27th National Chemistry Conference, Caciulata-Calimanesti, October, 23-25, **2002**,
2. "Electrooxidation cyanides from wastewater" I. Iordache, N. Aelenei, I. Cretescu, University 'Gh. Asachi' Conference, Iasi, November, 13-15, **2002**,
3. "Electrooxidation cyanides from wastewater in the alkaline pH", I. Iordache, N. Aelenei, I. Cretescu, University 'Al. I. Cuza' Conference, Iasi, November, 1-2, **2002**,
4. "Sonochemical removal of cyanide ions from wastewater", Iordache Ioan, Mircea Teodor Nichita, 4th International Conference of the Chemical Societies of the Southeast European Countries, Belgrade, Serbia and Montenegro, July 18-21, **2004**,
5. "Interaction study of NO_x with Fe-ZSM-5 zeolites", Mircea Teodor Nichita, Rosca Ioan, Ioan Iordache, Daniel Sutiman, Adrian Cailean, The 28th National Chemistry Conference, Caciulata-Calimanesti, October, 6-8, **2004**,
6. "Study of iron-nitro-silica complexes developed in ZSM-5 zeolites ", Mircea Teodor Nichita, Rosca Ioan, Ioan Iordache, Gabriela Apostolescu, The 28th National Chemistry Conference, Caciulata-Calimanesti, October, 6-8, **2004**,
7. "Sonoelectrochemical removal of cyanide ions from wastewater", Iordache Ioan, Mircea Teodor Nichita, Cojocaru Corneliu, University AUREL VLAICU Conference, Arad, November, 3-4, **2004**,
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