



ALENA ŠIŠKOVÁ  
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## WORK EXPERIENCE

2013 - present

### Researcher

Polymer Institute of Slovak Academy of Sciences, Dúbravská cesta 9, 84541 Bratislava, Slovakia

- Characterization of complex polymer systems by means of liquid chromatography techniques (SEC/GPC, HPLC, LC CC, LC LC, MD LC and coupled - LC techniques)
  - Design, preparation and characterization of controlled release systems for medical and agricultural applications. Electrospinning.
  - Data collection and analysis
  - Dissemination and exploitation of results
- Business or sector** Science and research

2006 - 2009

### Researcher

University of Jan Długosz, Faculty of Chemistry and Environmental Protection, Armii Krajowej 11/12, 84541 Częstochowa, Poland

- Characterization of complex polymer systems by means of liquid chromatography techniques (SEC/GPC, HPLC, LC-MS and LC-MS<sup>n</sup>)
  - Structural studies of polymer systems. Degradation and stability of polymers.
  - Data collection and analysis
  - Dissemination and exploitation of results
- Business or sector** Science and research

## EDUCATION

2009 – 2013

### Philosophiae doctor (Ph.D.)

Faculty of Chemical and Food Technology, Slovak Technical University in Bratislava, Radlinského 9, 812 37 Bratislava, Slovakia

- Macromolecular chemistry, Physics of polymers, Polymer Engineering, Polymer blends and composites, English.

2001 – 2006

### Master of Science (M.Sc.)

Textile Faculty, Technical University of Liberec, Studentska 2, 461 17 Liberec, Czech Republic

- Textiles and clothing, textile chemistry, materials engineering, nonwovens, textile technologies, English, German.

2002 – 2006

### Bachelor of Education (B.Ed.)

Faculty of Pedagogy, Technical University of Liberec, Voroněžská 1329/13, 460 01 Liberec, Czech Republic

- Pedagogy, Methodology of vocational subjects, School management, Psychology, Social communication, Teaching experience.

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**FELLOWSHIPS**

|                      |   |
|----------------------|---|
| 3/2004 – 8/2004      | West-Sächsische Hochschule Zwickau, Fakultät für Textil und Leder Technik, Reichenbach, Germany. Supervisor: Dr. Rüdiger Hüttner.   |
| 12/2006 – 3/2007     | Jagiellonian University, Faculty of Mathematical and Natural Sciences, Department of Neurobiochemistry, Cracow, Poland. Supervisor: Prof. Jerzy Silberring.                 |
| 4/2007 – 3/2009      | Polish Academy of Sciences, Center of Polymer and Carbon Materials (PAN, CMPW)  |
| and 9/2009 – 10/2009 | Zabrze, Poland. Supervisor: Prof. Marek M. Kowalczyk  |
| 5/2009 – 8/2009      | Akzo Nobel, Arnheim, The Netherlands, Supervisor: Dr. Oscar van den Brink.  |
| 10/2010              | National Research Council (CNR), Methodological Chemistry Institute, Department of Chromatography, Roma, Italy. Supervisor: Dr. Danilo Corradini.                           |
| 9/2011 – 10/2011     | National Research Council (CNR), Institute of chemistry and Technology of Polymers,   |
| and 5/2012           | Catania, Sicily, Italy. Supervisor: Dr. Concetto Puglisi.   |
| 6/2012               | National Research Council (CNR), Institute for Macromolecular Studies, Milano, Italy. Supervisor: Dr. Raniero Mendichi.   |
| 3/2013               | Faculty of Technology, University of Tomáš Baťa, Zlín. Czech Republic. Supervisor: Dr. Martina Polášková.   |
| 11/2014 – 12/2014    | Institute of Technological Development for the Chemical Industry, National Council of Scientific and Technical Research, Santa Fe, Argentina. Supervisor: Dr. Jose R. Vega. |
| 6/2016               | National Research Council (CNR), Institute for Macromolecular Studies, Milano, Italy. Supervisor: Dr. Francesco Galeotti  |

