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Professional
 experience

Institute of Experimental Botany AS CR (*since January 2014*) Olomouc, Czech republic
Centre of the Region Haná, Department of Metabolomics (*since January 2014*)
Palacky University, Faculty of Science (*since September 2013*)

Group leader. Research focuses on the development of new approaches to biologically active natural and nature-inspired molecules with main focus on their antileishmanial, antioxidant and anticancer activity.

Australian National University Canberra, Australia
Visiting researcher. Research School of Chemistry. Prof. L. Mander's group. Research focused on the synthesis of plant hormones – gibberellins. (November 2014)

École Polytechnique Paris, France
CNRS research fellow. Laboratory of Organic synthesis. Research focuses on the development of new *N*-radical precursors and radical-initiated cascade polycyclizations. Advisor: Prof. S. Zard. (October 2012 – July 2013)

Université catholique de Louvain Louvain-la-Neuve, Belgium
F.S.R.-FNRS research fellow. Institute of condensed matter and nanoscience. Research focused on development of new atom and functional group efficient synthetic methodologies, experimental physical-organic chemistry, labelled compounds, design of cascade reactions. (October 2008 – September 2012)
NMR-department responsible (part of ASM platform). (August 2009 – September 2012)

Max-Planck Institute für Kohlenforschung Mülheim-an-der-Ruhr, Germany
Max-Planck Institute postdoctoral fellow. Department of Organometallic Chemistry. Total synthesis of aspercyclide B and ipomoeassin D and F. Transition metal-based approaches to above mentioned molecules, carbohydrate chemistry. Advisor: Prof. A. Fürstner. (November 2006 – September 2008)

University of Missouri-Columbia Columbia (MO), USA
Stevenson research fellow. Department of Chemistry. Research focused on the NMR-based investigation of interactions between DNA and fecapentane-12. Advisor: Prof. K. S. Gates. (July 2001 – September 2001)

Université catholique de Louvain Louvain-la-Neuve, Belgium
Socrates-Erasmus fellow. Department of Organic and Medicinal Chemistry. Synthetic studies towards the okadaic acid total synthesis. Lewis acids promoted polycyclizations. Advisor: Prof. I. E. Markó. (April 2001 – June 2001)

IVAX Pharmaceuticals Ltd. Opava, Czech republic
Summer researcher. Research & Development. Advisor: Dr. M. Chudik (August 2000 – September 2000)

Education	<p>Université catholique de Louvain Louvain-la-Neuve, Belgium <i>Ph.D. doctorate in chemistry.</i> Department of Organic and Medicinal Chemistry. Title: Towards antifungal compounds: total synthesis of jerangolid D. Advisor: Prof. I. E. Markó. (September 2006)</p> <p>Université catholique de Louvain Louvain-la-Neuve, Belgium <i>Diplome d'études approfondies (D.E.A.)</i> (with the highest Distinction). Department of Organic and Medicinal Chemistry. (June 2005)</p> <p>Masaryk University Brno, Czech republic <i>Master of Science</i> (with Distinction). Department of Organic Chemistry. Thesis: Intramolecular 1,3-dipolar cycloadditions of azomethine ylides initiated by microwaves. Advisor: Prof. M. Potáček (June 2002)</p>
Teaching experience	<p>Palacky University Olomouc, Czech republic</p> <ul style="list-style-type: none"> • Seminary of Chemical Calculations. Lecturer. (Bc. 1, in Czech) The seminar of chemical calculations. Introduction to valuation of analytical results. (since September 2014) <p>Université catholique de Louvain Louvain-la-Neuve, Belgium</p> <ul style="list-style-type: none"> • Practical complements in chemistry. Lecturer. (Bc. 3, in French) Application of NMR spectroscopy in synthetic organic chemistry: from reaction kinetics to structure determination. Theory and applications. (September 2009 – June 2012) • Natural product synthesis. Lecturer. (MS 1, in English) Synthesis and retrosynthesis of challenging natural products. In-depth discussion of used synthetic approaches. (September 2008 – June 2012) • Organic chemistry. Head teaching assistant. (Bc. 1 and 2, in French) Prepared teaching materials including problem sets and exams. Supervised other teaching assistants and graders. Addressed individual students' questions and needs. (September 2008 – June 2012) • Organic chemistry laboratory. Teaching assistant. (Bc. 1 and 2, in French) Supervised and instructed students in organic chemistry techniques. Emphasized keeping complete and accurate scientific notes. (September 2008 – June 2012)
Awards and Honors	<ul style="list-style-type: none"> • 2014 Alfred Bader Prize for Organic Chemistry, Czech Chemical Society, Czech republic (2014). • Incentive Award of the C.G.B.-C.B.B. (intermediate committee between the two Belgian chemical societies), Belgium (2012). • JSP Fellow (Junior Scientific Program) at the Bürgenstock Conference, Switzerland (2012).

Awards and Honors	<ul style="list-style-type: none"> • Henkel fellow in the 59th Meeting of Nobel Laureates dedicated to Chemistry, Lindau, Germany (2009). • F.R.S.-FNRS research fellow, Belgium (2008-2012). • Max-Planck Postdoctoral fellow, Germany (2006-2008). • Rhodia Organics Ph.D. fellow, France (2002 – 2006). • Stevenson award, University of Missouri-Columbia, USA (2001). • The Dean prize (twice), Faculty of Science, Masaryk University, Czech republic (2000 and 2001). • Chemical section prize, Masaryk University, Czech republic (1999).
Bc., MS. and Ph.D. Theses supervisor	<ul style="list-style-type: none"> • Kozubíková, Hana – <i>Ph.D. Theses (in progress)</i>. Title: „Rostlinné přírodní látky s anti-oxidačními účinky“ (Natural products of plant origin with anti-oxidation properties) • Konrádová, Daniela – <i>Master Thesis (in progress)</i>. Title: “Výzkum a vývoj nových biologicky aktivních látek s antileishmanickými vlastnosti: Syntéza (-)-sanguinolignan A” (Development of new biologically active compounds with antileishmanial activity: Total synthesis of Sanguinolignan A) • Debrus, Kevin – <i>Master Thesis</i> (2011). Title: “Synthèse efficace d'oléfines non-conjuguées” (Efficient synthesis of non-conjugated olefins) • Billard, Francois – <i>Bachelor Thesis</i> (2010). Title: “Julia-Kocienski Reaction-Based 1,3-Diene Synthesis” • Baudrenghien, Lionel – <i>Master Thesis</i> (2009). Title: “The three Component Silyl Modified Sakurai Reaction : Scope and Limitations”
External funding	<ul style="list-style-type: none"> • P.I. Title: Cascade reactions, Source: F.R.S.-FNRS foundation (10/2008-09/2011), amount: 30,000 EUR • P.I. Title: β-ketosulfones as new parent molecules, Source: F.R.S.-FNRS foundation (10/2011-09/2012), amount: 10,000 EUR • Co-P.I. Title: Synthesis of the cationic sugar analogs as the inhibitors of the mycobacterial cell walls biosynthesis. Towards a new TBC therapy. Source: <i>Action de Recherche Concertée</i>, region Walloon (10/2008-09/2011), total amount: 250,000 EUR.
Languages	Czech (mother tongue), English (fluent), French (very good), Slovak (passive).
Other professional activities	<p>Member of the American chemical society (2006), Czech chemical society (1999) and Belgium chemical society – French-speaking part (2011).</p> <p>Reviewer to ACS Petroleum Research Funds (since 2010), Agence National de la Recherche (France, since 2010) and Grand Agency of the Czech republic (2011).</p> <p>Referee to Organic and Bioorganic Chemistry, Organic Letters, Tetrahedron Letters, Tetrahedron.</p>

