



Dr Mélanie MIGNOT



Assistant Professor

Analysis and modeling team

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PROFESSIONAL EXPERIENCES

- 2019- Assistant professor, INSA Rouen, University of Rouen Normandie, France.
2017-2019 Postdoctoral Researcher, promoter: Prof. D. Cabooter, KU Leuven/
Pharmaceutical Analysis, Belgium.
2016-2017 Temporary Assistant Professor, IUT, University of Rouen Normandie, France.

EDUCATION

- 2013-2016 European PhD in Analytical Chemistry, promoters: Dr. V. Agasse, Prof. P. Cardinael. Funding: French Research Ministry. Laboratory of Science and Separation Methods (SMS), University of Rouen, France.
2011-2013 Master in Analytical Chemistry, grade: With honors, Major. University of Rouen, France.

ADMINISTRATIVE & INSTITUTIONAL RESPONSIBILITIES

- 2020- Referee for Sustainable development and societal responsibilities (MRIE department - INSA Rouen Normandie)
2015-2016 Elected member of the Scientific Research Commission, and PhD students' representative at the laboratory council University of Rouen, France

RESEARCH INTERESTS

Development of analytical methodologies (chromatography, mass spectrometry, ICP) for complex matrix analysis

SCIENTIFIC ACHIEVEMENTS

Academic record (h-index: 4)

12 publications, 1 academic invited lecture (AFSEP), 1 industrial invited lecture (Interchim), 3 thesis committees, 1 PhD defense

Selected prizes and awards

- 2016 Finalist for Consideration of the 2016 Csaba Horváth Young Scientist Award, High Performance Liquid Phase Separations and Related Techniques (HPLC), San Francisco, USA

Exemples d'autres rubriques possibles (sans restriction de place)

SUPERVISION ACTIVITIES

- 2019- Supervision of Monica Gisel Arellano Sanchez, CONACYT grant, Title: Speciation of chromium species by column and planar chromatography coupled to molecular and elemental mass spectrometry
- 2019- Supervision of 1 M2, 2 DUT, 5 INSA students in industrial training period (4th & 5th year), 15 INSA students in research project
- 2013-2017 Supervision of 12 L3, 5 M2

GRANTS AND FELLOWSHIPS

- 2020 Synorg PhD project: New methodologies for second and third generation bio-oil characterization. PhD between COBRA Rouen, ISA Lyon starting on October, 2021.
- 2018 European MSCA grant (postdoc), ChromaFish project number 799806, KU Leuven/ Pharmaceutical Analysis, Belgium.

TEACHING ACTIVITIES

- 2019 Assistant professor, MRIE & Perf-ISP departments, INSA Rouen Normandie
Description: Courses, tutorial classes in analytical chemistry, experimental classes in analytical chemistry and process safety
- 2016-2017 Temporary assistant professor, IUT, University of Rouen Normandie, France.
Description: Tutorial classes in chemistry, experimental classes in chemistry, in chromatography and in spectroscopy
- 2014-2015 Assistant (64 hours), Chemical department, University of Rouen Normandie, France. Description: Spectroscopy classes (UV-vis, IR), tutorial classes in environmental chemistry, experimental classes in analytical chemistry

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2019 Member of AFSEP (French Association of Separative Sciences)
- 2013-2018 Young section of AFSEP Positions: Communication Manager (2015), treasurer (2016), president (2017)

CONFERENCES

15 oral communications as presenter between 2014 and 2017. Main ones:

Mélanie Mignot et al. Vers une meilleure compréhension des propriétés chromatographiques par la modélisation moléculaire : Etude de phases stationnaires aromatiques (mono et trifonctionnelle) à groupement polaire intercalé.. XIIème Congrès de l'Association Francophone des Sciences Séparatives (AFSEP), Mar 2017, Paris, France.

Mélanie Mignot et al. Using DFT approaches to investigate the enhanced aromatic selectivity of new antracényl polar embedded stationary phases for Liquid Chromatography. European symposium on chemical bonding (ESCB, 1, 2016), Aug 2016, Rouen, France.

Mélanie Mignot et al. Same core-shell silica batch, same microwave grafting procedure leading to various C18 stationary phases? Insight in thermal pretreatments. International Symposium & Exhibit on High Performance Liquid Phase Separations and Related Techniques (HPLC, 44, 2016), Jun 2016, San Francisco (CA), United States.

Mélanie Mignot et al. Preparation, characterization, and evaluation of a new polar-embedded aromatic core shell stationary phase for high-performance liquid chromatography. Euroanalysis XVIII, Oct 2015, Bordeaux, France.

5 poster communications as presenter, main ones:

Mélanie Mignot et al. New polar-embedded aromatic core-shell stationary phases for high-performance liquid chromatography. International Symposium & Exhibit on High Performance Liquid Phase Separations and Related Techniques (HPLC, 44, 2016), Jun 2016, San Francisco (CA), United States.

M. Mignot et al. Could the same core-shell silica batch functionalized with the same microwave procedure lead to various C18 stationary phases? Insight in thermal pretreatments. HPLC, Jun 2015, Genève, Switzerland.

M. Mignot et al. Microwave preparation, characterization, and evaluation of a new polar-embedded aromatic core-shell stationary phase for high-performance liquid chromatography. HPLC, Jun 2015, Genève, Switzerland.

Mélanie Mignot et al. Core-shell silica particles: Octadecyl silica particles by hydrosilylation and organosilanization. 30th International Symposium on Chromatography (ISC 2014), Sep 2014, Salzburg, Austria.

PUBLICATIONS

Meriem Kajeiou, Abdellah Alem, Soumaya Mezghich, Nasre-Dine Ahfir, Mélanie Mignot, et al. Competitive and non-competitive zinc, copper and lead biosorption from aqueous solutions onto flax fibers. *Chemosphere*, Elsevier, 2020, 260, pp.127505.

Patrick Fotsing, E. Djoufac Woumfo, Soumaya Mezghich, Mélanie Mignot, