

## PERSONAL INFORMATION

**Ianculescu Adelina-Carmen**

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Date of birth:

Nationality: Romanian

## WORK EXPERIENCE

2000–2022

**Research-and-teaching positions in Romania: lecturer (2000 - 2004), associate professor (2004 - 2008), professor (2008 - 2011), full professor – Habilitation (2011 - present)**

"POLITEHNICA" University of Bucharest, Faculty of Chemical Engineering and Biotechnologies, Department of Science and Engineering of Oxide Materials and Nanomaterials, 1-7 Gh. Polizu, district 1, 011061, <http://www.chimie.upb.ro/>, Bucharest, Romania.

Teaching and research activity

2002–2003

**Research-and-teaching positions in France: CNRS - Associated Senior Scientist**

**1. Inter-University Research and Engineering Centre on Materials – C.I.R.I.M.A.T. - UMR 5085, Laboratoire: Oxydes à valence mixte (OVM)**, 118 Route de Narbonne 31062, Paul Sabatier – Toulouse III University, <https://cirimat.cnrs.fr/>, Toulouse, France

Research activity, teaching activity, activity for mentoring MD and PhD students, member of the evaluation committee of dissertation theses for MD.

2001–2002

**2. Laboratory of Electrical Engineering (current name: Laboratory of Plasma and Energy Conversion - LAPLACE) - UMR 5213, Laboratoire: Matériaux Diélectriques dans la Conversion de l'Energie**, 118 Route de Narbonne 31062, Paul Sabatier University – Toulouse III, <http://www.laplace.univ-tlse.fr>, Toulouse, France.

Research activity

1990–2000

**Scientific researcher (1990 - 1995), Senior Scientist (1995 - 2000)**

Institute of Physical Chemistry „Ilie Murgulescu” of the Romanian Academy (Laboratory of Oxide Compounds and Materials Science), 202 Splaiul Independenței, District 6, 77208, <http://www.icf.ro/>, Bucharest (Romania).

Research activity

1987–1990

**Engineer in Chemistry**

Special Steels Factory – Targoviste (Laboratory of Raw Materials Control), 9 – 11 Sos. Gaesti, <http://www.cos-tgv.ro/>, Targoviste (Romania).

Technical quality control, research activity

## EDUCATION AND TRAINING

Feb. 1989 – Nov. 1996

**PhD / PhD diploma (Area of expertise: Chemistry (Technology of Silicates and Oxide Compounds))**

POLITEHNICA University of Bucharest, Bucharest (Romania)

Technology of Ceramics and Refractory Materials / Electroceramics; Solid State Physical Chemistry

Sep. 1982 – July 1987 **Engineer / MD diploma (Specialization: Chemistry / Technology of Silicates and Oxide Compounds)**  
 "POLITEHNICA" University of Bucharest, Bucharest (Romania)  
 Technology of Ceramics and Refractory Materials / Electroceramics; Solid State Physical Chemistry / Phase Equilibria in Oxide Systems, Physical Chemistry of Non-crystalline Systems; Binders Technology, Operations and Equipments in Silicates and Oxide Compounds Industry

Sep. 1978 – July 1982 **High School Diploma**  
 High School no. 18 of Bucharest, Bucharest (Romania)  
 Mathematical Analysis, Algebra, Geometry, Physics (Thermodynamics, Mechanics, Electricity and Magnetism, Optics, Molecular and Nuclear Physics), Chemistry, (Inorganic Chemistry, Organic Chemistry, Physical Chemistry), Computer Sciences.

## PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C2	C2	C2	C2	C2
German	C1	C2	C2	C1	C1
English	C1	C1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
 Common European Framework of Reference for Languages

Communication skills Good communication skills gained through:

- attendance at courses in pedagogy (certificate no. 917 / 10,076 / 11.06.2003) at the "Politehnica" University of Bucharest;
- own experience gained through: (a) supporting teaching with pronounced interactive character; (b) directing students in projects / dissertation projects and (c) coordination graduates and doctors involved in post-doctoral studies.