References

Prof. Samir Z. Zard
UMR 7652 CNRS-École Polytechnique
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91128 Palaiseau CEDEX, France
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Prof. István E. Markó
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Prof. Jim Thomas
Chemistry Building-2.27
The University of Manchester
Oxford Road, Manchester M13 9PL; UK
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Prof. Alois Fürstner
Max-Planck-Institut für Kohlenforschung
Kaiser-Wilhelm-Platz 1
D-45470 Mülheim an der Ruhr, Germany
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Publications

- (27) "Determination of free diferulic, disinapic and dicoumaric acids in plants and foods" Grúz, J.; Pospíšil, J.; Kozubíková, H.; Pospíšil, T.; Doležal, K.; Bunzel, M.; Strnad, M. *Food Chem.* **2015**, *171*, 280-286.
- (26) "On the Origin of E/Z Selectivity in the Modified Julia Olefination: Importance of the Elimination Step" Robiette*, R.; Pospíšil*, J. *Eur. J. Org. Chem.* **2013**, 836-840.
- (25) "Julia-Kocienski Reaction-Based 1,3-Diene Synthesis: Aldehyde-Dependent (E,E/Z)-Selectivity" Billard, F.; Robiette, R.; Pospíšil*, J. *J. Org. Chem.* **2012**, *77*, 6358-6364.
- (24) "Practical Synthesis of β -oxobenzo[d]thiazol sulfones: Scope and Limitations" Pospíšil*, J.; Robiette, R.; Sato, H.; Debrus, K. *Org. Biomol. Chem.* **2012**, *10*, 1225-1234.
- (23) "Planar Chirality of Imidazole-Containing Macrocycles – Understanding and Tuning Atropisomerism" Van Den Berge, E.; Pospíšil, J.; Trieu-Van, T.; Collard, L.; Robiette*, R. *Eur. J. Org. Chem.* **2011**, *2011*, 6649-6655.
- (22) "Simple protocol for enhanced (E)-selectivity in Julia-Kocienski reaction" Pospíšil*, J. *Tetrahedron Lett.* **2011**, *52*, 2348-2352.
- (21) "Practical synthesis of β -acyl and β -alkoxycarbonyl heterocyclic sulfones" Pospíšil*, J.; Sato, H. *J. Org. Chem.* **2011**, *76*, 2269-2272.
- (20) "Total Synthesis and Biological Evaluation of the Cytotoxic Resin Glycosides Ipomoeassin A-F and Analogues" Nagano, T.; Pospíšil, J.; Chollet, G.; Schulthoff, S.; Hickmann, V.; Moulin, E.; Herrmann, J.; Müller, R.; Fürstner*, A. *Chem. Eur. J.* **2009**, *15*, 9697-9706.
- (19) "Total Synthesis of the Aspercyclides" Pospíšil, J.; Müller, C.; Fürstner*, A. *Chem. Eur. J.* **2009**, *15*, 5956-5968.
- (18) "Unexpected nucleophilic behaviour of free-radicals generated from α -iodoketones" De Dobbeleer, C.; Pospíšil, J.; De Vleeschouwer, F.; De Proft, F.; Markó*, I. E. *Chem. Commun.* **2009**, 2142-2144.
- (17) "Amlodipine Benzenesulfonate: A Mechanistic Investigation of Its Industrial Preparation via Detritylation of N-tritylamlopidine and Related NMR Studies" Furlan, B.; Grdadolnik, S. G.; Hočevár, S.; Kocjan, D.; Levec, J.; Maskill, H.; Navrátilová, H.; Pospíšil, J.; Potáček, M.; Urleb*, U.; Žmitek*, J. *Croat. Chem. Acta* **2009**, *82*, 299-309.
- (16) "Metathesis-based synthesis of 3-methoxy α,β -unsaturated lactones: total synthesis of (R)-kavain and of the C1–C6 fragment of jerangolid D" Pospíšil, J.; Markó*, I. E. *Tetrahedron Lett.* **2008**, *49*, 1523-1526.
- (15) "Total synthesis of Jerangolid D" Pospíšil, J.; Markó*, I. E. *J. Am. Chem. Soc.* **2007**, *129*, 3516-3517. (JACS's 20th most accessed article in 2007, included in 1st issue of JACS β).

