



Curriculum vitae
Europass

Personal information

Surname / First name **IONITA GHEORGHE**
Date and place of birth
Gender
Nationality
Address
Email

PROFESSIONAL EXPERIENCE

1. Doctorate in Nuclear Energy (since 1997) with expertise in radioactive waste management, scientific research project management in the field of nuclear energy, and control and regulation of activities in the nuclear field.

2. Chemical researcher, grade I, with 43 years of experience and activity within the heavy water production pilot plant - Plant "G" Rm-Valcea *actual* /CSI Pm. Valcea), in providing technical assistance in the implementation of heavy water manufacturing technology at ROMAG PROD, in developing heavy water detritiation technology at CNE Cernavoda carried out within the National Institute for Research and Development for Isotopic and Cryogenic Technologies-ICSI Rm-Valcea — successor to the former Heavy Water Plant - Plant "G" Rm.Valcea

3. Extensive experience as project manager in the management and coordination of scientific research projects in the field of nuclear energy (deuterium and tritium separation, environment, etc.), over 30 scientific articles published as first author, over 90 national and international conferences attended; 6 patents, 3 new technologies approved in the nuclear field

MANAGERIAL EXPERIENCE

2012-2024 - President of the Scientific Council of ICSI Rm-Valcea and scientific secretary (2019-2022)
2020-2021 - President of the National Commission for Nuclear Activities Control (CNCAN) 2005-2005-2009 - President of the National Agency for Radioactive Waste;
2011-2024- Director of Scientific Research Programmes/Projects
Member of the Boards of Directors of ANDRAD (4 years), ICSI Rm-Valcea (12 years) and RATEN-Pitesti (3 years)

- as follows:

Period 2021-July 2024
Name of employer - National Institute for Research and Development in Cryogenics and Isotopic Separation - ICSI Rm. Valcea,

Position/job title Project Director/Project Manager PN 23150305 - Inoyatiya technology for low-temperature recombination/catalytic combustion of hydrogen isotopes
Project Director PN 19 11 01 03 -(2018-2022) "Smart catalysts for increasing the efficiency of chemical processes carried out in the presence of water and humidity with applications in nuclear and environmental protection

Period 15 January 2020 — 17 February 2021
Position or job held - President of the National Commission for Nuclear Activities Control (CNCAN)
Name and address of employer General Secretariat of the Government

Period March 2010 - 15 January 2020

Name of employer	National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm-Valcea (Str. Uzinei; No. 4; P.O 10 Raureni; Code 024550; Valcea County)
Position or post held	Scientific Researcher I, ICSI-Rm.Valcea, Core Programme Director, (2016-2017; PN 2018;) ICSI Nuclear Department / Catalyst Manufacturing Laboratory Separation of hydrogen isotopes (deuterium and tritium) by hydrogen-water isotopic exchange, catalysed Preparation, characterisation and testing of hydrophobic catalysts (Pt/C/PTFE); Activation of hydrophilic fillers and manufacture of mixed catalytic fillers specific to hydrogen isotope separation through the LPCE process; Experimentation with water-hydrogen isotope exchange for tritium separation; Extension of the applications of hydrophobic catalysts to the purification of liquid effluents resulting from nuclear or chemical activities;
Main activities and responsibilities	Development of research and development strategies and coordination of the scientific activity of ICSI Rm-Valcea; Development and management of scientific research projects (project director) in the field of deuterium and tritium separation as well as in the catalysis of associated chemical processes; National evaluator of scientific research projects and member of the editorial board of the ICSI scientific journal "Progrese in Cnogenie si separarea IzotopiloL" (Progress in Cnogenie and Isotope Separation). Annual organisation of the international conference "Progress in Cryogenics and Isotope Separation" and the workshop "Tritium Management" Scientific and technical guidance for young researchers, doctoral students or master's students (member of doctoral committees) as well as guidance for student interns (bachelor's theses) Management activities and responsibilities specific to the Scientific Council; April
Period	April 2005-February 2010
Name of employer	Ministry of Economy and Trade / National Agency for Radioactive Waste (ANDRAD)
Position or post held	President of the National Agency for Radioactive Waste (ANDRAD); Chairman of the Board of Directors (2005-2009); Head of the Radioactive Waste Final Storage Service (2009-2010)
Main activities and responsibilities	Management of the newly established agency (in August 2004), its institutional consolidation and creation of the necessary legislative framework for accession to the European Union; Developing the national strategy for the safe management of radioactive waste and the activity/research/technical and scientific cooperation programmes (PAA) of ANDRAD; Drafting specific legislative/regulatory acts in the field, with a view to harmonising them with European Union legislation; Developing and implementing three Phare projects and two technical cooperation projects with the International Atomic Energy Agency (IAEA); Member of the High Level Group on Nuclear Safety attached to the European Commission Reporting member of the Romanian Delegation (2005-2008) to the Joint Convention on the Safety of Spent Fuel Management and the Annual Conferences of the IAEA Coordination of Phare projects and Technical Cooperation projects with the International Atomic Energy Agency on the siting, licensing, construction and operation of radioactive waste repositories;
Period	.2006-2009
Name and address of employer	University of Pitesti — Faculty of Science
Position/job title	Lecturer and seminar leader — "Physical Chemistry of Polymers" at the University of Pitesti — Faculty of Materials Science (2006-2009)
Period	2001-2005
Position or post held	CS II - CS I - Head of the Environmental Radioisotopes Laboratory
Main activities and responsibilities	
Name and address of employer	National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm-Valcea (Str. Uzinei; No. 4; P.O 10 Raureni; Code 024550; Valcea County)
Type of business or sector	Research and Development/Related Activities