Organisational / managerial skills

- **Member of the Council of the European Ceramics (<https://ecers.org/en/ec/council-members>) (2013 - present);**
- **Member of the International Committee of the Electroceramics Network; (<https://electroceramics.org/en/el/international-committee>) (2018- present);**
- **Full Editor of the ISI-quoted (Q1 quartile) journal *NANOMATERIALS* - MDPI; I.F. = 5.719) (<https://www.mdpi.com/journal/nanomaterials/editors>);**
- **Invited editor of the special issue: "*Ferrocic nanomaterials: from synthesis to applications*" of the ISI-quoted journal *NANOMATERIALS* ([https://www.mdpi.com/journal/nanomaterials/special\\_issues/Ferrocic\\_Nano](https://www.mdpi.com/journal/nanomaterials/special_issues/Ferrocic_Nano));**
- **Member of the International Advisory Committee of XVIII ECerS Conference, 2 - 6 July, 2023, Lyon, France (<https://www.ecers2023.org/en/committees/international-advisory-committee/12>);**
- **Member of the organizing team of Symposium 8: "Functional ceramics" of XVIII ECerS Conference, 2 - 6 July, 2023, Lyon, France.**
- **Member of the International Advisory Committee of Ceramics in Europe Conference (ICC9, XVII ECerS, XVIII Electroceramics), 10<sup>th</sup> - 14<sup>th</sup> July, 2022, Krakow, Poland;**

<https://www.ceramicsineurope2022.org/komitet>;

- Member of the Organizing / Scientific Committee of some international conferences: "Seventh International Conference on Frontiers of Polymers and Advanced Materials" ICFPAM, Bucharest June 10 - 15, 2003, as well as of several editions of the Romanian International Conference on Chemistry and Chemical Engineering (RICCCE), International Conference of Physical Chemistry - ROMPHYSICHEM and European Symposium on Thermal Analysis and Calorimetry - ESTAC;
- Coordinator / partner team leader (UPB) of 14 national projects (grants) and 5 international projects (grants), involving management activities and responsibility of teams of more than 12 peoples;
- Board Member of the Faculty of Engineering in Foreign Languages (2020 - present);
- Member of the National Council for Attesting University Diplomas, Degrees and Certificates (C.N.A.D.T.C.U.), Engineering Sciences Panel, Commission no. 8. Chemical engineering, medical engineering, materials science and nanomaterials (2016 - present);
- Chair of Analysis Committee for appeals against decisions of the National Council for Attesting University Titles, Diplomas and Certificates (C.N.A.D.T.C.U.) - Field: chemical engineering, medical engineering, materials science and nanomaterials (2012 - 2016);
- Member of the National Council for Attesting University Diplomas, Degrees and Certificates (C.N.A.D.T.C.U.), Engineering Sciences Panel, Commission of Materials Engineering & Nanotechnology (2011 – 2012);
- Member of the Board of the Doctoral School of the Faculty of Applied Chemistry and Materials Science from "Politehnica" University of Bucharest (2012 - present);
- Board Member of the Faculty of Applied Chemistry and Materials Science (2008 - 2016);
- Member of the Management Committee of the European Program COST MP0904;
- Coordinator of the research activity of the Technological Platform "Micro and Nanostructured Multifunctional Materials – 3MN" from "Politehnica" University of Bucharest;
- Coordinator of the Research Laboratory of Materials Shaping from "Politehnica" University of Bucharest;;
- Head of the Didactic & Research Laboratory "Technology of Ceramics & Refractory Products" of the Department of Science & Engineering of Oxide Materials and Nanomaterials, "Politehnica" University of Bucharest
- Member of the Board of the Department of Materials Science and Engineering of Oxide Materials and Nanomaterials (2008 - 2012).

Area of expertise and  
job-related skills

A. Areas of expertise and research directions:

**(a) Basic research:** (1) Formation mechanisms, self-assembly phenomena and phase relations in oxide systems; (2) Correlations compositions – crystal structure – microstructure – properties in oxide systems; (3) Size-effects in oxide systems: new functionalities by modifying structuring from micro- toward nano-scale;

**(b) Applied research:** (1) Electroceramics: unitary materials and composites (ferroelectrics, multiferroics, pyro/piezoelectrics, dielectrics, relaxor, semiconductors, fast ion conductors, superconductors) – preparation, morpho-structural and functional characterization; (2) Oxide materials with restrictive geometries: homogeneous nanopowders, core-shell particles and superparticles, 1D nanostructures (nanowires / nanotubes, nanoshell tubes, thin films / superlattices / heterostructures, nanostructured ceramics, nanocomposites); (3) Oxide catalysts; (4) Oxide biomaterials; (5) Ceramic pigments.

B. Job-related skills:

- Synthesis by wet chemical methods of oxide nanopowders (sol-gel techniques, Pechini procedure, hydrothermal method, co-precipitation) and 1D nanostructures: wires, nanotubes and nanoshell tubes (template-mediated colloidal chemistry);
- Elaboration of oxide thin and thick films (chemical solution deposition, rf-magnetron sputtering, Pulsed Laser Deposition and tape casting);
- Skills acquired in handling and operation with a high performance spark plasma sintering (SPS)

equipment in order to obtain nanostructured ceramics and composites;

- In the laboratories afferent to the Technology Platform 3MN (Micro and Nanostructured Multifunctional Materials) I acquired knowledge in using the following experimental techniques: electron microscopy (FE-SEM, TEM / HRTEM / SAED), AFM / PFM / MFM, FT-IR and Raman spectroscopy, impedance spectroscopy, X-ray diffraction, thermal analysis methods.

#### Digital competence

- A good knowledge of Microsoft Office™ tools (Word, Excel, PowerPoint, Publisher, Access, Teams);
- Operating with image processing computer programs (Adobe Photoshop CS, Adobe Acrobat, Acrobat Reader DC, ImageJ);
- Operating with data processing computer programs (Origin 9.0);
- Operating with professional programs and databases (CrystalMaker, Match, Carine V.3., Keramos, CrystalMaker, Pcpdfwin, Phase Equilibria Diagrams 3.1).

#### Personal skills

Pedagogy (certificate no. 917 / 10.076 / 11.06.2003)

#### Hobbies

Reading, travelling, music (singing), painting, swimming

### ADDITIONAL INFORMATION

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#### Publications

- **200** scientific papers published in: (a) ISI-quoted journals (126); (b) journals indexed in international databases (29); (c) national journals (2); (d) proceedings of international scientific conferences (24) and (e) volumes of national scientific conferences (19) ; Most of the articles were published in ISI-quoted journals in prestigious foreign publishing houses: ACS, RCS, Wiley, Elsevier, Springer, AIP, IOP Science, Taylor & Francis; 95% of the scientific papers published between 2010 - 2020 are placed in Q1 (70%) and Q2 (25%) quartiles.

- **Number of citations: 3099 citations (Scopus); 2901 (ISI Web of Science); 3757 (Google Scholar);**

- **Hirsch citation index, H = 34 (Scopus); H = 33 (ISI Web of Science); H = 37 (Google Scholar);**

- 8 books: The monograph "Ba(Ti,Zr)O<sub>3</sub> - Functional Materials: From Nanopowders to Bulk Ceramics", authors: **Adelina Ianculescu**, Liliana Mitoşeriu published in NovaScience Publishers Inc, Hauppauge New York USA, 2010, ISBN-10: 1616687525; ISBN-13: 978-1-61761-779-9, was acquired by **998 libraries** belonging to prestigious universities and colleges from USA, Canada, Australia, New Zealand, India, China, Hong Kong, Taiwan, Singapore, Korea, South Africa, UK, France, Germany, Italy, Sweden, Denmark, Norway, Netherlands, Russia, Poland, Hungary, Slovenia, Turkey, Greece, Cyprus, Mexico, Brazil, Columbia, etc., according to the website: <http://www.worldcat.org/>;

- 12 book chapters: 11 book chapters published in prestigious publishing houses abroad: Elsevier - UK (3), Wiley - USA (1), NovaScience - USA (2), InTech - Croatia (1), MDPI - Switzerland - 1; Transworld Research Network - India (3) and 1 chapter in a national publishing house (Printech);

- 10 national patents granted (OSIM) and 2 national patent applications;

#### Conferences / Invited talks

417 contributions as first author or co-author of national and international scientific meetings (plenary lectures / keynote lectures / invited talks, oral presentations and poster presentations).;

- 22 plenary / key note / invited lectures presented at scientific events (congresses, conferences, symposia, seminars, workshops, etc.), national and international;

- 6 invited lectures / 12 invited courses abroad (University Paul Sabatier III of Toulouse and University of Limoges, France, 2001 - 2005);

- 2 invited lectures Romanian universities (University Alexandru Ioan Cuza of Iaşi, Romania, 2008).

