

# Curriculum vitae

## Informatii personale

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**Data nasterii** 26 decembrie 1985

**Nationalitate** Romana

**Stare civila** Necasatorit

## Educatie:

**2009** Diploma de licenta, Facultatea de Inginerie Chimica si Protectia Mediului, specializarea *Inginerie Chimica*, Universitatea Tehnica Gheorghe Asachi, Iasi, Romania

**2011** Master, Facultatea de Inginerie Chimica si Protectia Mediului, specializarea *Ingineria Procedeelor Nepoluante*, Universitatea Tehnica Gheorghe Asachi, Iasi, Romania

**2013-prezent** Doctorand, Institutul de Chimie Macromoleculara Petru Poni, Iasi, Romania

**Limbi straine** Engleza, foarte bine (citit, vorbit, scris)

## Activitate stiintifica

### Articole aparute

- 1 Goethite nanorods as a cheap and effective filler for siloxane nanocomposite elastomers, M. Iacob, G. Stiubianu, **C. Tugui**, L. Ursu, M. Ignat, C. Turta, M. Cazacu, RSC Adv. 2015, 5, 45439-45445 (IF: 3.108);
- 2 Bimodal silicone interpenetrating networks sequentially built as electroactive dielectric elastomers, **C. Tugui**, G. Stiubianu, M. Iacob, C. Ursu, A. Bele, S. Vlad, M. Cazacu J. Mater. Chem. C 2015, 3, 8963- 8969 (IF: 5.256);

- 3 Full silicone interpenetrating bi-networks with different organic groups attached to the silicon atoms, **C. Tugui**, M. Cazacu, L. Sacarescu, A. Bele, G. Stiubianu, C. Ursu, C. Racles *Polymer* 2015, 77, 312-322 (IF: 3.684);
- 4 Superparamagnetic amorphous iron oxide nanowires self-assembled into ordered layered structures, M. Iacob, D. Sirbu, **C. Tugui**, G. Stiubianu, L. Sacarescu, V. Cozan, A. Zelenakova, E. Cizmar, A. Feherc and M. Cazacu; *RSC Adv.* 2015, 5, 62563 (IF:3.108);
- 5 New dielectric elastomers with improved properties for energy harvesting and actuation, G. Stiubianu, A. Bele, **C. Tugui**, V. Musteata, *Proc. of SPIE Vol. 9258 925808-1*, 2015;
- 6 Highly stretchable composites from PDMS and polyazomethine fine particles, Carmen Racles, V. E. Musteata, A. Bele, M. Dascalu, **C. Tugui**, A-L Matriarcala, *RCS Adv.* 2015, 5, 102599-102609 (IF: 3.108);
- 7 Changes induced in the properties of dielectric silicone elastomers by the incorporation of transition metal complexes, G. Stiubianu, A.M.C. Dumitriu, C.D. Varganici, **C. Tugui**, M. Iacob, A. Bele, M. Cazacu *High Perform. Polym.* 2016, 28, 8, 915-926 (IF: 1.142);
- 8 Interpenetrating poly(urethane-urea)- polydimethylsiloxane networks designed as active elements in electromechanical transducers, **C. Tugui**, S. Vlad, M. Iacob, C. D. Varganici, L. Pricop and M. Cazacu, *Polym. Chem.* 2016, 7, 2709-2719 (IF: 5.375);
- 9 Dielectric silicone elastomers filled with in situ generated polar silsesquioxanes: Preparation, characterization and evaluation of electromechanical performance, A. Bele, M. Dascalu, **C. Tugui**, M. Iacob, C. Racles, L. Sacarescu, M. Cazacu, *Materials & Design* 2016, 106, 454-462 (IF: 4.364);
- 10 Dielectric elastomers based on silicones filled with transitional metal complexes, G. Ştiubianu, A. Soroceanu, C-D. Varganici, **C. Tugui**, M. Cazacu, *Composites Part B Engineering* 2016, 93, 236-243 (IF: 4.727);
- 11 Aging behavior of the silicone dielectric elastomers in simulated marine environment, A. Bele, G. Stiubianu, S. Vlad, **C. Tugui**, C.D. Varganici, L. Matricala, D. Ionita, D. Timpu, M. Cazacu, *RSC Adv.* 2016, 6, 8941-8955 (IF: 3.108);
- 12 From iron coordination compounds to metal oxide nanoparticles, M. Iacob, C. Racles, **C. Tugui**, G. Stiubianu, A. Bele, L. Sacarescu, D. Timpu and Maria Cazacu, *Beilstein J. Nanotechnol.* 2016, 7, 2074-2087 (IF: 3.127);
- 13 Dielectric elastomers with dual piezo-electrostatic response optimized through chemical design for electromechanical transducers, C. Tugui, A. Bele, V. Tiron, E. Hamciuc, C. D. Varganici, M. Cazacu, *J. Mater. Chem. C* 2017, 5, 824-834 (IF: 5.256) selectat ca **HOT Paper**;
- 14 All-silicone elastic composites with counter-intuitive piezoelectric response, designed for electromechanical applications, C. Racles, M. Dascalu, A. Bele, V. Tiron, M. Asandulesa, **C. Tugui**, A. L. Vasiliu, M. Cazacu, *J. Mater. Chem. C* 2017, doi: 10.1039/C7TC02201H (IF: 5.256).