Period	June 1999 - July 2001
Position or post held	Post-Doctoral Researcher - Japan Society for Promotion of Science;
Main activities and responsibilities	Studies and research on heavy water detritus; Research on the development of a new type of high-performance centrifugal extractor for the separation of minor actinides from nuclear waste; Publishing scientific articles and participating with scientific communications at conferences/scientific congresses in the field;
Name and address of employer	TOKYO INSTITUTE OF TECHNOLOGY-JAPONIA (2 Chrome- 12-1 Ookayama,Meguro,Tokyo 152-8550,Japonia) Telephone: =81 3-3726-1111

Period	1996- - 1999;
Position or post held	Scientific Researcher II / Head of the Solid-Liquid Interface Isotopic Exchange Laboratory
Main activities and responsibilities	Coordination of research activities at the interface exchange laboratory; Studies and research in the field of water-hydrogen isotope exchange catalysis; Preparation of new types of catalysts and contact elements specific to hydrogen isotope separation technology; Methods and procedures for the analysis and handling of tritium and heavy water Testing of catalytic fillings and catalysts in the pilot plant for separating deuterium and tritium from heavy water
Name and address of employer	National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm-Valcea (Str. Uzinei; No. 4; P.O 10 Raureni; Code 024550; Valcea County;

Period	September 1981-June 1996
Name and address of employer	UZINA "G" Rm-Valcea- (former heavy water pilot plant)
Position or post held	Chemist
Main activities and responsibilities	Processes and methods for producing heavy water through hydrogen-water isotopic exchange; hydrogen-ammonia, water-hydrogen sulphide; Physicochemical characterisation of heavy water (methods and equipment)

	Studies and research on hydrogen isotope separation technologies and their applications in the nuclear field; Approval of technology for separating deuterium and tritium isotopes from heavy water; Catalysis of isotopic exchange processes
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Period	January-September 1988
Name of employer	Plant "G" Rm-Valcea- DETACHED at the Heavy Water Chemical Plant-Drobeta Turnu —Severin
Activities carried out	General technical assistance in commissioning module no. 2 for heavy water production Technical assistance regarding methods for analysing and characterising raw materials and heavy water in laboratories; Assessment of corrosion processes in isotopic exchange columns; Procedure for physical-chemical analysis activities in the plant's laboratories

EDUCATION AND TRAINING

Period	2007-2009
Qualification/diploma obtained	Master's degree in Public Administration in the Context of European Integration
Name and type of educational institution	Pitesti University - Faculty of Legal Sciences
Period	July 2006
Qualification/diploma obtained	Certificate of completion of the training course "Management in public institutions and authorities"
Name and type of educational institution	National Institute of Public Administration, Bucharest;
Period	1999 2001
Qualification/diploma obtained	Certificate of participation in the postdoctoral specialisation programme