- Publications
- (14) "Microwave-assisted Solvent-free Intramolecular 1,3-Dipolar Cycloaddition Reactions Leading to Hexahydrochromeno[4,3-*b*] pyrroles: Scope and Limitations" Pospíšil, J.; Potáček*, M. *Tetrahedron* **2007**, *63*, 337-346.
 - (13) "Efficient and stereoselective synthesis of allylic ethers and alcohols" Pospíšil, J.; Markó*, I. E. *Org. Lett.* **2006**, *8*, 5983-5986.
 - (12) "Total synthesis of (*R*)-(+)-goniothalamine and (*R*)-(+)-goniothalamine oxide: first application of the sulfoxide-modified Julia olefination in total synthesis" Pospíšil, J.; Markó*, I. E. *Tetrahedron Lett.* **2006**, *47*, 5933-5937. (Tetrahedron Letters' 24th hottest article in 2006).
 - (11) "Highly Diastereoselective Silyl-Modified Sakurai Multicomponent Reaction" Pospíšil, J.; Kumamoto, T.; Markó*, I. E. *Angew. Chem. Int. Ed.* **2006**, *45*, 3357 – 3360.
 - (10) "Sulfoxide-modified Julia-Lythgoe olefination: Highly stereoselective di-, tri-, and tetra-substituted double bond formation" Pospíšil, J.; Pospíšil, T.; Markó*, I. E. *Collect. Czech. Chem. Commun.* **2005**, *70*, 1953-1969.
 - (9) "Tetracarbonylhydridoferrate Salts: NaHFe(CO)₄ and KHFe(CO)₄" Pospíšil*, J. *Synlett*, **2005**, 2543-2544.
 - (8) "Sulfoxides in Julia-Lythgoe Olefination: Efficient and Stereoselective Preparation of Di-, Tri-, and Tetrasubstituted Olefins" Pospíšil, J.; Pospíšil, T.; Markó*, I. E. *Org. Lett.* **2005**, *7*, 2373-2376.
 - (7) "A solvent-free method for substituted imidazolidin-4-ones synthesis" Pospíšil, J.; Potáček*, M. *Heterocycles* **2004**, *63*, 1165-1173.
 - (6) "Microwave-assisted solvent-free synthesis of hexahydrochromeno-[4,3-*b*] pyrroles" Pospíšil, J.; Potáček*, M. *Eur. J. Org. Chem.* **2004**, 710-716.
 - (5) "Studies on the DNA-damaging properties of the endogenous mutagen fecapentaene-12" Szekely, J.; Pospíšil, J.; Gates*, K. S. *Chem. Res. Tox.* **2003**, *16*, 101.
 - (4) "Studies on the DNA-damaging properties of the endogenous mutagen fecapentaene-12" Szekely, J.; Pospíšil, J.; Gates, K. S. *Abstr. Pap. Am. Chem. Soc.* **2003**, 226, p. 103-TOXI.
 - (3) "HPLC on chiral nonracemic sorbents with circular dichroism detection: Stereoisomers formed by 1,3-dipolar cycloadditions" Pospíšil, J.; Trávníček, M.; Mannschreck, A.; Potáček*, M. *Chem. Listy* **2003**, *97*, 1193-1197.
 - (2) "Influence of N-substituents of carbamoyl-stabilized azomethine ylides in 1,3-dipolar cycloadditions" Pospíšil, J.; Trávníček, M.; Potáček*, M. *ARKIVOC*, **2001**, (ii), 146-162.
 - (1) "Reactions of a new family of amide derivatives of phenanthridinium azomethine ylides with dipolarophiles" Trávníček, M.; Pospíšil, J.; Potáček*, M. *Collect. Czech. Chem. Commun.* **1999**, *64*, 1993-2006.