## Conferinte invitate/plenare/keynotes sustinute la manifestari stiintifice

- 1 Metallic compliant electrodes for dielectric silicone elastomers, **Codrin Tugui**, Cristian Ursu, Magdalena Aflori, Maria Cazacu EAP Workshop 2014, Electromechanically Active Polymer (EAP) transducers & artificial muscle, Queen Mary University of London, 25-26 November, London, UK;
- 2 New dielectric elastomers with improved properties for energy harvesting and actuation, George Stiubianu, Adrian Bele, **Codrin Tugui**, Valentina Musteata, ATOM-N 2014 The 7th edition of the International Conference "Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies" 21 - 24 august 2014, Constanta, Romania;
- 3 Silicone-Iron oxide nanocomposites with improved dielectric and mechanical properties, George Stiubianu, Mihail Iacob, **Codrin Tugui**, Maria Cazacu, Carmen Racles, Constantin Turta, The International Conference dedicated to the 55th anniversary from the foundation of the Institute of Chemistry of the Academy of Sciences of Moldova 25-26 mai 2014 Chisinau, Republica Moldova;
- 4 Siloxane-lignin elastomers for energy harvesting, George Stiubianu, Adrian Bele, Mihail Iacob, **Codrin Tugui**, Valentina Musteata, Maria Cazacu XXIIIrd Romanian Chemistry Conference October 1-3 2014 Calimanesti-Caciulata Valcea, Romania;
- 5 Silicone materials optimized for energy harvesting application, Maria Cazacu, Adrian Bele, Carmen Racles, George Stiubianu, **Codrin Tugui**, Mircea Ignat, EAP Workshop 2014, Electromechanically Active Polymer (EAP) transducers & artificial muscles 25-26 November 2014, London, UK;
- 6 Managing silicone electromechanical properties through inorganic nanoparticles fillers, Mihail Iacob, George Stiubianu, **Codrin Tugui**, Adrian Bele, Maria Cazacu, 14th World Renewable Energy Congress - WREC 2015, 8-12 iunie 2015, Bucuresti, Romania;
- 7  $\mu$ 3-oxotrinuclear iron carboxy-clusters as effective alternative sources for their oxide nanoparticles, Mihail Iacob, Carmen Racles, **Codrin Tugui**, George Stiubianu, Maria Cazacu, 15th International Balkan Workshop on Applied Physics, 2-4 iunie 2015, Constanta, Romania;
- 8 Preparation of magnetic nanoparticles for biomedical applications, Mihail Iacob, Maria Cazacu, Carmen Racles, Xenia Patras, George Stiubianu, **Codrin Tugui**, Adrian Bele, Liviu Sacarescu, Constantin Turta, Congres Internațional "Pregatim Viitorul Promovand Excelenta", editia XXV-a, sectiunea B – Repere in medicina moderna, 26 februarie-1 martie 2015, Universitatea Apolonia, Iasi, Romania;
- 9 Dielectric elastomers transducers as medical devices, **Codrin Tugui**, Cristian Ursu, Magdalena Aflori, George Stiubianu, Mihail Iacob, Adrian Bele, Xenia Patras, Maria Cazacu, Congres Internațional "Pregatim Viitorul Promovand Excelenta", editia XXV-a, sectiunea B – Repere in medicina moderna, 26 februarie-1 martie 2015, Universitatea Apolonia, Iasi, Romania;



**10** Electrozi flexibili pentru generatoare de energie, Adrian Bele, Mihai Asandulesa, **Codrin Tugui**, Mihail Iacob, Maria Cazacu, A XXV-a Sesiune de Comunicari Stiintifice a Institutului de Chimie Macromoleculara „Petru Poni” (ZILELE ACADEMICE IESENE), 24-26 septembrie 2015, Iasi, Romania;

**11** Elastomeri dielectrici pe baza de rețele siliconice bimodale, **Codrin Tugui**, George Stiubianu, Mihail Iacob, Cristian Ursu, Maria Cazacu, A XXV-a Sesiune de Comunicari Stiintifice a Institutului de Chimie Macromoleculara „Petru Poni” (ZILELE ACADEMICE IESENE), 24-26 septembrie 2015, Iasi, Romania;

**12** Elastomeri dielectrici cu aplicații în conversia de energie, **Tugui Codrin**, Conferința Știința Moderna și Energia, editia XXXIII-a, 14-15 Mai 2015, Cluj-Napoca, România;

**13** Dielectric elastomers optimized through interpenetration strategies, **Codrin Tugui**, Adrian Bele, Stelian Vlad, Carmen Racles, Maria Cazacu, EIGHTH CRISTOFOR I. SIMIONESCU SYMPOSIUM – FRONTIERS IN MACROMOLECULAR AND SUPRAMOLECULAR SCIENCE, 29 May – 3 June 2016, Iasi, Romania;

**14** Enhancement of carbon dimers formation in graphite excimer laser ablation plasma, Cristian Ursu, **Codrin Tugui**, Petru Edward Nica; The 6<sup>th</sup> National conference of applied physics 26–27 november 2016, Iasi, Romania.

