

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) Helena Švajdlenková
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 E-mail helena.svajdlenkova@savba.sk
 Nationality Slovak
 Year of birth 1982
 Gender Female

Work experience

<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>January 2009 onwards</p> <p>Postdoctoral Research scientist</p> <p>I. Structure, dynamic and transport properties of condensed materials, especially polymers studied by the combination of three techniques, such as electron spin resonance spectroscopy (ESR), positron annihilation spectroscopy (PALS) and broadband dielectric spectroscopy (BDS)</p>
<p>Name and address of employer</p> <p>Type of business or sector</p>	<p>Polymer Institute, Slovak Academy of Sciences, Dúbravská cesta 9, 845 41 Bratislava, Slovakia</p> <p>Research</p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>October 2014-March 2015 (6 months)</p> <p>Postdoctoral Research scientist</p> <p>Preparation and characterization of thiol-ene polymer networks</p>
<p>Name and address of employer</p> <p>Type of business or sector</p>	<p>Ao. Univ. Prof. Dipl.-Ing. Dr. techn. R. Liska, TU Wien, Getreidemarkt 9/163, A-1060 Vienna, Austria</p> <p><i>Research grant of the action of Austria-Slovakia for Postdocs supported by Agency SAIA</i></p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>January-February 2014, October-November. 2013 (4 months)</p> <p>Postdoctoral Research scientist</p> <p>Primary α relaxation and secondary β relaxation dynamics of meta-Toluidine in the liquid state from broadband dielectric spectroscopy (BDS)</p>
<p>Name and address of employer</p> <p>Type of business or sector</p>	<p>Priv.-Doz. Dr. Peter Lunkenheimer, Experimental Physics V, EKM, University of Augsburg, D-861 35 Augsburg, Germany</p> <p><i>Individual scientific grant supported by Prof. Dr. Dipl.-Ing. Alois Loidl, EPV, EKM, UNI Augsburg, D-861 35 Augsburg, Germany</i></p>
<p>Dates</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>May 2012, May, October 2011</p> <p>Postdoctoral Research scientist</p> <p>Training in broadband dielectric spectroscopy (BDS)</p>
<p>Name and address of employer</p>	<p>Priv.-Doz. Dr. Peter Lunkenheimer, Experimental Physics V, EKM, University of Augsburg, D-861 35 Augsburg, Germany</p>

Type of business or sector	<i>Individual scientific grant supported by Prof. Dr. Dipl.-Ing. Alois Loidl, EPV, EKM, UNI Augsburg, D-861 35 Augsburg, Germany</i>
Dates	October 2010
Occupation or position held	Postdoctoral Research scientist
Main activities and responsibilities	Training in analysis of ESR spectra by means of Nonlinear-Least-Squares Line (NLSL) simulation program
Name and address of employer	Prof. Srećko Valić, University of Rijeka, Rijeka, Croatia
Type of business or sector	<i>Start grant 2010 supported by Polymer Institute SAS, Bratislava</i>
Dates	February 2008
Occupation or position held	PhD student
Main activities and responsibilities	Characterization of mixture CaCO ₃ -stearic acid by DRIFT technology
Name and address of employer	University of Pisa, Italy
Type of business or sector	Project supported by European Social Funds and Ministry of Slovak Republic

Projects:

Molecular and atomic probing a series of elastomers in relation to the dynamics from broadband dielectric spectroscopy.
(*ESMI_2015, ESMI_2014*) *Project of FP 7 EU*

Resolving the segmental relaxation dynamics in oligomeric poly(isoprene)s.
(*ESMI_2013*) *Project of FP 7 EU*

Secondary relaxations in a series of poly(isoprene)s as a function of chain length in relation to the glass-liquid transition phenomenon by a combined broadband dielectric spectroscopy (BDS), positron annihilation lifetime spectroscopy (PALS) and electron spin resonance (ESR) investigations.
(*ESMI_2011/2012*) *Project of FP 7 EU*

Simulation of ESR spectra in polymers and heterogeneous polymer systems.
(*Start grant_2010/2011*)

Relationships between free volume and broadband relaxation dynamics of glass formers within a phenomenological and novel theoretical approach. (*DAAD/SAV_2008/2009*)

External probe characterization of the confined organics. (*DAAD/SAV_2015/2016*)

Slovak projects:

Characterization of complex organic matters in space limitation by means of external probing techniques. (*VEGA_2016/2019*)

Structural-dynamic characterization of volume and space-limited glass-formers and crystallizing matrices by means of ESR technique. (*VEGA_2012/2015*)

Free volume microstructure and dynamics of glass-forming systems by using two probe techniques. (*VEGA_2009/2011*)

Phenomenological and microscopic aspects of the structure and the dynamic and transport properties of condensed systems. (*VEGA_2006/2008*)

