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# Curriculum Vitae

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| **Surname/First name** | **Cazacu Maria** |
| **Address** | Str. Sararie nr. 6, Bl. 6, Sc. B, Et. 2, Ap. 6, 700079, Romania |
| **Telephone** | +40-232-265929 |
| **E-mail** | mcazacu@icmpp.ro; mmcazacu@yahoo.com |
| **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.<br>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, Head of Department, PhD promoter;<br>1990-1997: "Petru Poni" Institute of Macromolecular Chemistry, Inorganic Polymers Department, Iasi – Researcher;<br>1989-1990: "Petru Poni" Institute of Macromolecular Chemistry, Inorganic Polymers Department, Iasi – Engineer;<br>1981-1989: "FIRMELBO" Spinning Mill - Botosani, Romania: Probationer Engineer, Team Leader, Quality Technologist. |
| **Present Position** | Senior researcher (CSI), Head of Inorganic Polymers Department, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, PhD promoter. |
| **Publications** | 212 scientific articles in journals with impact index, an author book, two editor books and six book chapters, six invention patents (*an international patent* and five Romanian patents). |
| **Scientometric indicators** | 1631 citations (1102 without self-citations), h-index=20 (Web of Science); |
| **Awards, membership in professional organizations** | •The Romanian Academy Prize for Chemistry, "C. D. Nenitescu", 1996;<br>•Gold Medal at International Exhibition of Inventions Scientific Research and New Technologies, Inventika 2009, 13th edition, Octomber 2009, Bucuresti Romania<br>•Gold Medal at Innovation National Exhibition CHIM-INVENT, 20-22 October, 2005, Iasi, Romania;<br>•Diploma and Medal "Petru Poni" at National Salon of Inventions CHIMINVENT 2013, Iasi, Romania;<br>•Diploma and Medal "CHIMINVENT" Salon of Inventions National CHIMINVENT 2013, Iasi, Romania.<br>2000 - present, member of the Romanian Chemical Society. |
| **Areas of interest** | •Polymers and polymeric materials: siloxane-based polymers and copolymers (synthesis, characterization, processing, chemical modification); organic/inorganic hybrid materials; networks and composites; nanostructured polymeric materials;<br>•Metal-containing materials: clusters and metal oxide nanoparticles, coordination compounds and metal-organic frameworks;<br>•Interdisciplinary fields ranging between polymer chemistry and physic, medicine, electrochemistry, catalysis, magnetism, environmental protection, medicine, biology, electronics, construction, energy, etc. |

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| **Professional skills** | •Polymerization techniques: ionic, radicalic, ring-opening polymerization, polycoordination, polycondensation, sol-gel;<br>•Synthesis of siloxane monomers, polymers and copolymers by various procedures;<br>•Processing of the silicone polymers as rubbers, oils, adhesives;<br>•Modifying of the silicones;<br>•Preparing of the polymeric materials for applications in various fields: dentistry, textiles, leather, electronic, construction, energy;<br>•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;<br>•Preparation of coordination compounds and metal-organic frameworks.<br>•Preparation of organic/inorganic hybrid materials (composites, networks, hybrids). |
| **Language** | Mother tongue: Romanian; Other languages: English, Russian |
| **Organisational skills and competences** | Project management;<br>Coordination of the scientific activities for a research team in the period 1996-present; Head of Inorganic Polymers Department since 2014. |
| **Involvement in research projects** | **36 projects**:<br>•11 projects as project coordinator (between them a project financed by European Regional Development Fund);<br>•7 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);<br>•the other as member;<br>•seven applicative research projects (team member).<br>The main research grant:<br>•Silicone-based energy conversion units built up by green chemistry, Experimental demonstration project, PN-III-P2-2.1-PED-2016-0188/CNCS/CCCDI-UEFISCDI (Grant 68PED/ 2017).<br>•Multifunctional Spin Crossover Materials, Proiect H2020-MSCA-RISE-2016/H2020-MSCA-RISE-2016, SPINSWICH (Cod Proiect: 734322), 2016-2019.<br>•New coordination networks containing polyfunctional flexible bridges, Exploratory Research Projects - PN-II-ID-PCE-2012-4, Contract 53/2.09.2013, 2013-2016;<br>•Collaborative project FP7-Energy-2012-1-2STAGE, New mechanisms and concepts for exploiting electroactive Polymers for Wave Energy Conversion, PolyWEC, GA 309139, 2012-2016;<br>•Synthesis and study of the polymeric metallosiloxanes – new materials for catalysis and nanosciences (POLISILMET), SOP IEC-A2-O2.1.2-2009-2, ID 570;<br>•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;<br>Peer-review activity for scientific journals (more than 130 articles reviewed in the last 10 years);<br>Member of the Examination Board for 17 doctoral and two habilitation theses. |