## Postere

**1** Full silicone interpenetrating bi-networks with different organic groups to the silicon atoms **Codrin Tugui**, Maria Cazacu, Stelian Vlad, Cristian Ursu, EuroEAP 2014: Intl. Conference on EAP transducers & artificial muscles, 10-11 June 2014, Linköping, Sweden;

**2** Strategies and own results on the development and optimization of silicone materials for electromechanical applications Maria Cazacu, Carmen Racles, George Stiubianu, Adrian Bele, **Codrin Tugui** EuroEAP 2014: Intl. Conference on EAP transducers & artificial muscles, 10-11 June 2014, Linköping, Sweden;

**3** Superparamagnetic iron oxide nanowires self-assembled into smectic crystal, Mihail Iacob, **Codrin Tugui**, Dumitru Sirbu, George Stiubianu, Maria Cazacu, The XVIII-th International Conference "Physical Methods in Coordination and Supramolecular Chemistry" (dedicated to the memory of professor Constantin Turta and professor Mihail Revenco), 8-9 octombrie 2015, Chișinău, Republica Moldova;

**4** Bimodal silicone networks as dielectric elastomers, **Codrin Tugui**, George Stiubianu, Mihail Iacob, Cristian Ursu, Cristian-Dragos Varganici, Maria Cazacu, 5th international conference on Electromechanically Active Polymer (EAP) transducers & artificial muscles, 9-10 iunie 2015, Tallinn, Estonia;

5 High breakdown strength composites based on silicone and ceramic nanotubes, Adrian Bele, **Codrin Tugui**, Carmen Racles, Maria Cazacu, EuroEAP 2016 6th international conference on Electromechanically Active Polymer (EAP) transducers & artificial muscles, Helsingor, Denmark;

6 Ultra-thin stretchable silver electrodes as compared with PDMS-based electrodes designed for energy harvesting, **Codrin Tugui**, Cristian Ursu, Adrian Bele, Mihail Iacob, Maria Cazacu, EuroEAP 2016 6th international conference on Electromechanically Active Polymer (EAP) transducers & artificial muscles, Helsingor, Denmark;

7 Synthetic approach to obtain silicone-based elastomers with improved electromechanical properties, Maria Cazacu, **Codrin Tugui**, EuroEAP 2016 6th international conference on Electromechanically Active Polymer (EAP) transducers & artificial muscles, Helsingor, Denmark;

8 Comparative approaches to high performance stretchable electrodes, **Codrin Tugui**, Maria Cazacu; EuroEAP 2017 7th International conference on Electromechanically Active Polymer (EAP) transducers & artificial muscles, 6-7 June 2017, Cartagena, Spain;

9 Polysiloxane-polyimide semi-interpenetrated networks with dual electromechanical response, Maria Cazacu, **Codrin Tugui**, Bele Adrian, Elena Hamciuc; EuroEAP 2017: 7th International conference on Electromechanically Active Polymer (EAP) transducers & artificial muscles, 6-7 June 2017, Cartagena, Spain;

10 Functionalized silicones showing giant actuation strains, Adrian Bele, **Codrin Tugui**, Mihaela Dascalu, Carmen Racles, Maria Cazacu; EuroEAP 2017: 7th International conference on Electromechanically Active Polymer (EAP) transducers & artificial muscles, 6-7 June 2017, Cartagena, Spain.

### **Granturi/proiecte/contracte cu finantare din strainatate**

1 PolyWEC ([www.polywec.org](http://www.polywec.org), prj. ref. 309139), autori: tip proiect: a FET-Energy project that is partially funded by the 7th Framework Programme of European Community and co-financed by UEFISCDI (Contract 205EU), beneficiar: Ins. de Chimie Macromoleculara Petru Poni, Iasi;

2 Romanian National Authority for Scientific Research and Innovation, CNCS/CCCDI-UEFISCDI, project number PN-III-P2-2.1-PED-2016-0188, within PNCDI III (Grant 68PED / 2017).

### **Stagii in strainatate**

1 COST Action, European Network on smart inorganic polymers, COST-TS-ECOST-TRAINING SCHOOL CM1302-250914-049000, 25-30 September 2014, Graz - Austria, Trieste - Italy;

**2** COST Action, ESNAM Training School on Dielectric Elastomers 2014 25-27 March 2014, Darmstadt, Germany.

### **Alte activitati**

**1** Membru in comitetul de diseminare si informare al European Society for Electromechanically Active Polymer, EuroEAP;

**2** Workshop IEEE: How to write a basic technical paper?, 7 mai 2015 Iasi, Romania;

**3** "Acțiuni transnaționale de sprijin a participării cu succes în cadrul Programului-cadru pentru cercetare și inovare al UE ORIZONT 2020 – actHORIZ", 10-13 octombrie 2016, Iasi, Romania.

**Indice Hirsch: 5 (google scholar)**