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**PROJECTS**

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| 07/2016 – 06/2020 | <i>VIS-CuM</i> : Fotochemicky indukovaná meďou sprostredkovaná radikálová polymerizácia s prenosom atómu. APVV-15-0545, Head: J. Mosnáček.  |
| 07/2016 – 06/2020 | Modified polymers from renewable resources and their degradation, APPV-15-0528, Head: Š. Chmela   |
| 01/2017 – 12/2018 | Preparation and study of polymers and polymer materials from renewable resources, VEGA 2/0158/17, Head: M. Danko  |
| 01/2016 – 12/2018 | Advanced LC-MS <sup>n</sup> for characterization of bio-polymers and their degradation products. Bilateral project SAS-PAS, Head: A. Šišková.   |
| 01/2014-05/2017   | Innovative application of regenerated wood cellulose fiber. COST Action FP 1205. Head: Asa Ostlund. Member of management committee: A. Šišková  |
| 01/2016 – 12/2017 | Luminescence silk nanofibers as a platform for sensing devices – NANOSIL, bilateral project between CNR – SAS, Head: M. Danko.  |
| 01/2015 – 12/2017 | Synthesis of well - defined tailor made copolymers via ... Syntéza dobre definovaných nových kopolymérov pomocou živých polymerizačných metód a pokročilých chromatografických techník. SAS-MOST joint research cooperation, Head: J. Mosnáček. |
| 01/2014-12/2016   | Micro – and nanofibers from natural resources on the base of sacharide and peptides prepared by electrospinning. Head: A. Eckstein.   |
| 01/2013-12/2014   | Synthesis and analysis of block copolymers containing polyacrylate and polyacrylic acid blocks. PPP project of NSC (Taiwan)-SAS. Head: Š. Chmela.   |
| 01/2013-12/2014   | Synthesis, molecular characterization and purification of block polymers. Bilateral project CNRS-SAS. Head: D. Berek.   |
| 01/2013-12/2014   | Characterization of Chromatographically-Complex Polymers by Advanced Liquid Chromatography Methods: MD-SEC and LC LCD. Bilateral project between SAS and CONICET (Argentina), Head: A. Šišková.   |
| 01/2013-12/2014   | Dvojdimenziálna kvapalinová chromatografia komplexných polymérových systémov. VEGA 2/0001/12. Head: D. Berek  |
| 05/2011 - 10/2014 | Živá/radikálová polymerizácia: Optimalizácia polymerizačného procesu pre prípravu dobre definovaných polymérov s cieľnou architektúrou a vlastnosťami, APVV-0109-10. Head: J. Mosnáček  |
| 01/2009 – 12/2011 | Optimalizácia a nové aplikácie originálnych kombinovaných metód kvapalinovej chromatografie na separáciu a molekulovú charakterizáciu komplexných polymérových systémov. VEGA 2/0171/09 , Head: D. Berek  |
| 01/2010 – 12/2012 | Advanced methods for separation and molecular characterization of natural and synthetic macromolecules and related or associated substances, Bilateral project CNR-SAV, Head: D. Berek  |
| 2005 – 2009       | Multistage mass spectrometry of synthetic polymers and synthetically modified biopolymers (MEST-CT-2005-021029), Marie Curie Fellowship programme. Head: O. van den Brink.  |

