

PERSONAL INFORMATION

Private Address:

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EDUCATION

- 2011 – 2014 **PhD in Organic Chemistry**
University of Bordeaux, Institute of Molecular Sciences, Team “Molecular Chemistry and Materials”, Thesis title “*Dendritic functionalization of core-shell magnetic nanoparticles for biotechnology*”, Bordeaux, France
- 2008 – 2010 **MSc (Exact Sciences), Specialization – Coordination Chemistry**
Moldova State University, Department of Chemistry and Chemical Technology, Chişinău, Rep. of Moldova
- 2003 – 2008 **BSc (Chemistry), Specialization – Analytical Chemistry**
Moldova State University, Department of Chemistry and Chemical Technology, Chişinău, Rep. of Moldova

WORK and RESEARCH EXPERIENCE

- 2015 **Postdoc** (April – June), University of Copenhagen, Faculty of Science, Department of Chemistry, Copenhagen, Denmark
- 2011 – 2014 **PhD thesis**, University of Bordeaux, Institute of Molecular Sciences, Bordeaux, France
- 2007 – 2011 **Laboratory Assistant**, Moldova State University, Department of Chemistry and Chemical Technology, Chair of Analytical and Organic Chemistry, Chişinău, Rep. of Moldova
- 2010 **Chemistry teacher** (January – May), “Mihail Sadoveanu” High School, Chişinău, Rep. of Moldova
- 2008 – 2009 **Laboratory Assistant**, Institute of Applied Physics of the Academy of Sciences of the Republic of Moldova, in the joint Moldavian and Belarusian research project “Synthesis and research of polymeric nanocomposites with controlled molecular structure”, Chişinău, Rep. of Moldova

PERIODS of LEAVE

- July 2015 – Present Maternity Leave with my daughter Emilia

RESEARCH MANAGEMENT

- Jan. - May 2014 Iulia BALANUTA, Master student, University of Bordeaux - Moldova State University, “*Synthesis of aldehyde functionalized organosilanes for chemical modification of surface*”
- Jan. - May 2013 Jamie LEITCH, Erasmus student, University of Bordeaux - University of Bath, UK, “*Magnetic nanoparticles functionalization for use in biotechnology*”
- Apr. - June 2013 Sandy PRAUD, Licence (Bachelors) student, University of Bordeaux, “*Synthesis of functional organosilanes for chemical modification of surface*”
- May - July 2012 Soraya BOURDIN, Licence (Bachelors) student, University of Bordeaux, “*Synthesis and grafting of functionalized linear and dendritic precursors*”

GRANTS

- 2011 Mobility grant (covered 30 months of my PhD at University of Bordeaux) in the framework of Erasmus Mundus External Cooperation Window Lot 7, coordinated by University of Deusto, Bilbao, Spain

AREAS OF EXPERTISE

- **Organic Chemistry:** Multi-step organic synthesis and characterization of organic compounds
- **Surface Chemistry:** Surface modification/functionalization of nanoparticles and their characterization, immobilization of biomolecules on the surface of nanoparticles

- **Analytical Chemistry:** Identification, separation and quantification of the chemical species
- **Coordination Chemistry:** UV-Vis Spectroscopy study of the complexation reaction mechanism

SKILLS

- Multi-step organic synthesis under aerobic/anaerobic conditions;
- Purification of organic compounds (via precipitation, recrystallization, and classical or gel-permeation column chromatographies);
- FT-IR (ATR, KBr), UV-Vis, and NMR Spectroscopies;
- Gravimetric and Volumetric analysis (titration);
- Potentiometric Titration;
- Grafting/modification/functionalization of nanoparticles' surfaces
- Zeta Potential measurements;
- Transmission Electron Microscopy;
- TGA and MS data interpretation;
- Management of the chemistry laboratory

LIST of PUBLICATIONS

- L. Mitcova, T. Buffeteau, G. Le Bourdon, O. Babot, L. Vellutinia, and K. Heuzéa, "Positive dendritic effect on maleimide surface modification of core-shell (γ -Fe₂O₃/polymer) nanoparticles for bio-immobilization" *ChemistrySelect*, **2016**, 1, 4350 – 4356.
- L. Mitcova, H. Rahma, T. Buffeteau, R. Clérac, L. Vellutini, K. Heuzé, "Dendritic maleimide functionalization of core-shell (γ -Fe₂O₃/polymer) nanoparticles for efficient bio-immobilization" *RSC Advances*, **2015**, 5, 88574.

CONFERENCE ORAL PRESENTATIONS

- "Dendritic functionalization of core-shell magnetic nanoparticles for biotechnology", Journée Scientifique de l'ISM 2013, Talence, France, 5 July 2013.
- "Dendritic functionalization of core-shell magnetic nanoparticles for biotechnology", Semaine d'Etudes de Chimie Organique (SECO50): Week of Study in Organic Chemistry, Saint-Trojan-les-Bains, Island of Oleron, France, 26th of May - 2nd of June 2013.
- "Determination of the charges of copper complex compounds with semi and thiosemicarbazone of quinoline-8-carbaldehyde using spectrophotometric method", Scientific student conference dedicated to 62nd anniversary of Moldova State University, Moldova State University, Chişinău, Rep. of Moldova, 14-18 April 2008.

LANGUAGE PROFICIENCY

English – fluent,

French – pre-intermediate,

Danish – beginner,

Romanian and **Russian** – native languages.

COMPUTER SKILLS

Systems: Windows 7/8.1/10

MS Office Applications: Word, Excel, Power Point

Data treatment: Kaleidagraph, Origin

Spectroscopic data analysis: MestReNova (1D and 2D), OMNIC

ChemBioOffice 2010: ChemBioDraw, Chem3D

REFERENCES

Dr. Karine Heuzé

CNRS researcher

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