

PERSONAL INFORMATION

Balazs Brem

nr. 458, 447135 Foieni, Satu-Mare (Romania)

0744144481

brembalazs@gmail.com

Sex Male | Date of birth 23 February 1987 | Nationality Romanian

EDUCATION AND TRAINING

01 November 2014 –
01 November 2015

Doctoral (Sciex) Fellow

University of Neuchatel, Institut of Inorganic Chemistry, Neuchâtel (Switzerland)

PDT "Synthesis of heteroaryl meso substituted porphyrins, and their coordination with ruthenium complexes."

01 October 2012 –
01 September 2015

PhD student

Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj- Napoca (Romania)

"SYNTHESIS AND BIOLOGICAL ACTIVITY ASSESSMENTS IN SERIES OF NEW PHENOTHIAZINE FUNCTIONALIZED HETEROAROMATIC COMPOUNDS"

01 July 2013 –
01 September 2013

SOE-DAAD Scholarship

University of Leipzig, Faculty of Chemistry and Minerology, Leipzig (Germany)

22 November 2012 –
22 December 2012

SOE-DAAD Scholarship

University of Leipzig, Faculty of Chemistry and Minerology, Leipzig (Germany)

15 April 2011 –
01 July 2013

Research Assistant

Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj -Napoca (Romania)

20 November 2011 –
20 April 2012

Erasmus Guest

Eötvös Loránd University, Faculty of Natural Sciences, Budapest (Hungary)

Knowledge skills and competences to be acquired:

-ECD spectroscopic studies of proteins and peptides.

Models:β-turn and hairpin peptides, lactalbumin

Preparation of dirhodium complexes of amino acids/dipeptides by in situ method:

-monitoring the complexation by UV- and ECD spectroscopy

- optimize the conditions of ECD measurement for the amide wavelength region: 190-300 nm

- analysis of the mixtures of complexes by HPLC

Developing a separation methodology for the earlier, in situ method prepared dirhodium complexes: automat (Biotage) and normal flash chromatography, HPLC

Structure analysis of the new, isolated dirhodium complexes: ECD, FTIR, VCD and/or studies of the in situ complex mixtures by FTIR spectroscopy

01 October 2009 – **Master's degree** EQF level 6
 01 July 2011 Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj Napoca (Romania)
 Organic and Biochemical Processes Engineering

“THE SYNTHESIS OF NEW PHENOTHIAZINYL PORPHYRINS AND THEIR METAL(II) COMPLEXES”

08 February 2010 – **Erasmus Scholarship**
 08 August 2010 UNIVERSITY OF TECHNOLOGY AND ECONOMICS, Faculty of Chemistry, Budapest (Hungary)
 Knowledge skills and competences to be acquired:

- enzyme catalyzed kinetic resolution
- preparative scale kinetic resolution
- GC analyses were carried out on ACME 3000 instruments equipped with FID detector

Enantiomer selective acylation of racemic thiophene- alcohols in discontinuous and continuous-flow bioreactors

01 October 2005 – **Bachelor of Science degree (ENGINEER)** EQF level 5
 01 July 2009 Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj Napoca (Romania)
 Chemistry and Engineering of Organic Substances, Petrochemistry and Carbochemistry

“SYNTHESIS AND STRUCTURAL ANALYSIS OF PHENOTHIAZINE CONTAINING KETONES”

01 September 2001 – **High School Diploma** EQF level 3
 01 July 2005 Teoretical High School Carei, Carei (Romania)
 Mathematics and Informatics

PERSONAL SKILLS

Mother tongue(s) Hungarian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B1	B1	B2
Romanian	C1	C1	C1	C1	B2
German	A2	A2	A1	A2	A1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
[Common European Framework of Reference for Languages](http://www.cedefop.europa.eu)

Computer skills -good command of Microsoft Office suite
 - basic user of Matlab

Driving license: **B**

Attachments:

Presentations:

1. THE SYNTHESIS OF NEW PHENOTHIAZINYL PORPHYRINS AND THEIR METAL(II) COMPLEXES

Workshop "From Molecules to Functionalised Materials", SOE-DAAD Workshop Skopje, Macedonia, 16-20 March 2011

2. PHENOTHIAZINE BASED DIPYRROMETHANES ACYLATION, AND SELECTIVE PURIFICATION WITH DIALKYL-TIN COMPLEXATION

Workshop "From Molecules to Functionalised Materials", SOE-DAAD Workshop Cluj Napoca, Romania, 8-11 October 2013

Posters

1. SYNTHESIS AND STRUCTURAL ANALYSIS OF PHENOTHIAZINE CONTAINING KETONES

Balázs Brém, Anetta Láng, Tamás Lovász, Luminița Silaghi-Dumitrescu, Workshop "From Molecules to Functionalised Materials" - Cluj Napoca, Romania, October 2009