Name and type of educational institution	Japan Society for Promotion of Science-Tokyo Institute of Technology
Period	1991-1997
Qualification/diploma obtained	Doctorate in Physics; Specialisation in Nuclear Energy;
Name and type of educational institution	Institute of Atomic Physics, Bucharest;
Period	1984 - 1990;
Qualification/diploma obtained	Certificates of completion of postgraduate specialisation courses in the fields of: catalysis and catalysts; separation and use of radioisotopes;
Name and type of educational institution	Bucharest Polytechnic Institute/Faculty of Chemical Engineering; Institute of Atomic Physics, Bucharest;
Period	1980-1981
Qualification/diploma obtained	Certificate of specialisation - "Physical Chemistry of Polymers"; Gheorghe Asachi Polytechnic Institute - Faculty of Chemistry;
Name and type of educational institution	Gheorghe Asachi Polytechnic Institute - Faculty of Chemistry
Period	1976-1980
Qualification/diploma obtained	Bachelor's degree in CHEMISTRY
Name and type of educational institution	Gheorghe Asachi Polytechnic Institute - Faculty of Chemistry

Skills and competences

Personal

Mother tongue(s) Romanian

Foreign language(s) known

Self-assessment <i>European level (*)</i>	Listening	Comprehension Reading	Speaking Participation in expression Conversation	Oral speech	Writing Written
English	1	B1	B2	B1	B2
French	2	B1	B1	A2	B1
Japanese	3	A1	-	A1	

(*) Common European Framework of Reference for Languages

Competence and skills in using a computer A good command of Microsoft Office software packages

Driving licence	Category B
Professional affiliations	Member of: European Physical Society; Romanian Chemical Society; Romanian Catalysis Society; Romanian Nuclear Energy Association;
Hobbies/	Sports/mountain tourism; skiing, tennis; athletics/half marathon; Scientific literature
Appendices	Appendix 1. List of main scientific publications and relevant patents; Appendix 2. List of relevant projects coordinated as project director Appendix 3. List of international representation activities;
	Dr. Chim. Gheorghe Ionita
	28 08 2025

Annex 1 - Chronological list of main scientific publications

1. Gh. Ionita, C. Ghirvu and Ana Onu, "Influence of radical in polystyrene solution in " Revue Roumaine deChemie ,vol:27, no. 9-10 pg. 1029-1033, 1982
- 2) Gh. Lonita "Hydrophobic catalysts for hydrogen-water isotopic exchange —Chemical Journal no.: 10/1994
3. Gh. Lonita "Catalytic recombination of stoichiometric hydrogen-oxygen mixtures —Chemical Journal no. 5/1995
4. Gh. Lonita and I. Stefanescu "The Separation of Deuterium and Tritium on Pt/SDB and Pt/C/PTFE Catalyst" —Fusion Technology vol. 28/1995)
5. Gh. Lonita and C. Varlam "Determination of low level tritium activity concentration in natural water samples by liquid scintillation method" in Materials and Geoenvironment vol. 45, No. 1-2/1988
6. Carmen Varlam and Gh. Ionita, "Determination of level tritium activity concentration in natural water samples by liquid scintillation spectrometer Quantulus 1220" in Materials and Geoenvironment, vol. 45, No. 1-2, pp. 270-271, 1998
7. G. Ionita, Irina Popescu, A Kitamoto and Masami Shimizu "Proposal for removal of dissolved dioxide-like compounds from wastewater effluent with hydrophobic catalyst after biological treatment" in Progress of Cryogenics and Isotopes Separation no. 9-10/2002
8. G. Ionita, I Popescu, A. Bornea, N Bidica, I. Stefanescu "Endurance test of SCKCEN packing proposed for Water Detritiation System at JET" in "Fusion Science & Technology; vol. 48 (pp. 112-115; (2005);
9. I. Popescu, G. Lonita and A. Kitamoto "New Hydrophobic Catalyst for Tritium Separation from Nuclear Effluent" in Fusion Science & Technology; vol. 48, pp. 108-111; (2005)
10. S. Rosanvallon, N. Bekris, J. Braet, I Cristescu, Gh. Ionita and C. Grisolia, "Tritium Related Studies within JET Fusion Technology Work Programme, - vol (48) pp. 268-273 (2005)
- 11) G. Ionita, A. Kitamoto, D-tru Mirica, Cornelia Croitoru, Ioan Stefanescu, Teodora Retegan "New improved Counter - Current Centrifugal Extractor for Solvent Extraction Process" in Progress of Cryogenics and Isotopes Separation no. 10-11 /2004;
12. I. Popescu, Gh. Ionita, I. Stefanescu, A. Kitamoto — "A new hydrophobic catalyst for tritium separation from nuclear effluents" - Fusion Science and Technology, vol 48, No. 1, Fuste8(1) 1-806 (2005) ISSN: 1536-1055;

13. Gh. Ionita, A. Bornea, J. Braet, I. Popescu, I. Stefanescu, N. Bidica, C. Varlam, C. Postolache, L. Matei — "Endurance test for SCK-CEN catalytic mixed packing, proposed for water detritiation system at JET" - Fusion Science and Technology, vol 48, No. 1, Fuste8(1) 1-806 (2005) ISSN: 1536-1055
14. I. Popescu, Gh. Ionita, I. Stefanescu C. Varlam, D. Dobrinescu, I. Faurescu — "Improved Characteristics of Hydrophobic Polytetrafluoroethylene-Platinum Catalysts for Tritium Separation", Fusion Engineering and Design 83, vol. 83, Issue 10-12, Part B, (2008), p. 1392-1394, ISSN 0920-3796
15. I. Popescu, G. Ionita, D. Dobrinescu, C. Varlam — "Current status applications of modified zeolites in depollution of wastewaters", Journal of Environmental Protection and Ecology — forthcoming
16. Carmen Varlam, I Stefanescu, Gheorghe Ionita "Tritium Monitoring in the environment at tritium separation facility —ICIT" - Fusion Science Technology, vol 60; No. 3 pg 1002-1005, (2011)
17. Gheorghe Ionita, I Stefanescu, Popescu Gh- "A critical analysis of contact element used in I hydrogen-water isotopic exchange" submitted for publishing in Fusion Science Technology (2015);
18. Gheorghe Ionita, Ciprian Bucur, Ionut Spiridon and Ioan Stefanescu "An assessment on hydrogen isotopes separation by Liquid phase catalytic exchange process", Journal Radioanalytical Nuclear Chemistry; Vol. 305; No. 1; July 2015;
19. Gh. Ionut, Adriana Marinoiu, Ciprian Bucur et al., "Aspects concerning manufacture of reproducible and homogenous batches of Pt/C/PTFE catalysts for hydrogen-water Isotopic Exchange- in Fusion Science Technology (2017) p.663-667;
20. Gh. Ionita Spiridon Ionut, Bucur Ciprian "Hydrodynamic characteristics of mixed catalytic packing for heavy water detritiation," Ionita Gheorghe, *Fusion Engineering and Design*, 136(Part B), pp. 1252-1255, (2018) ISSN: 0920-3796, DOI: 10.1016/j.fusengdes.2018.04.111, relative influence score: 0.875, Impact factor: 1.437 Q1 Elsevier Science SA, Lausanne, Switzerland;
21. Anisia Bornea; George Ana; Gheorghe Ionita; Alina Miu; Alina Niculescu; Anisoara Oubraham; Nicolae Sofilica; Iuliana Stefan; Liviu Stefan; Ionut Spiridon; Felicia Vasut; Marius Zamfirache "New catalytic packing performance." *Theoretical and experimental characterisation for LPCE process* " in Fusion Engineering and Design; Volume 146, Part B, September (2019), Pages 2384-2388; <https://doi.org/10.1016/j.fusengdes.2019.03.196> ;
22. Gheorghe Popescu, George Ana, Anisia Bornea, Liviu Stefan, Gheorghe Ionita, Juliana Stefan, Alina Niculescu, Felicia Vasut, Anisoara Oubraham, Ciprian Bucur, Ovidiu Balteanu, Nicolae Bidica, Mihai Vijulie—, Commissioning of LPCE and purification systems as front-end of the experimental Pilot plant for D_T separation" in Fusion Engineering and Design; Volume 161, December 2020. <https://doi.org/10.1016/j.fusengdes.2020.112044>;
23. Gh. Ionita - "Romanian contribution to heavy water production and hydrogen isotopes separation", submitted for publication in *International Journal of Hydrogen Energy* (2024),

Patents

- 1) Gh. Ionita, Gh. Titescu C. Ciorte- "*Compact catalytic mixed filling*" — Patent no. 134746 I28 01 2022, Romania
- 2) Gheorghe Ionita, Felicia Vasut and Nicolae Sofilica - "*Hydrophobic Pt/C/PTFE catalyst and method for its preparation*" - Patent No. 137504 I29 03 2024
- 3) G. Ionita and D. Mirica — "Multi-stage countercurrent centrifugal extractor" — Patent No. A 200300056/21 01 2003
- 4) G. Ionita and M. Peculea "Process for preparing hydrophobic catalysts", RSR Patent No. 147684/1994
- 5) G. Ionita and M. Peculea "Mixed catalytic filling for burning stoichiometric mixtures of hydrogen and oxygen - RSR Patent; No. 107558/1993
- 6) G. Ionita Process for the semi-industrial manufacture of COMPACK-CP-002 mixed catalytic filler - currently being drafted/evaluated;
- 7) Gheorghe Ionita et al —Process for manufacture of hydrophobic catalyst Pt/C/PTFE and use thereof- *European Patent application*, No; EP 2200240.6/4194086A1/2023- under evaluation

Approved Products and Technologies

1. G. Ionita - Hydrophobic platinum catalyst on carbon and Teflon - STI No. 12/1998
2. G. Ionita, F. Pop, C Croitoru - "Technology for separating hydrogen isotopes by catalysed isotopic exchange coupled with cryogenic distillation of liquid hydrogen" - NI: S-123 and Minutes 1187/1989

3. G. Ionita - "Technology for the catalytic oxidation of hydrogen in water" - NI:5-64 and PV2197/10.061992;

Annex no. 2 List of relevant projects coordinated as project manager / responsible for the project

1. PN 1119 01 03 "Smart catalysts for increasing the efficiency of chemical processes carried out in the presence of water and humidity with applications in the nuclear and environmental protection fields - 2019-2022" - Project Manager
2. Core Programme "*Innovative research for new clean energy technologies and improving quality of life*" - "Clean ENLIFE"; 2016-2018; Programme Director;
3. Core Programme "*Energy 2.0 for a cleaner environment - harnessing research potential to support the development of new energy and environmental technologies and materials*" - "CS/ 4E" - Programme Director Project Manager;
4. Removal of radionuclides from nuclear waste by countercurrent centrifugal extraction - Project Director: Contract Manager: 03/10.11.2001
5. Fundamental physicochemical processes in supercritical fluids - Project Director CERES Contract No. 3-82/07 11 2003
6. Depollution of wastewater containing organochlorinated compounds by advanced catalytic oxidation on hydrophilic and hydrophobic catalysts - Project Manager: Subcontract: 01/27.11.2001
7. Mobile installation for conditioning spent ion exchange resins from the nuclear industry - Responsible Subcontract 10 144/2002 - Mener programme
8. Determination of tritium and C-14 concentrations in water samples - Responsible Subcontract 12 144/2002 - Ceres programme
9. Monitoring tritium and deuterium levels in the Danube-Black Sea ecosystem after the start-up of the Cernavoda Nuclear Power Plant and the Drobeta Turnu-Severin Heavy Water Plant, Theme manager: B.9, Horizon 2000 Programme Code: 7.2/1997
10. Reducing the amount of hydrogen generated in the event of a nuclear accident in a CANDU power plant; Responsible for Theme B.4, Horizon 2000 Programme Code: 9.3/1996
11. Theoretical and experimental studies on the recovery and storage of tritium from gaseous and liquid products. Responsible for Theme, Contract 837B/95, Theme B.2, Programme and Subprogramme: 2.6/1995
12. Laboratory experiments on the static and dynamic conversion of tritiated hydrogen on heated metal surfaces
13. Theoretical and experimental studies on the separation of tritium from heavy water - Project manager: A.7, Contract: 98B/1995, programme and subprogramme code 9.2
14. Coordinator of Phare Projects and Technical Cooperation with the IAEA in the field of radioactive waste management and decommissioning of nuclear facilities for the years 2005-2008;
15. Project responsible for ROM-2009 TCP Project- 2013- 2014 with IAEA- Strengthening of ICSI capability to implement TRF at Cernavoda

Annex 3 - List of international representation activities

Representative of Romania at FORATOM - Research Task Force (since 2013 on behalf of ROMATOM)

Member of the Romanian delegation to the Annual Conferences of the International Atomic Energy Agency-Vienna in 2005-2008;

Member of the Romanian delegation to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management in Vienna, 2005 and 2007;

Member of the Romanian delegation to the European Commission (DGTREN) in 2006 and 2007 on reporting on the implementation of Article 37 of the EURATOM Treaty and the fulfilment of obligations in the field of energy;

Member of the High Level Group on Nuclear Safety, attached to the European Commission

Director of the technical cooperation project with the International Atomic Energy Agency, 2012-2013 cycle Director of International Project JW4-FT- 2.20/2004 within the EURATOM programme

Coordinator of Phare Projects and
nuclear facilities for the years 2005-2008;

Technical Cooperation with the IAEA in the field of radioactive waste management and
decommissioning

2 years of work experience in Japan (Tokyo Institute of Technology) 1999-2001;

2 months of exchange experience at SCK-CEN Belgium (Oct-Dec 2004);

Dr. Chem. Gheorghe Lonita

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