- Book chapters
- (2) "Julia, Julia-Kocienski, and related sulfur-based alkenylation" Markó, I.E.; Pospíšil, J. In *Science of Synthesis*, Vol. 47a: Alkenes; de Meijere, A., Ed.; Thieme, **2009**; p. 105-160.
 - (1) "The modified Sakurai and related reactions" Jacques, T.; Markó, I.E.; Pospíšil, J. In *Multicomponent reactions*; Zhu, J.; Bienaime, H., Eds.; Wiley, **2005**; p. 398-452.
- Teaching manuscripts
- (1) "CHM-1141 – Organic Chemistry I – Exercises" Pospíšil*, J. *UCLouvain*, **2012**. (E-book designed for students of CHM1141 – Organic chemistry I lecture course).
- Invited talks
- (19) "Novel synthetic tools and their application in natural product synthesis" *49th Advances in Organic, Bioorganic and Pharmaceutical Chemistry*, Lázně Bělohrad (Czech republic), November 2014.
 - (18) "Syntéza lignanů a jejich derivátů" *XIV. Mezioborové setkání mladých biologů, biochemiků a chemiků*, Devět Skal hotel, Milovy (Czech republic), May 2014.
 - (17) "Novel approaches to classical building blocks, natural products and their analogs" *BioNet centrum seminary*, Olomouc (Czech republic), May 2013.
 - (16) "Towards 'programmable' organic reagents" *Seminary*, DCSO, École Polytechnique (France), December 2012.
 - (15) "New organic reagents" *Louvain Drug Research Institute*, Université catholique de Louvain (Belgium), December 2012.
 - (14) "Vers une nouvelle classe de réactifs organiques" *Journée Scientifique Annuelle de la SRC*, Louvain-la-Neuve (Belgium), October 2012.
 - (13) "α-Carbonyl benzo[d]thiazoyl (BT) sulfones as powerful reagents in organic synthesis" *ChemCYS*, Blankenberge (Belgium), March 2012.
 - (12) "Organic synthesis – one science, two points-of-view" *Seminary*, Agro-BioTech, Université de Liège (Belgium), January 2012.
 - (11) "Application of benzo[d]thiazoyl(BT)sulfonyl group as traceless directing group in organic synthesis" *15th Sigma-Aldrich Organic synthesis meeting*, Spa (Belgium), December 2011.
 - (10) "Ambivalent organic molecules: from concept to first applications" *BioNet centrum seminary*, Olomouc (Czech republic), May 2011.
 - (9) "Novel approaches to classical building blocks" *Euro-express workshop ESF*, Palacky University (Czech republic), May 2011.
 - (8) "Cascade reactions" *1st Young Investigator Workshop, EuChem conference*, Liblice (Czech republic), July 2009.
 - (7) "Pericyclic reactions Initiated by Microwaves" *Chemistry in High-Energy Microenvironments Satellite Event to 10th Meeting of the European Society of Sonochemistry*, Hamburg (Germany), Book of Abstracts p. 26, June 2006.
 - (6) "Synthetic studies towards (+)-ambruticine" *Eli Lilly workshop*, Namur (Belgium), April 2006.

Invited talks

- (5) "Synthetic studies towards (+)-ambruticine" *9th Sigma-Aldrich Organic synthesis meeting*, Spa (Belgium), December 2005.
- (4) "Synthetic studies towards (+)-ambruticine" *9th PhD's students day*, Louvain-la-Neuve (Belgium), May 2005.
- (3) "Synthetic studies towards (+)-ambruticine" *Pfizer workshop*, Sandwich (UK), September 2003.
- (2) "Mikrovlkami iniciované 1,3-dipolární cykloadiční reakce azomethinylidů" *3rd International meeting of Master students in organic chemistry*, Bratislava (Slovakia), April 2002.
- (1) "Synthesis and biological evaluation of fecapentane 12" *Stevens award lecture talk*, University of Missouri-Columbia, Columbia MO (USA), September 2001.