

Curriculum Vitae



Surname/First

irst | Cazacu Maria

name Address

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Nationality

Romanian

Date/place of birth

January 26, 1956 in Tiganasi - Iasi, Romania

Education

Ph.D. (April 1996), Romanian Academy, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania; topic: Synthesis of the siloxane polymers and copolymers by heterogeneous catalysis.

B.S. (July 1981), Department of Macromolecular Compounds Technology, Faculty of Industrial Chemistry, "Gh. Asachi", Polytechnic Institute of Iasi, Romania.

Professional Experience

1997-present: "Petru Poni" Institute of Macromolecular Chemistry, Inorganic Polymers Department, Iasi - Senior Researcher, Team Leader, PhD promoter;

1990-1997: "Petru Poni" Institute of Macromolecular Chemistry, Inorganic Polymers Department, Iasi – Researcher;

1989-1990: "Petru Poni" Institute of Macromolecular Chemistry, Inorganic Polymers Department, Iasi – Engineer;

1981-1989: "FIRMELBO" Spinning Mill - Botosani, Romania: Probationer Engineer, Team Leader, Quality Technologist.

Present Position

Senior researcher (CSI), Head of Department of Inorganic Polymers, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, PhD supervisor.

Publications

242 scientific articles (233 in journals with impact index), an author book, two editor books and eight book chapters, eight invention patents (one international *a European patent* and five Romanian patents).

Scientometric indicators

2109 citations, h-index=23 (Web of Science, 233 documents); 2610 citations, h-index=26 (Google Scholar, 273 documents).

Awards, membership of professional organizations

- •The Romanian Academy Prize for Chemistry, "C. D. Nenitescu", 1996;
- •Gold Medal at International Exhibition of Inventions Scientific Research and New Technologies, Inventika 2009, 13th edition, Octomber 2009, Bucuresti, Romania for the Patent "Polymer-based microactuator";
- •Gold Medal at Innovation National Exhibition CHIM-INVENT, 20-22 October, 2005, lasi, Romania;
- •Diploma and Medal "Petru Poni" at National Salon of Inventions CHIMINVENT 2013, Iasi, Romania;
- •Diploma and Medal "CHIMINVENT" Salon of Inventions National CHIMINVENT 2013, lasi, Romania;
- •Gold Medal at The 22nd International Exhibition of Inventics "INVENTICA 2018",

lasi, June 27-29, 2018;

"Petru Poni" Medal and the Diploma of Honor for outstanding contributions to the promotion of chemistry awarded by the Romanian Chemistry Society, July 2019. 2000 - present, member of the Romanian Chemical Society.

Areas of interest

- •Polymers and polymeric materials: polymers and copolymers (synthesis, characterization, processing, chemical modification); organic/inorganic hybrid materials; networks and composites; nanostructured polymeric materials;
- •Metal-containing materials: clusters and metal oxide nanoparticles, coordination compounds/polymers and metal-organic frameworks;
- •Development, formulation and optimization of dielectric elastomers, especially on the basis of inorganic polymers, and evaluating the operation performance of the electromechanical transducers (actuators and power generators) as well as the sensors built on them;
- •Interdisciplinary fields ranging between polymer chemistry and physic, medicine, electrochemistry, catalysis, magnetism, environmental protection, medicine, biology, electronics, construction, energy, etc.

Professional skills

- •Polymerization techniques: ionic, radicalic, ring-opening polymerization, polycoordination, polycondensation, sol-gel;
- Synthesis of siloxane monomers, polymers and copolymers by various procedures;
- Processing of the silicone polymers as rubbers, oils, adhesives;
- Modifying of the silicones;
- •Preparing of the polymeric materials for applications in various fields: dentistry, textiles, leather, electronic, construction, energy;
- •Preparation of organic-inorganic copolymers; segmented and graft copolymers having various internal functions (ester, ether, amide, imide, anhydride, azomethine, azo) able to develop biphasic morphology, photochemical, surface, liquid crystalline, controlled degradability properties;
- Preparation of coordination compounds and metal-organic frameworks.
- Preparation of organic/inorganic hybrid materials (composites, networks, hybrids).

Language

Mother tongue: Romanian; Other languages: English, Russian

Organisational skills and competences

Project management;

Coordination of the scientific activities for a research team (8-14 members) in the period 1996-present; Head of Department of Inorganic Polymers since 2014.

Involvement in research projects

34 projects:

- •11 projects as project coordinator (between them a project financed by European Regional Development Fund);
- •9 projects as partner team leader (between them a European FP7 project and a COST project National leader, member in management committee for COST Action MP1003 European Scientific Network for Artificial Muscle, ESNAM);
- •the other as member;
- •Seven applicative research projects (team member).

The main research grants:

- •Metal-organic networks with finely controlled hydrophobicity using silicone chemistry, SiMOFs, Research project: PN-III-P4-ID-PCE-2016-0642 (114/2017/ 2017-2019);
- •Silicone-based energy conversion units built up by green chemistry, Experimental demonstration project, GrEENergy, PN-III-P2-2.1-PED-2016-0188 (68PED / 2017, 2017-2018);
- •New coordination networks containing polyfunctional flexible bridges, Exploratory Research Projects PN-II-ID-PCE-2012-4, Contract 53/2.09.2013, 2013-2016;
- •Collaborative project FP7-Energy-2012-1-2STAGE, New mechanisms and concepts for exploiting electroactive Polymers for Wave Energy Conversion, PolyWEC, GA 309139, 2012-2016;
- •Synthesis and study of the polymeric metallosiloxanes new materials for catalysis and nanosciences (POLISILMET), SOP IEC-A2-O2.1.2-2009-2, ID 570;
- •Multifunctional nanostructured silicone materials (NANOSIMAT), Contract CEEX-MATNANTECH 52/2006 (2006-2008).

Other activities

Peer-review activity for national (UEFISCDI) and international (INTAS, ERA.NET RUS, National Science Centre - Poland, Czech Science Foundation) programs/projects;

Peer-review activity for scientific journals (more than 150 articles reviewed in the last 10 years);

Member of the Examination Board for 16 doctoral theses;

Member of the Academic Advisory Commission for the North-East Regional Development Agency;

Member CNATDCU in section: Chemical engineering, medical engineering, materials science and nanomaterials in 2016-2020 mandate.

April 10, 2020

