

Team leader of P4 team: [CS I Dr. Maria CAZACU](#)

Positions: **2014 – present:** **Head of Inorganic Polymers Department**, "Petru Poni" Institute of Macromolecular Chemistry (PPIMC); **2010 – present:** **PhD supervisor**, PPIMC; **2007 - present:** **Principal scientist** CSI, PPIMC; **1989 – 1997:** **Researcher**, PPIMC; **1981-1989:** Quality control engineer, Firmelbo Spinning Mill, Botosani

Education: **1996:** **PhD in Chemistry**, topic: synthesis of the siloxane polymers and copolymers by heterogeneous catalysis, Romanian Academy, PPIMC; **1981:** **B.S.** Macromolecular Compounds Technology, Polytechnic Institute of Iasi, Romania

Awards: **2013:** Diploma, Medal "Petru Poni", Diploma and Medal "CHIMINVENT" at National Salon of Inventions, Iasi, Romania; **2009:** Gold medal at International Exhibition of Inventions Scientific Research and New Technologies, Inventika, Bucuresti, Romania for the Patent "Polymer-based microactuator"; **1996:** Romanian Academy Prize for chemistry "Costin D. Nenitescu";

Evaluator: for national (UEFISCDI)/ international (INTAS, ERA.NET RUS, NSC-Poland, Czech-SF) program/projects

Expertise fields: macromolecular chemistry, silicone chemistry, ligands

Research contracts: **36:** **11** as **project coordinator** (of which a project financed by European Regional Development Fund - 1,500,000 EUR, two bilateral projects with Austria and Moldova), **7** as **team leader** (of which an ongoing European FP7 collaborative project and a COST project - Action MP1003 ESNAM, as national leader, member in management committee), **18** as **member**

Scientific results were published in **more than 200 scientific papers** in international journals indexed WoS (40 Q1 journals, 70 Q2 journals), **3 books**, **6 book chapters**, presented at **10 international conferences**. The international recognition in the field is reflected by: **Hirsch factor** (WoS): **20**, **Number of citation** (WoS, independent citations): **1000+**.

Scientific achievements were focused on **silicone chemistry** where I had made several contributions regarding the **silicones synthesis processes** and getting **new compounds and materials** based on these (**M. Cazacu** et. al., *J. Organomet. Chem.* 689(19), 2004 – 43 independent citations; **M. Cazacu**, et. al., *Macromolecules*, 39(11), 2006 - 20 independent citations). Research has been conducted for approaching on this background new research directions, of high challenging and/or interest, including: **original ligands** with highly flexible and hydrophobic siloxane skeleton and coordination structures built on them (discrete molecules or 1D, 2D and 3D structures, especially metal-organic frameworks - MOFs) with high catalytic and biological activity, luminescence, gas sorption capacity, etc.; dielectric silicone elastomers for "**artificial muscles**" a new research direction recently launched worldwide, with good results in actuation and energy harvesting (30 articles in Q1 and Q2 journals in this field and two invention patents since 2009; e.g., C. Racles, **M. Cazacu** et. al, *Smart Mater. Struct.* 22(10), 2013 – **21 independent citations**).