## OTHERS

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|----------------------------|--|
| Membership/chairing        | <ul style="list-style-type: none"> <li>• Chair of Young Researchers Council at Polymer Institute of Slovak Academy of Sciences (September 2016 - present).</li> <li>• Chair of Bratislava Young Polymer Scientists Workshop (BYPoS), years: 2014, 2016, 2017.</li> <li>• Member of Organization committee of BYPoS in 2012.</li> <li>• Member of Slovak Chemical Society (2010 - present)</li> <li>• Member of Associazione Italiana di Scienze e Tecnologia delle Macromolecole (from 2017)</li> </ul>  |
| Exhibitions/popularization | <ul style="list-style-type: none"> <li>• Co-author of "NANO-Art" objects in Technological Museum, Trnava (Co-operation with M.Art. J. Frajová, Academy of Fine Arts in Bratislava), 2016 - 2017.</li> <li>• Co-operation in educational programme "Find a scientist in yourself" 2017</li> <li>• Participation of Open days 2014, 2015 and 2016.</li> <li>• Participant of Night of Researchers 2015 and 2016.</li> <li>• Attendance on Exhibitions and Competitions: New Future (2015), Textile Art of Today (2015-2017), Design.s (2016), Rundgang (2016), Heimtextil (2017), Miniatura (2017),</li> </ul>   |
| Teaching experience        | <ul style="list-style-type: none"> <li>• Secondary School of Textile Engineering (Textile materials, Testing of textiles)</li> <li>• Secondary School of Furniture (Technical education, history of furniture, mathematic)</li> <li>• Training of High School Students (in the frame of SOČ)</li> <li>• Training of University Students (Master thesis preparation and praxis)</li> </ul>  |
| Attendance on training     | <ul style="list-style-type: none"> <li>• Creation and management of projects, Lifelong learning on University of Matej Bell, Banská Bystrica, completed with a certificate, 2/2017</li> <li>• Training School of gas chromatography, Pragolab, Bratislava. 11/2016.</li> <li>• Training School on Shaping of nanocellulose, KTH and Innventia, Stockholm Sweden, 4/2016</li> <li>• Training School on Advanced Characterization Techniques for Electrospun Nanofibers. UNAM-Institute of Materials Science and Nanotechnology, Bilkent University, Ankara, Turkey, 6/2015.</li> <li>• Summer School of Liquid Chromatography, Slovak Technical University, 6/2010</li> </ul> |

## AWARDS

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| September 2012 | 1 <sup>st</sup> Prize in competition "The Best Poster Award", 55. Zjazd Polskiego Towarzystwa Chemicznego i Stowarzyszenia Inżynierów i Techników Przemysłu Chemicznego, Białystok, Poland.          |
| Maj 2012       | Travel Grant of Slovak Academic and Information Agency, realization of research stay in Institute of Chemistry and Technology of Polymers, Catania, Sicily, under supervision of Dr. C. Puglisi.     |
| September 2012 | Travel grant from Slovak Chemical Society to attend on the 55 Scientific Congress of Polish Chemical Society „ <i>Chemia dla środowiska i cywilizacji</i> “, 16. – 20. 9.2012 Białystok, Poland.     |
| September 2012 | Travel grant from Deutsche Chemische Gesellschaft (GChD) to attend on 29 <sup>th</sup> International Symposium on Chromatography, 9. – 13. 9. 2012, Toruń, Poland.                                   |
| March 2013     | Travel Grant of Slovak Academic and Information Agency, realization of research stay on Faculty of Technology, University of Tomáš Baťa, Zlín, Czech Republic under supervision of Dr. M. Polášková. |
| August 2013    | Grant obtained from International Union of Pure and Applied Chemistry (IUPAC) as selected participant on 47 <sup>th</sup> General Assembly, 8 – 15. August, 2013, Istanbul, Turkey                   |
| August 2013    | Travel grant from International Union of Pure and Applied Chemistry (IUPAC) on 44 <sup>th</sup> World Chemistry Congress, 11 – 16. August, 2013, Istanbul, Turkey.                                   |
| September 2014 | Borealis Travel Grant, to attend the 30 <sup>th</sup> International Symposium on Chromatography, 9. – 14. September 2014, Salzburg, Austria.   |
| May 2015       | Travel Grant to attend the Polinnova project Conference: „Challenges in Science and Technology of Polymer Materials“ on 19.-23. May, 2015 in Banskó, Bulgaria.                                       |

INVITED PRESENTATIONS,  
SEMINARS

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- March 2014 Ongoing R&D projects in COST member countries, The Biocomposites Centre, Bangor University, United Kingdom, Meeting of the Management Committee of COST Action FP1205 and Training School, Bangor, United Kingdom. (Šišková)
- November 2013 Un-conventional methods for characterization of complex polymer systems, Institute of Technological Development for the Chemical Industry, National Council of Scientific and Technical Research, Santa Fe, Argentina (Šišková).
- May 2012 Characterization of complex polymer systems by sequenced two dimensional liquid chromatography, National Research Council (CNR), Institute of Chemistry and Technology of Polymers, Catania, Sicily, Italy (Šišková).
- July 2011 Two Dimensional Liquid Chromatography of Complex Polymer systems, POLYOR 2011, Opole, Poland (Šišková).