June 26, 2017

**List of publications and patents (selective):**

**Books**

1. Cazacu, M. (Ed.) "*Recent Developments in Silicone-Based Materials*" Nova Science Publishers, New York, **ISBN:** 978-1-61668-624-6, **2010**.
2. Cazacu, M. (Ed.) "*Advances in Functional Heterochain Polymers*", Nova Science Publishers, New York, **ISBN:** 978-1-60456-598-0, **2008**.
3. Cazacu, M., Racles, C., "*Materiale siliconice. Obtinere, proprietati si aplicatii*", Editura Performantica, Iasi, **ISBN:** 973-730-207-9, **2006**.

**Book chapters:**

1. Cazacu M. "*Possibilities to Develop Functional Materials on Silicone/Silica Backbones*" in "*Recent Developments in Silicone-Based Materials*" Nova Science Publishers, New York, **ISBN:** 978-1-61668-624-6, **2010**.
2. Cazacu M. "Polymers containing Si, O and other elements within backbone" in *Advances in Functional Heterochain Polymers,* Cazacu M.-Ed., Nova Science Publishers, New York, **ISBN:** 978-1-60456-598-0, **2008**.
3. Cazacu, M. "*Siloxane based Polymeric* Structures containing Complexed Metals" in "*Advances in Organometallic Chemistry Research"*, Yamamoto K. -Ed., Nova Science Publishers, **ISBN:** 1-60021-779-6m, 227-256, **2007**.
4. Dragan, E.S., Cazacu, M. "*Ionic hybrid hydrogels*" in "*New Trends in Ionic (Co)Polymers and Hybrids"*, Dragan E.S. -Ed., Nova Science Publishers, **ISBN:** 1-60021-611-0, 145-164, **2007**.
5. Cazacu, M., Racles, C., "*Recent developments in siloxane-based polymers and copolymers*" in "*New Trends in Nonionic (Co)polymers and Hybrids*", Dragan S. -Ed., Nova Science Publishers, **ISBN:** 1-60021-051-1, 167-213, **2006.**
6. Cazacu, M., "*Polysiloxanes bearing ionic groups*" in "*Focus on Ionic Polymers*, Dragan S. -Ed., Research Signpost, **ISBN:** 81-7736-285-2, 261-292, **2005**.

**Granted patents, national and/or international**

1.Lazarescu, S., Marcu, M., Cazacu, M., Bolohan, St., Peroxid de di-tert-butil conditionat sub forma de pasta, *Brevet de Inventie nr. 106569 $B_1$* ***1993***
2. Marcu, M., Cazacu, M., Lazarescu, S., Matricala, C., Simionescu, M., Bolohan, St., Procedure to obtain tetramethyltetravinylcyclotetrasiloxane, *Patent Romania 114329/***1999**.
3.Cazacu, M., Marcu, M., Vlad, A., Procedure to obtain diphenylsilanediol in heterogeneous catalysis with anion exchangers , *Patent Romania 122779/29.01.***2010.**
4. Ignat, M., Zarnescu, G., Hamciuc, E., Hamciuc, C., Cazacu, M., Sava, I.,
Microactuator based on polymer Brevet RO 127096 A2/**2012**
5.Cazacu, M., Stiubianu, G., Procedure to prepare room temperature vulcanization silicone rubber filled with lignin, *Brevet de Inventie nr. cu numărul 00126477/**2013**.*
6. Opris Dorina Maria [CH]; Dünki Simon [CH]; Racles Carmen [RO]; Bele Adrian [RO]; Cazacu Maria [RO], High permittivity polymers based on functionalized silicones, Zusammenfassung von WO2015/135086 (A1), **2015.**

## Articles selected from the last five years


[1] Iacob M, Bele A, Airinei A, Cazacu M. The effects of incorporating fluorinated polyhedral oligomeric silsesquioxane, [F3C(CH2)2SiO1.5]n on the properties of the silicones. **Colloids Surfaces A Physicochem Eng Asp 2017**;522:66–73. doi:10.1016/j.colsurfa.2017.02.045.

[2] Zaltariov MF, Hammerstad M, Arabshahi HJ, Jovanović K, Richter KW, Cazacu M, et al. New Iminodiacetate-Thiosemicarbazone Hybrids and Their Copper(II) Complexes Are Potential Ribonucleotide Reductase R2 Inhibitors with High Antiproliferative Activity. **Inorg Chem 2017**;56. doi:10.1021/acs.inorgchem.6b03178.

[3] Racles C, Dascalu M, Bele A, Tiron V, Asandulesa M, Tugui C, et al. All-silicone elastic composites with counter-intuitive piezoelectric response, designed for electromechanical applications. **J Mater Chem C 2017**. doi:10.1039/C7TC02201H.

[4] Shova S, Cazacu M, Novitchi G, Zoppellaro G, Train C, Arion VB. An iron(iii)-centred ferric wheel Fe⊂{Fe6} with a siloxane-based bis-salicylidene Schiff base. Dalt Trans 2017;46:1789–93. doi:10.1039/c7dt00141j.

[5] Tugui C, Bele A, Tiron V, Hamciuc E, Varganici CD, Cazacu M. Dielectric elastomers with dual piezo-electrostatic response optimized through chemical design for electromechanical transducers. **J Mater Chem C 2017**;5:824–34. doi:10.1039/c6tc05193f.

[6] Lazar MM, Varganici C, Cazacu M, Dragan ES. Cationic hybrids from poly(N,N-dimethylaminoethyl methacrylate) covalently crosslinked with chloroalkyl silicone derivatives effective in binding anionic dyes. **J Appl Polym Sci 2016**;133. doi:10.1002/app.43942.

[7] Zaltariov M-F, Cojocaru C, Shova S, Sacarescu L, Cazacu M. Synthesis, structural characterization and quantum chemical studies of silicon-containing benzoic acid derivatives. **J Mol Struct 2016**;1120:302–16. doi:10.1016/j.molstruc.2016.05.038.

[8] Bele A, Dascalu M, Tugui C, Iacob M, Racles C, Sacarescu L, et al. Cazacu M. Dielectric silicone elastomers filled with in situ generated polar silsesquioxanes: Preparation, characterization and evaluation of electromechanical performance. **Mater Des 2016**;106. doi:10.1016/j.matdes.2016.06.010.

[9] Racles C, Ignat M, Bele A, Dascalu M, Lipcinski D, Cazacu M. Silicone-based elastic composites able to generate energy on micromechanical impulse. **Smart Mater Struct 2016**;25. doi:10.1088/0964-1726/25/8/085024.

[10] Ştiubianu G, Soroceanu A, Varganici C-D, Tugui C, Cazacu M. Dielectric elastomers based on silicones filled with transitional metal complexes. **Compos Part B Eng 2016**;93. doi:10.1016/j.compositesb.2016.03.005.

[11] Soroceanu A, Vacareanu L, Vornicu N, Cazacu M, Rudic V, Croitori T. Assessment of some application potentials for copper complexes of the ligands containing siloxane moiety: Antimicrobial, antifungal, antioxidant and redox activity. **Inorganica Chim Acta 2016**;442:119–23. doi:10.1016/j.ica.2015.12.006.

[12] Iacob M, Racles C, Tugui C, Stiubianu G, Bele A, Sacarescu L, et al. From iron coordination compounds to metal oxide nanoparticles. **Beilstein J Nanotechnol 2016**;7. doi:10.3762/BJNANO.7.198.

[13] Tugui C, Vlad S, Iacob M, Varganici CD, Pricop L, Cazacu M, et al. Interpenetrating poly(urethane-urea)–polydimethylsiloxane networks designed as active elements in electromechanical transducers. **Polym Chem 2016**;7:2709–19. doi:10.1039/C6PY00157B.

[14] Bele A, Stiubianu G, Vlad S, Tugui C, Varganici CD, Matricala L, et al. Cazacu M. Aging behavior of the silicone dielectric elastomers in a simulated marine environment. **RSC Adv 2016**;6:8941–55. doi:10.1039/C5RA22780A.

[15] Vlad A, Zaltariov M-F, Shova S, Novitchi G, Train C, Cazacu M. Metal–organic frameworks based on tri- and penta-nuclear manganese( ii ) secondary building units self-assembled by a V-shaped silicon-containing dicarboxylate. **RSC Adv 2016**;6:37412–23. doi:10.1039/C6RA03969C.

[16] Soroceanu A, Cazacu M, Racles C, Stoica I, Sacarescu L, Varganici C-D. Supramolecular Aggregation in Organic Solvents of Discrete Copper Complexes Formed with Organosiloxane Ligands. **Soft Mater 2015**;13:93–105. doi:10.1080/1539445X.2015.1009551.

[17] Iacob M, Stiubianu G, Tugui C, Ursu L, Ignat M, Turta C, et al. Goethite nanorods as a cheap and effective filler for siloxane nanocomposite elastomers. **RSC Adv 2015**;5:45439–45. doi:10.1039/C5RA03765D.

[18] Racles C, Bele A, Dascalu M, Musteata VE, Varganici CD, Ionita D, et al. Cazacu M. Polar–nonpolar interconnected elastic networks with increased permittivity and high breakdown fields for dielectric elastomer transducers. **RSC Adv 2015**;5:58428–38. doi:10.1039/C5RA06865G.

[19] Iacob M, Sirbu D, Tugui C, Stiubianu G, Sacarescu L, Cozan V, et al. Cazacu M. Superparamagnetic amorphous iron oxide nanowires self-assembled into ordered layered structures. **RSC Adv 2015**;5:62563–70. doi:10.1039/C5RA10469F.

[20] Tugui C, Stiubianu G, Iacob M, Ursu C, Bele A, Vlad S, et al. Cazacu M. Bimodal silicone interpenetrating networks sequentially built as electroactive dielectric elastomers. **J Mater Chem C 2015;**3:8963–9. doi:10.1039/C5TC01391G.

[21] Dascalu M, Musteata VE, Vacareanu L, Racles C, Cazacu M. Synthesis and characterization of metal-containing poly(siloxane-urethane) crosslinked structures derived from siloxane diols and ferrocene diisocyanate. **RSC Adv 2015**;5:99193–200. doi:10.1039/C5RA15290A.

[22] Zaltariov M-F, Cazacu M, Racles C, Musteata V, Vlad A, Airinei A. Metallopolymers based on a polyazomethine ligand containing rigid oxadiazole and flexible tetramethyldisiloxane units. **J Appl Polym Sci 2014**;132:n/a-n/a. doi:10.1002/app.41631.

[23] Iacob M, Cazacu M, Turta C, Doroftei F, Botko M, Čižmár E, et al. Amorphous iron–chromium oxide nanoparticles with long-term stability. **Mater Res Bull 2015**. doi:10.1016/j.materresbull.2015.01.055.

[24] Cazacu M, Shova S, Soroceanu A, Machata P, Bucinsky L, Breza M, et al. Charge and Spin States in Schiff Base Metal Complexes with a Disiloxane Unit Exhibiting a Strong Noninnocent Ligand Character: Synthesis, Structure, Spectroelectrochemistry, and Theoretical Calculations. **Inorg Chem 2015**;54:5691–706. doi:10.1021/acs.inorgchem.5b00229.

[25] Bele A, Cazacu M, Racles C, Stiubianu G, Ovezea D, Ignat M. Tuning the Electromechanical Properties of Silicones by Crosslinking Agent. **Adv Eng Mater 2015**:n/a-n/a. doi:10.1002/adem.201400505.

[26] Bele A, Stiubianu G, Varganici C-D, Ignat M, Cazacu M. Silicone dielectric elastomers based on radical crosslinked high molecular weight polydimethylsiloxane co-filled with silica and barium titanate. **J Mater Sci 2015**;50:6822–32. doi:10.1007/s10853-015-9239-y.

[27] Zaltariov M-F, Cazacu M, Avadanei M, Shova S, Balan M, Vornicu N, et al. Synthesis, characterization and antimicrobial activity of new Cu(II) and Zn(II) complexes with Schiff bases derived from trimethylsilyl-propyl-p-aminobenzoate. **Polyhedron 2015**;100:121–31. doi:10.1016/j.poly.2015.07.030.

[28] Dascalu M, Balan M, Shova S, Racles C, Cazacu M. Design and synthesis of the first ferrocenylsiloxane urea: Structure and properties. **Polyhedron 2015**;102:583–92. doi:10.1016/j.poly.2015.11.013.

[29] Dumitriu A-C, Cazacu M, Bargan A, Balan M, Vornicu N, Varganici C-D, et al. Cazacu M. Full functionalized silica nanostructure with well-defined size and functionality: Octakis(3-mercaptopropyl)octasilsesquioxane. **J Organomet Chem 2015**;799–800:195–200. doi:10.1016/j.jorganchem.2015.09.025.

[30] Nedelcu GG, Nastro A, Filippelli L, Cazacu M, Iacob M, Rossi CO, et al. Structural characterization of copolymer embedded magnetic nanoparticles. **Appl Surf Sci 2015**;352:109–16. doi:10.1016/j.apsusc.2015.04.191.

[31] Tugui C, Cazacu M, Sacarescu L, Bele A, Stiubianu G, Ursu C, et al. Full silicone interpenetrating bi-networks with different organic groups attached to the silicon atoms. **Polymer 2015**;77:312–22. doi:10.1016/j.polymer.2015.09.042.

[32] Zaltariov M-F, Vlad A, Cazacu M, Avadanei M, Vornicu N, Balan M, et al. Silicon-containing bis-azomethines: synthesis, structural characterization, evaluation of the photophysical properties and biological activity. **Spectrochim Acta A Mol Biomol Spectrosc 2015**;138:38–48. doi:10.1016/j.saa.2014.11.007.

[33] Bele A, Cazacu M, Stiubianu G, Vlad S, Ignat M. Polydimethylsiloxane–barium titanate composites: Preparation and evaluation of the morphology, moisture, thermal, mechanical and dielectric behavior. **Compos Part B Eng 2015**;68:237–45. doi:10.1016/j.compositesb.2014.08.050.

[34] Cazacu M, Vlad A, Zaltariov M-F, Shova S, Novitchi G, Train C. Di- and tetracarboxylic aromatic acids with silane spacers and their copper complexes: Synthesis, structural characterization and properties evaluation. **J Organomet Chem 2014**;774:70–8. doi:10.1016/j.jorganchem.2014.10.006.

[35] Zaltariov M-F, Cazacu M, Shova S, Varganici C-D, Vacareanu L, Musteata V, et al. A silicon-containing polyazomethine and derived metal complexes: synthesis, characterization, and evaluation of the properties. **Des Monomers Polym 2014**;17:668–83. doi:10.1080/15685551.2014.907623.

[36] Iacob M, Bele A, Patras X, Pasca S, Butnaru M, Alexandru M, et al. Cazacu M. Preparation of electromechanically active silicone composites and some evaluations of their suitability for biomedical applications. **Mater Sci Eng C 2014**. doi:10.1016/j.msec.2014.07.031.

[37] Rotaru I, Bujoreanu C, Bele A, Cazacu M, Olaru D. Experimental testing on free vibration behaviour for silicone rubbers proposed within lumbar disc prosthesis. **Mater Sci Eng C Mater Biol Appl 2014**;42:192–8. doi:10.1016/j.msec.2014.05.021.

