



PERSONAL INFORMATION Prof. Igor Cretescu


 "Gheorghe Asachi" Technical University of Iasi, „Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Bd. D. Mangeron 73, 700050, Iasi, Romania

 +40232-278683, int.2226  +40741-914342

 icre1@yahoo.co.uk; icre@ch.tuiasi.ro

 <https://orcid.org/0000-0001-5108-9752>
<https://www.researchgate.net/profile/Igor-Cretescu>
<https://scholar.google.ro/citations?user=qE1MeL0AAAAJ&hl>
<https://www.webofscience.com/wos/author/record/34264267>
<https://www.intechopen.com/profiles/289929>

Gender M | Nationality Romanian

WORK EXPERIENCE

- From 2013-present **Full Professor**
 Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi" Technical University of Iasi, Romania
 - Teaching and research activities
 - Sources of Radiation and Protection Technologies
 - Sensors Applied in Environmental Monitoring
 - Optimization and Modeling of Environmental and Chemical Processes
- From 2001-2013 **Associated Professor**
 Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi" Technical University of Iasi, Romania
 - Teaching and research activities
 - Radiochemistry, Radiation Sources and Environmental Protection
 - Sensors Applied in Environmental Monitoring
 - Optimization and Modeling of Chemical Processes
- From 1997 to 2001 **Lecturer**
 Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi" Technical University of Iasi, Romania
 - Teaching and research activities
 - Radio and Electro-Chemistry
 - Sensors Applied in Environmental Monitoring
 - Optimization and Modeling of Environmental Processes
 - Recycling Technologies of Wastes
 - Treatment of Dangerous Wastes and Environmental Technologies
- From 1990 to 1997 **Assistant Professor**
 Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi" Technical University of Iasi, Romania
 - Teaching and research activities
 - Environmental Technologies and Radio-ElectroChemistry
 - Electro-Analytical Methods of Analyses
 - Optimization and Modeling Methods of Chemical Processes
- From 1989 to 1990 **Research Engineer**
 Synthetic Fibres Research Centre, Savinesti, Romania
 - Technical supervisor of pilot plant for Electrosynthesis of Persulfate Salts and Kolbe dimerization of dicarboxylic acids

EDUCATION AND TRAINING

From February 2005 to September 2005

Master of Science

Faculty of Physics, Department of Nuclear Physics, University of Bucharest, Romania

- Radioisotope separation
- Measure of ionising radiation
- Gamma spectrometry

From November 1990 to December 1999

Doctor in Chemical Engineering

"Gheorghe Asachi" Technical University of Iasi, Faculty of Industrial Chemistry, 73 Bvd. D. Mangeron, 700050, Iasi, Romania

- Contributions to the investigation and optimization of electrode processes applied in the electrosynthesis of N,N-dimethyle-p-phenilene diamine and electrochemical treatment of the resulted wastewater, 217 p, 1999

From September 1984 to July 1989

Bachelor of Science in Chemical Engineering

Polytechnic Institute of Iasi, Faculty of Industrial Chemistry, 73 Bvd. D. Mangeron, 700050, Iasi, Romania

- Organic compounds technology and design of chemical processes and equipments

Invited professor / researcher

2017- Invited professor, University of Castilla-La Mancha, Ciudad Real, Spain, An innovative approach for soil remediation electrochemically assisted

2002- Invited researcher, Postdoctoral stage: The materials for ion selective electrode (selective membrane-sensor), Polish Academy of Science, Poland;

2000 – Invited researcher: Electrode material for electrochemical treatment of organic wastewaters, University of Sherbrooke, Canada;

1997- Invited researcher with Specialization Certificate: Sensors and data acquisitions systems, Faculty of Computer Science and Microelectronics, Technical University of Moldova, Chisinau, Republic of Moldova;

1996 - Invited researcher with Specialization Certificate: Investigation of organic electrochemical processes, "M.V. Lomonosov" Moscow State University, Russia;

1996 - Invited researcher with Specialization Certificate: Organic electrosynthesis technology and electrochemical treatment of waste waters, "M.D. Mendeleev" Russian University of Chemical Technology Moscow, Russia;

1995 – Visiting researcher, Semiconductors Micro-Sensors, Physical Engineering Institute (National Research Nuclear University), Moscow, Russia

PERSONAL SKILLS

Other language(s)	Romanian				
	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Proficient User C1	Proficient User C2	Proficient User C1	Proficient User C2	Proficient User C2
Multilanguage trading center, Iasi, Romania					
French	Proficient User C1	Proficient User C2	Proficient User C1	Proficient User C2	Proficient User C1
"Al. I. Cuza" University of Iasi, Romania					
Russian	Proficient User B1	Proficient User B2	Proficient User B2	Proficient User B1	Proficient User B1
D. Mendeleev University of Chemical Technology of Russia, Moscow					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

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

Organisational / managerial skills

- Member of Departmental Council, 2008-present (Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi", Technical University of Iasi)
- Member of Faculty Council, 2008-2020 (Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi", Technical University of Iasi)
- Head of Environmental Engineering and Management Department, 2012-2016; (Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi", Technical University of Iasi)
- Deputy Head of Environmental Engineering and Management Department, 2008-2012; (Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi", Technical University of Iasi)

Organization of scientific events:

12. INVENT-INVEST Editia a XII-a, 10 decembrie 2021, Targului International de Inventii si Idei Practice INVENT - INVEST - CONSTANTIN-MARIN ANTOHI, online, Iasi, Romania, <https://www.inventica-sir.ro/events.html>

11. INVENT-INVEST, Editia a XI-a, 10 decembrie 2020, online, Iasi, Romania, https://www.inventica-sir.ro/events_2020.html

10. INVENT-INVEST, Editia a X-a, 7-9 mai 2019, Ploiesti, Romania, <https://www.upg-ploiesti.ro/ro/targul-international-de-inventii-si-idei-practice-invent-invest-ploiesti-7-9-mai-2019>

9. INVENT-INVEST, Editia a IX-a, 9-11 noiembrie 2018, Republica Moldova, <http://edu.asm.md/sites/default/files/Invent%20Invest%202018.pdf>

8. INVENT-INVEST, Editia a VIII-a, 12-15 noiembrie 2017, Ungheni, Romania-Moldova, <http://edu.asm.md/md/noutate/targul-international-invent-invest-2017>

7. INVENT-INVEST, Editia a VII-a, 15-18 septembrie 2016, Iasi, Romania

6. INVENT-INVEST, Editia a VI-a, 18-22 octombrie 2015, Iasi, Romania, www.inventica.tuiasi.ro

5. INVENT-INVEST, Editia a V-a, 12-15 noiembrie 2014, Iasi, Romania.

4. TESLA INVENT-INVEST, 18-23 iunie 2013, Bucuresti, Romania.

3. INVENT-INVEST SIR 22, 23-26 mai 2012, Bucuresti, Romania, https://www.cttecotech.ro/organizare_manifestari_romana.html

2. INVENT-INVEST SIR 21, 25-28 mai 2011, Baia Mare, Romania, <http://ece.ubm.ro/invest/program.html>

1. INVENT-INVEST SIR 20, 22-27 noiembrie 2010, Iasi, Romania.

- International Symposium Control and Metrology of Environmental Quality Factors (IS.CMEQF- 01), November 23– 27, 2010, Iasi, Website: http://www.eemj.icpm.tuiasi.ro/pdfs/vol10/no3/0_Editorial.pdf

- International Conference „Inventics – Performance and Technical Creativity”, XII-th Edition, 2008, Website: <https://agepi.gov.md/ro/news/salonul-international-al-inventiilor-cercetarii-si-transferului-tehnologic-%E2%80%9Einventica%E2%80%9932008%E2%80%9D>

- The 5th International Conference on ENVIRONMENTAL ENGINEERING AND MANAGEMENT ICEEM/05, 15-19 September, 2009 Tulcea, Danube Delta – Romania, Website: http://www.eemj.icpm.tuiasi.ro/pdfs/vol8/no4/01_pliantICEEM05.pdf

- The 8th International Symposium on Cement Based Materials for a Sustainable Agriculture, 22-25 Oct 2015, Iasi, Romania, Website: <https://www.h2020.md/en/csa-2015-joint-international-conference-0>

Scientific coordination of students:

- coordination of BA Thesis and Dissertation thesis of students
- mentor of Ph.D students

- Communication skills**
- good communication skills gained through my experience as a teacher, head of department and research leader
 - self-educated regarding the research, publishing activity, national and international collaboration
 - facile interactions between academic and industrial activities

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user

[Digital competences - Self-assessment grid](#)

- PC software/ hardware installation and repair (extensive);
- Windows Operating Systems and -Windows Networking;
- Linux (Basic installation and system management);
- Scientific Programming in Quick BASIC and Turbo Pascal;
- Web design and administration;
- Wording and processing of texts and images: Microsoft Office (Word, PowerPoint), Photoimpact, ChemDraw, Adobe - Photoshop, etc.;
- Operating with programs as: MathCAD, Visio, Lab Windows, Corel, Microsoft Excel, SigmaPlot, etc.

Research interests

- Monitoring of Environmental components;
- Sensors and their applications in quality - control of the environment and products;
- Modeling and Optimization process;
- Treatment of fluid waste stream;
- Valorization and recycling of wastes using different treatment methods;
- Development (syntheses) and characterization of new materials for use in environmental applications:
 1. Membranes: permeability, selectivity, electrical and mechanical properties, etc.:
 2. Nanostructured and polydispersed sorbents: mesoporous zeolites, clays, composite particles or fibres, etc.
- Development of new compounds involved in sensor and monitoring technologies:
 1. Organic ligands available to form ion-ligand complex and to be compatible with the polymeric matrix of membrane sensor;
 2. Design and Synthesis of Functional Coordination Polymers or Copolymers.

Other skills

- Measurements of sensorial signals
- Measurements of electromagnetic field
- Data acquisition systems
- Classical electronic devices and specialized circuits;
- Digital and analogue circuits.

ADDITIONAL
INFORMATION

Projects

International grants

1. **Project ERANET 107/01.05.2019**, 2019-2022, title: Closing the Water Cycle Gap with Harmonised Actions for Sustainable Management of Water Resources/Water Harmony (Director: Igor CRETESCU);
2. **Project No. 576/2012**, Bilateral Romanian-Greek Scientific Cooperation, Solar Photocatalytic Oxidation and Decolorization of Dye Solutions in Aqueous Media (director, Conf. dr. Doina LUTIC-UAIC), Technical University of Iasi responsible: **Igor Cretescu**
3. **Grant (B.EN.A.) – Cosmote/2007**: Some Effects of High-Frequency Electromagnetic Radiations Used in Radio Communication toward the Cultivated Plants Growing, COSMOTE Grecia, prin B.EN.A. International, Director: **Igor Cretescu**
4. **Project No. 430/15.06.2010, Bilateral Grant Romania/Moldavia**, Sustainable Management of Anthropogenic Soils achieved by Monitoring and Remediation Technologies, director: Assoc. Prof. Dr. Iticescu Catalina, "Dunarea de Jos" University of Galati, Technical University of Iasi, coordinator: **Igor Cretescu**, 2010-2011.
5. **Project 24/2007-2008 MCT**-Romanian-Greek Scientific Cooperation Program, tema: Synthesis of magnetic nanoporous materials applied in medical and environmental purposes, (director, prof. dr. Eveline POPOVICI-UAIC), Technical University of Iasi responsible: **Igor Cretescu**

National grants

- **Project PCE 39/2021, Program PN-III-P4/** Fundamental and frontier research (UEFISCDI), 2021-2023, title: Biofiltration of air from urban automotive underground spaces / BIO-AUTO (team member);
- **Project 301PED/2020, Program PN-III-P2-2.1/** Competitiveness through research, development and innovation (UEFISCDI), 2020-2022, title: Biotrickling filtration upgrade in the context of atmospheric protection and climate change / BIO-UP (team member);
- **RDI-STAR 157/2017**, RDI Program for Space Technology and Advanced Research–STAR (Romanian Space Agency-ROSA), 2017-2019, title: Sustainable biochemical method for air revitalization in spacecrafts / BIO-MARS (team member);
- **Bilateral project of research Romania-Norway RO14/EEA Grants, no. 18 BIL/2017**, title: Bioconcepts in environmental protection and management: promoter of bilateral relationship between Romanian and Norwegian research entities (team member);
- **Grant 305P/23.02.2016**, Technical University "Gheorghe Asachi" of Iasi, Romania, 2016: Study concerning the measurements of gas emissions issued from the building heating systems in the urban area of Iasi municipality (team member);
- **Project PN-II-PT-PCCA-2013-4-2165**, National Partnership Program, 2014-2016, title: Autonom antibacterial venting and luminating modular green system for curtain wall/ VALMGreen (team member).
- **Contract PN-II-IN-CI-2012-1-0094**, Treatment of industrial waste cooling liquid from machine tools, Director: **I. Cretescu**
- **Contract PN-II- IDEI Cod 357, No.721/2009-2011**, New types of nanocomposite materials with applications in electronics and electrochemical sensors, Director: Doina Sibiescu, team member: **Igor Cretescu**
- **Contract no. 26/2007-2008 CEEX** - Experimentation and improving biological technology operating on an intensive apple orchard mode, with a favorable impact on consumer health and the environment, Director: M. Diaconu, team member: **I. Cretescu**
- **Contract CNCSIS Cod 1070, no. A1/ GR 164/ 2004-2006**, Membrane polymeric composites for separation and control technologies and equipments for food industry and environmental protection, Director: **I. Cretescu**
- **Contract no. 3161P/05**, Chemical and physical determination for self-calcium lime paste product, Director: **I. Cretescu**

Bilateral/Academic mobility programs

Research Grant-Balkan Environmental Association –Technological Education Institute, Thessaloniki, Greece

Bilateral Romanian Greek Cooperation, The Aristotle University of Thessaloniki, Greece

Erasmus Project – University of Warmia and Mazuria, Olsztyn, Poland

Erasmus Project – Aristotle University of Thessaloniki, Greece

Erasmus Project – University of Castilla La Mancha, Ciudad Real, Spain

Research Project: European Food Safety Network FP V, Polish Academy of Science, Olsztyn, Poland;

Research Project: Romanian- Moldavian Scientific Partnership, Technical University of Moldova, Chisinau, Moldova Republic.

Scientific portofolio

260 Scientific Papers

- 180 papers in peer reviewed and ISI Thomson Master List journals;
- 33 papers in peer reviewed and journals indexed International Data Base;
- 30 papers in other journals, recognized at the national level (by the scientific national authority :CNCSIS);
- 17 papers in conference proceedings.

30 Awarded patents and patent demands

- 25 awarded patents
- 5 patent demands.

2600 citations (Scopus) from which 2000 citations are without self-citations**H-index of 24;****Cumulative impact factor, higer than 100.**

Honours and awards

Selected Scientific awards from more than 80 medals and awards;

2010 – Silver Medal - Warning equipment based on acoustic and electromagnetic signal for the avoiding road and railway accidents, the 10th International Exhibition of Innovations and Investments, 7 September 10, 2010, Moscow.

2010 - Silver Medal - The prevention of rail and road accidents, The Belgian and International Trade Fair for Technological Innovation, Eureka, 20 November 2010, Brussels.

2010 – Gold Medal - Unconventional cooling system applied for solidification of alloys from the metalurgical proceses, the 6th International Exhibition of New Technologies (NEW TIME), 23 September 25, 2010, Sevastopol, Ukraine.

2009 – Gold Medal - Procédé et installation d'échange ionique dans un champ magnetique, Salon International des Inventions Geneve, Swiss, April 2009.

2009 - Silver medal - Device and method for ion exchange in magnetic field, International Warsaw Invention Show 2009, Warsaw, 3rd of June

2009 - Cycle of Patents, Special Prize awarded by the Society of Inventors in Ukraine, in the fourth salon specializing in inventions INFOINVENT, Kiev, Ukraine

2009 - Excellence Diploma, INFOINVENT, the Ministry of Education, Technical University of Moldova, Republic of Moldova.

2009 - Excellence Diploma, INFOINVENT, the Ministry of Education, Technical University of Moldova, Republic of Moldova.

2009 - Silver Medal, Specialized International Exhibition - INFOINVENT 2009, 24-27 November, Chisinau, Republic of Moldova.

2009 - Excellence Diploma - INFOINVENT 2009, Republic of Moldova, Ministry of Education, Technical University of Moldova.

2009 - Gold Medal, The 5th International Exhibition New Time, Sevastopol, Ukraine, 24-26 - Electronic equipment based on acoustic and electromagnetic signal for the increasing the auto circulation safety.

2009 - Gold Medal, The 5th International Exhibition New Time, Sevastopol, Ukraine, 24-26 September for Metalurgical method for obtaining a big revolution.

solid pieces, for developing of some imposed characteristics using the special alloys.

2008 - Silver Medal - Device and Method for Ion Exchange in Magnetic Field, Silver Medal, TESLA FEST 2008- International Festival of Innovation, Knowledge and Inventiveness, for the invention, Novi Sad, Serbia, October, 2008.

2008 - Gold Medal, obtained at the fourth Exhibition "New Time", Sevastopol, Ukraine for the invention: Device and Method for Ion Exchange in Magnetic Field.

- Memberships**
- Vice-president of the Romanian Inventors Society (SIR);
 - Member of the Academic Organization of Environmental Engineering and Management (OAIMDD);
 - Member of the Balkan Environmental Association (BENA);
 - Member of the Romanian Radioprotection Society;
 - Member of the Chemistry Society of Romania;
 - Member of the Association of Graduates from Industrial Chemistry Faculty

Editorial board member (International Journals)

- ENVIRONMENTAL ENGINEERING and MANAGEMENT JOURNAL (EEMJ);
- JOURNAL OF ENVIRONMENTAL ENGINEERING AND LANDSCAPE MANAGEMENT (JEELM);
- JOURNAL OF ENVIRONMENTAL PROTECTION AND ECOLOGY (JEPE);
- COATINGS (MDPI, Switzerland);
- MATERIALS (MDPI, Switzerland); Guest Editor for Special Issue "Innovative Applications of Wastes, Low-Cost and Recycled Materials"
https://www.mdpi.com/journal/materials/special_issues/lowcost_waste_recycled_materials
- Procedia Environmental Science, Engineering and Management (P - ESEM);
- Applied Journal of Environmental Engineering Science (Morroco),
- Ecology & Safety (Bulgaria).

March 01, 2023

Prof. univ. Dr. Eng. Igor CRETESCU