Education

Dates	2005-2009
Title of qualification awarded	PhD. in macromolecular chemistry (PhD.)
Principal subjects/occupational skills covered	Structure, dynamics and rotational-transport properties of glass forming systems
Name and type of organisation providing education and training	Polymer Institute, Slovak Academy of Sciences, Bratislava, Slovakia Slovak University of Technology, Faculty of Chemical and Food Technology, Bratislava, Slovakia
Dates	2000-2005
Title of qualification awarded	Master in physical chemistry (Ing.)
Principal subjects/occupational skills covered	ESR study of photochemical reactions in carotenoids
Name and type of organisation providing education and training	Slovak University of Technology, Faculty of Chemical and Food Technology, Bratislava, Slovakia

Personal skills and competences

Good social skills, the ability to adapt to working environment, I am also used to work in team and to offer my knowledge and skills.

Mother tongue(s)

Slovak

Self-assessment

European level (*)

English

Spanish

Czech

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B1	Independent user	B1	Independent user	B1	Independent user	B1	Independent user	B1	Independent user
A2	Basic user	B1	Basic user	A1	Basic user	A1	Basic user	A2	Basic user
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	B2	Independent user

(*) [Common European Framework of Reference for Languages](#)

Social skills and competences

Good adaptability to multicultural environments, gained through my work experience abroad

Technical skills and competences

Electron Spin Resonance (ESR)
 Broadband Dielectric Spectroscopy (BDS)
 Positron annihilation lifetime spectroscopy (PALS)
 Differential scanning calorimetric (DSC)
 Diffuse Reflectance Infra-red Fourier Transform (DRIFT)
 photo-DSC, photo-Rheometry with IR,
 Dynamic mechanical analysis (DMTA)

Computer skills and competences

MS Office products, Origin, WIN-EPR, NLSL, IS Draw, Elementary programming with C++, Dynamic Websites (HTML, CSS, JAVASCRIPT_ Visual studio, Dreamweaver 8.0), Database Development in Microsoft SQL Server, e-Project-Dreamweaver (certificate from *Aptech* accredited Computer Education, March 2013)

Other skills and competences

State exam from administration and typing

Driving licence

Category B

Additional information

PUBLICATIONS:

TOTAL PUBLICATIONS: 19

CC PUBLICATIONS: 14

19.

J. BARTOŠ*, H. ŠVAJDLENKOVÁ, O. ŠAUŠA, M. LUKEŠOVÁ, D. EHLERS, M. MICHL, P. LUNKENHEIMER, A. LOIDL: Molecular probe dynamics and free volume in organic glass formers and their relationships to structural relaxation: 1-Propanol. In *J. Phys. - Cond. Matter* 28, (2016), 015101-112.

18.

H. ŠVAJDLENKOVÁ, B. ZGARDZINSKA, M. LUKEŠOVÁ, J. BARTOŠ*: Spin probe dynamics in relation to free volume in crystalline compounds by ESR and PALS: Cyclohexane. In *Chem. Phys. Letts.* 643, (2016) 98-102.

17.

H. ŠVAJDLENKOVÁ*, O. ŠAUŠA, J. STEINDL, T. KOCH, CH. GORSCHÉ*: Microstructural PALS Study of Regulated Dimethacrylates: Thiol- versus β -Allyl Sulfone-Based Networks. In *J. Polym. Sci. B Polym. Phys.* X, (2016) YY-ZZ.

16.

P. GAUS, S. CLARK LIGON-AUER, M. GRIESSER, CH. GORSCHÉ, H. ŠVAJDLENKOVÁ, T. KOCH, N. MOSZNER, R. LISKA*: The influence of Vinyl Activating groups on β -Allyl Sulfone-Based Chain Transfer Agents for Tough Methacrylate Networks. In *J. Polym. Sci. Part A: Polym. Chem.* 54, (2016) 1417-1427.

15.

M. LUKEŠOVÁ, B. ZGARDZINSKA, H. ŠVAJDLENKOVÁ, R. ZALESKY, B. CHARMAS, J. BARTOŠ*: Spin probe dynamics in relation to free volume in crystalline organics from ESR and PALS: n-tridecane. In *Physica B - Cond. Matter* 476, (2015) 100-108.

14.

M. LUKEŠOVÁ, H. ŠVAJDLENKOVÁ, P. SIPPEL, E. MACOVA, D. BEREK, A. LOIDL, J. BARTOŠ*: Spin probe Dynamics of n-hexadecane in confined geometry. In *Eur. Phys. J.B- Condensed Matter and Complex Systems* 88, (2015) 46-57.

13.

J. BARTOŠ*, H. ŠVAJDLENKOVÁ, M. LUKEŠOVÁ, Y. YU, R. Krause-Rehberg: Molecular Dynamics and free volume in organic glass-formers: a series of oligomer and polymer 1,4-poly(isoprene)s. In *J. Chem. Phys. Letters* 602, (2014) 28-33.