[38] Zaltariov M-F, Vlad A, Cazacu M, Shova S, Balan M, Racles C. A Novel siloxane-containing dicarboxylic acid, 1,3-bis(p-carboxyphenylene-ester-methylene)tetramethyldisiloxane, and its derivatives: ester macrocycle and supramolecular structure with a copper complex. **Tetrahedron 2014**;70:2661–8. doi:10.1016/j.tet.2014.02.061.

[39] Racles C, Iacob M, Butnaru M, Sacarescu L, Cazacu M. Aqueous dispersion of metal oxide nanoparticles, using siloxane surfactants. **Colloids Surfaces A Physicochem Eng Asp 2014**;448:160–8. doi:10.1016/j.colsurfa.2014.02.029.

[40] Tagne Kuate AC, Alexandru M, Freytag M, Racles C, Cazacu M, Jones PG, et al. Siloxane-bridged [n]troticenophanes: Syntheses, structures and ring-opening reactions. **J Organomet Chem 2014**;751:628–37. doi:10.1016/j.jorganchem.2013.08.013.

[41] Iacob M, Cazacu M, Racles C, Ignat M, Cozan V, Sacarescu L, et al. Iron–chromium oxide nanoparticles self-assembling into smectic mesophases. **RSC Adv 2014**;4:6293. doi:10.1039/c3ra47072e.

[42] Racles C, Alexandru M, Bele A, Musteata VE, Cazacu M, Opris DM. Chemical modification of polysiloxanes with polar pendant groups by co-hydrosilylation. **RSC Adv 2014**;4:37620. doi:10.1039/C4RA06955B.

[43] Alexandru M, Cazacu M, Arvinte A, Shova S, Turta C, Simionescu BC, et al. μ-Chlorido-Bridged Dimanganese(II) Complexes of the Schiff Base Derived from [2+2] Condensation of 2,6-Diformyl-4-methylphenol and 1,3-Bis(3-aminopropyl)tetramethyldisiloxane: Structure, Magnetism, Electrochemical Behaviour, and Catalytic Oxidation of Sec. **Eur J Inorg Chem 2014**;2014:120–31. doi:10.1002/ejic.201300969.

[44] Zaltariov M-F, Alexandru M, Cazacu M, Shova S, Novitchi G, Train C, et al. Tetranuclear Copper(II)

Complexes with Macrocyclic and Open-Chain Disiloxane Ligands as Catalyst Precursors for Hydrocarboxylation and Oxidation of Alkanes and 1-Phenylethanol. **Eur J Inorg Chem 2014**;2014:4946–56. doi:10.1002/ejic.201402578.

[45] Vertechy R, Fontana M, Stiubianu G, Cazacu M. Open-access dielectric elastomer material database. In: Bar-Cohen Y, editor. **SPIE Smart Struct. Mater**. + Nondestruct. Eval. Heal. Monit., International Society for Optics and Photonics; **2014**, p. 90561R. doi:10.1117/12.2045053.

[46] Cazacu M, Ignat M, Racles C, Cristea M, Musteata V, Ovezea D, et al. Well-defined silicone-titania composites with good performances in actuation and energy harvesting. **J Compos Mater 2013**;48:1533–45. doi:10.1177/0021998313488148.

[47] Bele A, Cazacu M, Stiubianu G, Vlad S. Silicone–barium titanate composites with increased electromechanical sensitivity. The effects of the filler morphology. **RSC Adv 2014**;4:58522–9. doi:10.1039/C4RA09903F.

[48] Racles C, Shova S, Cazacu M, Timpu D. New highly ordered hydrophobic siloxane-based coordination polymers. **Polymer 2013**;54:6096–104. doi:10.1016/j.polymer.2013.09.001.

[49] Cazacu M, Racles C, Zaltariov M-F, Dumitriu A-MC, Ignat M, Ovezea D, et al. Electroactive composites based on polydimethylsiloxane and some new metal complexes. **Smart Mater Struct 2013**;22:104008. doi:10.1088/0964-1726/22/10/104008.