#### Projects

- 19 academic grants as project leader or UPB project coordinator (including 5 international grants) obtained through competition;

- Project leader / team member in 4 Socrates - Erasmus projects with University of Limoges, France;

- 26 research projects as a mentor / team member (including 2 international projects) obtained through competition.

## Honours and awards

- Award "I. G. Murgulescu" of the Romanian Academy - awarded in 2003 for the works in the topic "Correlations formation mechanism - structural characteristics in perovskite-based oxide materials";
- Award LOT Oriol & Hamamatsu (Hamamatsu Award) for the work "*Functional properties of the (1-x) BiFeO<sub>3</sub> - xBaTiO<sub>3</sub> solid solutions*" presented at the 9th European Conference on Applications of Polar Dielectrics, Rome (Italy), 26 to 29 August 2008;
- Certificates "Dyes and Pigments - Top Cited Papers for 2010 and 2011" (Elsevier New York, USA), for the group of authors: D. Visinescu, C. Paraschiv, Ianculescu A., B. Jurca, Basil B., O. Carp for the work: "*The environmentally benign synthesis of nanosized Co<sub>x</sub>Zn<sub>1-x</sub>Al<sub>2</sub>O<sub>4</sub> blue pigments*" published in Dyes and Pigments (Elsevier), 87 [2], 2010, 125-131.

## Review activity

1. Member of the jury of the "Student Speech Contest" held at each edition of the Conference of the European Ceramics Society (representative evaluator of Romania);
2. Member of the evaluation committee for the competition aiming to occupy the position of head of the Council for Doctoral Studies (CSUD) within the Organizing Institution for Doctoral Studies "Politehnica" University of Timișoara (Romania);
3. Reviewer within the programs NUCLEU, CEEX, PNII, PNIII, CNCSIS, RELANSIN, MATNANTECH and grants of the Romanian Academy (Member in the National Register of Experts);
4. POSDRU trainer and expert;
5. Member of evaluation / appeal commissions for promotion, both in teaching positions at the Faculty of Applied Chemistry and Materials Science from Polytechnics University of Bucharest, Al. I. Cuza University of Iași, Polytechnics University of Timișoara, Babeș-Bolyai University of Cluj-Napoca, Technical University of Cluj-Napoca, as well as in research positions at ICPE-CA Bucharest (2009; 2015, 2021), at the Institute of Physical Chemistry "Ilie Murgulescu" of the Romanian Academy (2013, 2017, 2022) and the National Research-Development Institute for Materials Physics (2017 - 2022);
6. Reviewer for:
  - 19 ISI-quoted journals (15 ISI-quoted journals from abroad and 4 ISI-quoted national journals): Journal of the American Ceramic Society – *Wiley*; Journal of the European Ceramic Society – *Elsevier*; Journal of Thermal Analysis and Calorimetry – *Springer*; Optical Materials – *Elsevier*; Applied Surface Science – *Elsevier*; Materials Science & Engineering B – *Elsevier*; Journal of Alloys and Compounds – *Elsevier*; Ceramic International – *Elsevier*; Thin Solid Films – *Elsevier*; Chemical Physics Letters – *Elsevier*; Journal of Applied Physics – *AIP (American Institute of Physics)*; Journal of Nanoparticles Research – *Springer*; Materials & Design – *Elsevier*; Nanomaterials – *MDPI*; Processing and Application of Ceramics – Serbia; Journal of Optoelectronic and Advanced Materials; Revue Roumaine de Chimie, Revista Română de Materiale (Romanian Journal of Materials); Scientific Bulletin-University "Politehnica" of Bucharest (series B Chemistry and Materials Science);
  - 4 Habilitation theses;
  - 32 PhD theses, one of them defended abroad, at University of Limoges, France;
  - 4 books / monographs.

## Member of Scientific Societies

- 1993 - present: European Ceramic Society;
- 1993 - present: Romanian Ceramic Society;
- 1998 - present: Romanian Chemistry Society;
- 2000 - present: Romanian Society of Advanced Materials;
- 2008 - present: International Confederation for Thermal Analysis and Calorimetry;
- 2011 – present: European Society of Electron Microscopy;
- 2011 - present: Romanian Electron Microscopy Society (REMS);
- 2013 - present: Council of the European Ceramic Society;
- 2019 - present: International Committee of the Electroceramics Network.