

Curriculum Vitae



PERSONAL INFORMATION

Petra Šrámková

Komenského 12, 94111, Palárikovo (Slovakia)

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Date of birth: 11th October 1988

EDUCATION AND TRAINING

2013-present *PhD candidate*

Polymer Institute, Slovak Academy of Sciences, Department for Biomaterials Research (led by Igor Lacík, PhD., DSc.), Bratislava (Slovakia)

Field of study: *Macromolecular chemistry*

Dissertation thesis: Hydrogels and covalently stabilized polymers based on 2-oxazolines for biomedical applications

Supervisor: Juraj Kronek, PhD.

2011-2013 *Master*

Faculty of Natural Sciences, Comenius University, Department of Organic Chemistry, Bratislava (Slovakia)

Field of study: *Organic and Bioorganic Chemistry*

Diploma thesis: Synthesis of bithiazole derivatives with optoelectronic properties

Supervisor: Assoc. Prof. Peter Magdolen, PhD.

Diploma thesis was focused on preparation of bithiazole derivatives with condensed structure and potential use in the field of organic electronics. Bithiazole with electro-accepting properties was used as a central unit in the molecules with π -conjugated system.

2008-2011 *Bachelor*

Faculty of Natural Sciences, Comenius University, Department of Organic Chemistry, Bratislava (Slovakia)

Field of Study: *Biochemistry*

Diploma thesis: Heterocyclic compounds containing sulfur and nitrogen in their structure with optoelectronic properties

Supervisor: Assoc. Prof. Peter Magdolen, PhD.

PERSONAL SKILLS

Mother tongue(s) SLOVAK

Other language(s)

| | Listening | Reading | Spoken interaction | Spoken production | Reading |
|---------|-----------|---------|--------------------|-------------------|---------|
| ENGLISH | B2 | B2 | B1 | B1 | B2 |
| FRENCH | A1 | A1 | A1 | A1 | A1 |

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
 Common European Framework of Reference for Languages

Technical skills

Theoretical and practical knowledge in organic and bioorganic synthesis, macromolecular chemistry and biomaterials
 Strong expertise in synthesis of poly(2-oxazolines)
 The experiences with fabrication and characterization of hydrogels
 Basic skills at *in vitro* cytotoxicity studies
 Knowledge in instrumental analytical methods (UV-VIS, ATR FTIR, fluorescence spectroscopy, HPLC, NMR, DLS, ...)
 Basic skills with appropriate softwares - MestreNova, Omnic, ChemDraw, Origin, Zetasizer software

Publications

ŠRÁMKOVÁ, Petra - ZAHORANOVÁ, Anna - KRONEKOVÁ, Zuzana - ŠIŠKOVÁ, Alena - KRONEK, Juraj. Poly(2-oxazoline) hydrogels by photoinduced thiol-ene "click" reaction using different dithiol crosslinkers. Journal of Polymer Research 2017, vol. 24, art. no. 82, 13p.

Manuscripts in preparation

TRELOVÁ, D. - SALGARELLA, A.R. - RICOTTI, L. - GIUDETTI, G. - CUTRONE, A. - ŠRÁMKOVÁ, P. - ZAHORANOVÁ, A. - CHORVÁT, D. - HAŠKO, D. - CANALE, C. - MICERA, S. - KRONEK, J. - MENCIASSI, A. - LACÍK, I. Soft zwitterionic hydrogel coatings for neural electrodes to reduce fibroblast and macrophage adhesion.

KRONEK, J. - NEDBAL, J. - VALENTOVÁ,^{H.} - NEUBERT, M. - JANIGOVÁ, I. - PETREŇKOVÁ, N. - ŠRÁMKOVÁ, P. - CSOMOROVÁ, K. - PETRA, L. Thermal stability and structural anisotropy of semiaromatic poly(ester amides) from aromatic bis(2-oxazolines) and aliphatic dicarboxylic acids. (submitted to Polymer Testing)

Internship**July 2015**

SUMMER SCHOOL on Supramolecular Nanosystems 2015
 Julius-Maximilians University, Würzburg, Germany
 Poster - Šrámková, P. - Kronek, J. Preparation and characterization of hyperbranched macroinitiators for cationic ring opening polymerization of 2-oxazolines.

November 2015

Tomas Bata University, Zlin, Czech Republic - Centre of Polymer Systems

Participation on projects

November-December 2016

The Biorobotics Institute, Scuola Superiore Sant'Anna; Viale Rinaldo Piaggio 34, 56025 Pontedera (PI), Italy

International projects

CASSETTE - Conjugated Antisense system for Selective and Specific BCR-ABL suppression: An innovative strategy for CML treatment.