[50] Racles C, Nistor A, Cazacu M. A silica-silver nanocomposite obtained by sol-gel method in the presence of silver nanoparticles. **Cent Eur J Chem 2013**;11:1689–98. doi:10.2478/s11532-013-0294-4.

[51] Racles C, Cazacu M, Fischer B, Opris DM. Synthesis and characterization of silicones containing cyanopropyl groups and their use in dielectric elastomer actuators. **Smart Mater Struct 2013**;22:104004. doi:10.1088/0964-1726/22/10/104004.

[52] Zaltariov M-F, Cazacu M, Vornicu N, Shova S, Racles C, Balan M, et al. A new diamine containing disiloxane moiety and some derived Schiff bases: synthesis, structural characterisation and antimicrobial activity. **Supramol Chem 2013**;25:490–502. doi:10.1080/10610278.2013.794947.

[53] Vlad A, Zaltariov M-F, Shova S, Novitchi G, Varganici C-D, Train C, et al. Flexible linkers and dinuclear metallic nodes build up an original metal–organic framework. **CrystEngComm 2013**;15:5368. doi:10.1039/c3ce40506k.

[54] Racles C, Silion M, Arvinte A, Iacob M, Cazacu M. Synthesis and characterization of poly(siloxane–azomethine) iron(III) coordination compounds. **Des Monomers Polym 2013**;16:425–35. doi:10.1080/15685551.2012.747161.

[55] Soroceanu A, Cazacu M, Shova S, Turta C, Kožíšek J, Gall M, et al. Copper(II) Complexes with Schiff Bases Containing a Disiloxane Unit: Synthesis, Structure, Bonding Features and Catalytic Activity for Aerobic Oxidation of Benzyl Alcohol. **Eur J Inorg Chem 2013**; 1458–74. doi:10.1002/ejic.201201080.

[56] Vlad A, Cazacu M, Zaltariov M-F, Shova S, Turta C, Airinei A. Metallopolymeric structures containing highly flexible siloxane sequence. **Polymer 2013**;54:43–53. doi:10.1016/j.polymer.2012.11.021.

[57] Vlad A, Turta C, Cazacu M, Rusu E, Shova S. A Bis(pyrrole) Schiff Base Containing a Flexible Siloxane Bridge and Its Ni II Complex. **Eur J Inorg Chem 2012**;2012:5078–84. doi:10.1002/ejic.201200612.

[58] Zaltariov M-F, Cazacu M, Shova S, Vlad A, Stoica I, Hamciuc E. Hydrogen-bonded supramolecular polymers containing dimethylsilane groups: Synthesis, crystal structure, and characterization. **J Polym Sci Part A Polym Chem 2012**;50:3775–87. doi:10.1002/pola.26166.

[59] Cazacu M, Vlad A, Turta C, Lisa G. New iron-cobalt clusters with silicon-containing dicarboxylic acids. **Cent Eur J Chem 2012**;10:1079–86. doi:10.2478/s11532-012-0022-5.

[60] Racles C, Silion M, Stanica N, Cazacu M, Turta C. New siloxane-containing iron(III) carboxylate clusters. **J Organomet Chem 2012**;711:43–51. doi:10.1016/j.jorganchem.2012.03.024.

[61] Stiubianu G, Nicolescu A, Nistor A, Cazacu M, Varganici C, Simionescu BC. Chemical modification of cellulose acetate by allylation and crosslinking with siloxane derivatives. **Polym Int 2012**;61:1115–26. doi:10.1002/pi.4189.

[62] Vlad A, Cazacu M, Turta C, Tigoianu RI, Airinei A, Arvinte A. Telechelic or side-functionalized diorganosiloxanes with ferrocenylimine groups. **Synth Met 2012**;161:2659–68. doi:10.1016/j.synthmet.2011.09.040.

[63] Cazacu M, Racles C, Airinei A, Vlad A, Stoica I. Silicone composites containing stabilized silver clusters or nanoparticles. **Polym Adv Technol 2012**;23:122–9. doi:10.1002/pat.1844.