12.

Y. Yu, G. DLUBEK*, J. BARTOŠ, H. ŠVAJDLENKOVÁ and R. KRAUSE-REHBERG*: Relationships between Positron Lifetime and Dynamics of Polymers. In *Materials Science Forum* 733, (2013) 179-182.

11.

J. BARTOŠ, H. ŠVAJDLENKOVÁ, Y. Yu, G. DLUBEK, and R. KRAUSE-REHBERG: Molecular probe Dynamics and free volume in glass-formers: 1,2- and 1,4-poly(butadiene)s. In *Chem. Phys. Letters* 584, (2013) 88-92.

10.

J. BARTOŠ*, H. ŠVAJDLENKOVÁ, R. ZALESKI, M. EDELMANN, M. LUKEŠOVÁ: Spin probe Dynamics in relation to free volume in crystalline organics by means of ESR and PALS: n-Hexadecane. In *Physica B: Cond. Matter* 430, (2013) 99-105.

9.

H. ŠVAJDLENKOVÁ, O. ŠAUŠA, M. ISKROVÁ-MIKLOŠOVIČOVÁ, V. MAJERNIK, J. KRIŠTIK, J. BARTOŠ: On the relationships between guest molecular dynamics and free volume in a series of small molecular and polymer glass formers. In *J. Chem. Phys. Letters* 539-540, (2012) 39-44.

Additional information

8. J. BARTOŠ, M. ISKROVÁ-MIKLOŠOVIČOVÁ, D. CANGIALOSI, A. ALEGRÍA, O. ŠAUŠA, H. ŠVAJDLENKOVÁ, A. ARBE, J. KRIŠTIK and J. COLMENER: Positron annihilation and Relaxation dynamics from dielectric spectroscopy: poly(vinylmethylether). In *J. Phys.- Cond. Matter* 24, (2012) 155104-16.
7. J. BARTOŠ, O. ŠAUŠA, M. KÖHLER, H. ŠVAJDLENKOVÁ, P. LUNKENHEIMER, J. KRIŠTIK, A. LOIDL: Positron annihilation response and broadband dielectric spectroscopy: A series of *propylene (glycols)*. In *J. Non - Cryst. Solids* 357, (2011) 376 – 384.
6. H. ŠVAJDLENKOVÁ, O. ŠAUŠA, G. DLUBEK, J. KRIŠTIK, J. BARTOŠ: ESR study of the spin probe dynamics in relation to the free volume from PALS in a series of amorphous polymer glass-formers. In *Macromol. Symp.* 305, (2011) 108-115.
5. H. ŠVAJDLENKOVÁ, J. BARTOŠ: Spin probe mobility in relation to free volume and relaxation dynamics of glass-formers: A series of spin probes in poly(isobutylene). In *J. Polym. Sci. B Polym. Sci.* 47, (2009) 1058-1068.
4. H. ŠVAJDLENKOVÁ, D. RAČKO, J. BARTOŠ: Spin probe reorientation and its connections with free volume and relaxation dynamics: Diglycidyl ether of bis phenol A. In *J. Non-Cryst. Solids* 354, (2008) 1855-1861.
3. H. ŠVAJDLENKOVÁ, J. BARTOŠ: Spin probe dynamics in relation to free volume and relaxation dynamics of poly(isobutylene). In *Chem. Listy* 102, (2008) 1271-1275.
2. H. ŠVAJDLENKOVÁ, J. BARTOŠ: Spin probe reorientation and its connections with free volume and relaxation dynamics: The case of poly(isobutylene). In *Trends in Appl. Spectroscopy* 6, (2007) 57-67.
1. D. DVORANOVÁ, V. BREZOVÁ, H. ŠVAJDLENKOVÁ: Photoinduced generation of reactive intermediates in titanium dioxide suspensions investigated by EPR spin trapping technique: N-oxide vs. nitron spin trapping agents. In *Chem. Listy* 99, (2005) 207-210.

CONFERENCES:

Participation on conferences (total/active): lectures: 23/9, poster: 7/5

INVITED LECTURES:

2. H. ŠVAJDLENKOVÁ, A. RUFF, O. ŠAUŠA, P. LUNKENHEIMER, A. LOIDL, J. BARTOŠ: Non-traditional characterization of m-Toluidine via PALS and ESR in relation to relaxation data from BDS. *Experimental Physics V, EKM, University of Augsburg, D-86135 Augsburg, Germany.*
(21.03.2014)
1. H. ŠVAJDLENKOVÁ, J. BARTOŠ: The mutual relationships of spin probe mobility (ESR) with free volume (PALS) in relation to relaxation dynamics (BDS) in selected glass-forming systems, *Forschungszentrum Garching, Germany.*
(24.01.2013)