PI: Filip Rázga, PhD.

Duration: 2015-2018

My role: Synthesis of polymer linker with suitable functional groups at the chain-ends by utilization of cationic polymerization of 2-oxazolines.

ERANET - M2Neural: Multifunctional Materials for Advanced Neural Interfaces (M-ERA.NET Transnational Call 2013). (Cooperation with The Biorobotics Institute, Scuola Superiore Sant'Anna, Pontedera, Italy)

PI: Igor Lacík, PhD., DSc.

Duration: 2014-2017

My role: Covering of the polyimide by hydrogel thin film for decreasing the mechanical and chemical mismatch between the PI implant and living tissue.

National projects

APVV-15-0485 (DARLINK) Towards highly selective cancer treatment: Endogenous lipoprotein-DARPin complexes as a new generation of targeted drug delivery vehicles. (Cooperation with UPJŠ, Košice, Slovakia)

PI: Juraj Kronek, PhD.

Duration: 2016-2020

My role: Synthesis of polymer linker with suitable functional groups at the chain-ends by utilization of cationic polymerization of 2-oxazolines.

APVV-15-0741 Nanocomposite materials based on organo-phosphonium smectites and polymers. (Cooperation with Institute of Inorganic Chemistry SAS)

Duration: 2016-2020

My role: Synthesis of organo-phosphonium salts.

VEGA 2/0163/15 Polymers based on 2-oxazolines for targeted drug delivery and controlled cell adhesion.

PI: Juraj Kronek, PhD.

Duration: 2015-2017

My role: Synthesis of required 2-oxazoline monomers and their polymerization for achieving the hyperbranched nanoparticles, block/statistical copolymers and hydrogels.

APVV-0242-11 Towards increased sensitivity of cancer detection and selectivity of cancer treatment: biophotonic nanotechnology applications. (Cooperation with UPJŠ, Košice, Slovakia)

PI: Juraj Kronek, PhD.
Duration: 2011-2016
My role: Synthesis of cholesterol-modified dextran.

APVV-14-0858 (MEREDIT) Materials and processes for functional encapsulation of pancreatic islets in diabetes treatment.

PI: Igor Lacík, PhD., DSc.
Duration: 2015-2019

My role: Synthesis of cationic poly(2-oxazolines).

Conference contributions

“Amphiphilic star-shaped copolymers based on 2-oxazoline for drug delivery.” ŠRÁMKOVÁ, P. - KRONEK, J. (BiPoCo 2014, 2nd International Conference on Bio-based Polymers and Composites, Visegrád, Hungary, August 24th–28th 2014, Poster)

“Preparation of macro-initiators for star-shaped poly(2-oxazolines).” ŠRÁMKOVÁ, P. - KRONEK, J. (BYPOS, 5th Bratislava Young Polymer Scientists Workshop, Zázrivá, Slovakia, June 16th–20th 2014, Presentation)

“Preparation of hyperbranched poly(esteramides) and poly(etheramides) as macroinitiators for cationic ring-opening polymerization of 2-oxazolines.” ŠRÁMKOVÁ, P. - KRONEK, J. (67th Chemical Congress, Horný Smokovec, High Tatras, September 7th–11th 2015, Presentation)

„Advanced nano-doped materials for long-term neural interfaces.“ SALGARELLA, A.R. - RICOTTI, L. - GIUDETTI, G. - KRONEK, J. - RINGHI, M. - CUTRONE, A. - CAFARELLI, A. - ZAHORANOVÁ, A. - ŠRÁMKOVÁ, P. - TREĽOVÁ, D. - BOSSI, S. - MICERA, S. - LACÍK, I. - MENCIASSI, A. (IEEE NANO 2015, Danvers, The Institute of Electrical and Electronics Engineers)

“Thiol-ene click reaction as efficient method for preparation of cross-linked materials based on poly(2-oxazolines).” ŠRÁMKOVÁ, P. - ŠÍŠKOVÁ, A. - KRONEK, J. (BYPOS 2016, 6th Bratislava Young Polymer Scientists Workshop, March 13th–18th 2016, High Tatras, Presentation)

“Poly(2-oxazoline) hydrogels by photoinduced thiol-ene click reaction using different dithiol crosslinkers.” ŠRÁMKOVÁ, P. - ZAHORANOVÁ, A. - KRONEKOVÁ, Z. - KRONEK, J. (BIMac 2016, XXII. Bratislava Conference on Macromolecules, September 6th–9th 2016, Bratislava, Presentation)

Hobbies

Music (listening, visiting concerts, playing the bass guitar, doing the reviews and interviews intended for music e-zine and printed zine)
Team sports (basketball, volleyball), hiking, cooking