



Dr. CS. III. Mihaela SIMIONESCU

Inorganic Polymers Department
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CURRENT POSITION Scientist

EDUCATION

B.S., “Gh. Asachi” Tech. Univ., Chem. Eng., Macromol. Chem. **1991**

Ph.D. in Chemistry and Technology of Polymers, **2003**
“Petru Poni” Institute of Macromolecular Chemistry Iasi,
“Gh. Asachi” Technical University Iasi

AWARDS

Romanian Academy Award “Nicolae Teclu” 2005:
“Organosilicon Polymers with Unconventional Architectures. Methods and Applications”

PROFESSIONAL DEVELOPMENT

Polymer synthesis and properties

Polysiloxanes synthesis **1999**
Russian Academy of Sciences
Nesmeianov Institute of Inorganic Polymers

Structural characterization of polymers

QCM analysis. Theory and method **2012**
University of Maribor, Slovenia

Research interests

- Organic synthesis using microwaves and ultrasound irradiation
- Synthesis of polysilanes by non-conventional methods
- Polysiloxane copolymers with dipolar molecular segments
- Synthesis of polysiloxane-imides with piezoelectric response
- Polysilane-based materials with applications in optics
- Piezoelectric polymeric composites and semiconductors
- Interactions between sigma-conjugated polymers
- Hyperconjugated supramolecular structures
- Polymers for energy storage

Representative publications

- Synthesis of polysilane–bis(salicyliden)ethylenediamine Ni(II) complex, G. Sacarescu, R. Ardeleanu, L. Sacarescu, M. Simionescu, *J. Organomet. Chem.*, 2003.
- Microwave-Assisted Synthesis of Functional Polysilanes, M. Simionescu, L. Sacarescu, G. Sacarescu, *Designed Monomers & Polymers*, 2012.
- Fluorescence detection system based on silicon quantum dots–polysilane nanocomposites, L. Săcărescu, G. Roman, G. Săcărescu, M. Simionescu, *EXPRESS Polym. Lett.*, 2016.
- Dual-emissive polydiphenylsilane nanocomposite: Effect of N,N'-bis(4-hydroxysalicylidene)-1,2-phenylenediamine-Zn complex, L. Săcărescu, C. Cojocaru, R. Ardeleanu, M. Fortuna, G. Săcărescu, M. Simionescu, *Polym. Adv. Technol.*, 2016.
- Polyhydrosilane mediated synthesis of one-dimensional gold nanostructures, L. Săcărescu, M. Simionescu, G. Săcărescu, V. Harabagiu, *J. Inorg. Organomet. Polym. Mater.*, 2013.
- Bichromophoric pyrazoline derivative with solvent-selective photoluminescence quenching, A. L. Chibac, G. Roman, C. Cojocaru, S. Shova, G. Sacarescu, M. Simionescu, L. Sacarescu, *J. Mol. Liq.*, 2019.