2. SYNTHESIS AND CHARACTERIZATION OF SOME NEW PORPHYRINS WITH PHENOTHIAZINE UNITS

Brém Balázs, Gál Emese, Lovász Tamás, Luminița Silaghi-Dumitrescu, Workshop "From Molecules to Functionalised Materials" - Cluj Napoca, Romania, October 13-18, 2010

3. KINETIC RESOLUTION OF SULFUR-CONTAINING SECONDARY ALCOHOLS IN BATCH AND CONTINUOUS-FLOW BIOREACTORS

Boros Zoltán, Hellner Gabriella, Brém Balázs, Zsóka Péter, Poppe László, HCS 1. National Conference, Sopron, Hungary, May 22-25, 2011

4. STRUCTURAL ANALYSIS OF NEW PHENOTHIAZINYL-PORPHYRINS

B. Brém, E. Gál, T. Lovász, L. Găină, L. Silaghi-Dumitrescu, Advanced Spectroscopies on Biomedical and Nanostructured Systems BioNanoSpec-4 - Cluj Napoca, Romania, September 4-7, 2011

5. FLUORESCENCE PROPERTIES OF NEW PHENOTHIAZINYL-PORPHYRINE DERIVATIVES

E. Gál, B. Brém, L. Găină, T. Lovász, C. Cristea, L. Silaghi-Dumitrescu, 12th Conference on Methods and Applications of Fluorescence - Strasbourg, France, September 11-14, 2011

6. FIRST EXAMPLES OF MESO-PHENOTHIAZINYL-DIPYRROMETHANE CONTAINING HOMOLEPTIC TRANSITION METAL COMPLEXES

B. Brém, E. Gál, L. Găină, T. Lovász, L. Silaghi-Dumitrescu, XVIIIth International Conference on Chemistry - Oradea, Romania, November 22-25, 2012

7. SYNTHESIS OF HETEROARYL MESO-SUBSTITUTED PORPHYRINS, AND THEIR COORDINATION WITH RUTHENIUM COMPLEXES

Balázs Brém, Luminița Silaghi-Dumitrescu, Bruno Therrien, SCS Laureates and Awards & Fall Meeting 2015, Lousanne, Elveția, September 5, 2015

Publicated scientific articles:

1. A "yellow" laccase with "blue" spectroscopic features, from *Sclerotinia sclerotiorum*, Augustin C. Moț, Marcel Pârvu, Grigore Damianc, Zsuzsanna Darulad, Katalin F. Medzihradskyd, Balazs Brem, Radu Silaghi-Dumitrescu, *Process Biochemistry*, 2012, 47(6), 968–975;
2. Dirhodium complexes: determination of absolute configuration by the exciton chirality method using VCD spectroscopy, Gábor Szilvágyi, Balázs Brém, Gábor Báti, László Tölgyesi, Miklós Hollósi, Elemér Vass, *Dalton Trans.*, 2013, 42, 13137–13144;
3. Novel meso-phenothiazinylporphyrin dyes: Synthesis, optical, electrochemical properties and PDT assay, Emese Gal, Balazs Brem, Iani Pereteanu, Luiza Gaina, Tamas Lovasz, Maria Perde-Schrepler, Laura Silaghi-Dumitrescu, Castelia Cristea, Luminita Silaghi-Dumitrescu, *Dyes and Pigments*, 2013, 99, 144-153;
4. Assessments of electronic properties in phenothiazine carbaldehyde regioisomers series, B. Brém, E. Gál, C. Cristea, L. Găină, L. Silaghi-Dumitrescu, *STUDIA UBB CHEMIA*, 2015, LX, 2, 271-279;
5. Synthesis of new benzothiazolyl-phenothiazine derivatives, B. Brém, E. Gál, C. Cristea, A. Grozav, V. Zaharia, L. Găină, L. Silaghi-

Dumitrescu, *STUDIA UBB CHEMIA*, **2015**, LX, 2, 361-369;

6. **Synthesis of Novel(Phenothiazinyl)Dipyrrolymethanes**, B. Brém, E. Gál, L. Găină, C. Cristea, L. Silaghi-Dumitrescu, *Rev. Roum. Chim.*, **2014**, 59(11-12), 949-952;
7. **Electronic properties of regioisomeric Schiff bases assembled by employing phenothiazine building blocks**, C. Cristea, L. Găină, E. Gál, B. Brém, I. Torje, V. Andronic, L. Silaghi-Dumitrescu, submitted to *Tetrahedron*;
8. **Metallo complexes of Meso-Phenothiazinylporphyrins-two photon active chromophores**, B. Brém, E. Gál, L. Găină, C. Cristea, A. M. Gabudean, S. Astilean, L. Silaghi-Dumitrescu, *Dyes and Pygments*, **2015**, 123, 386-395;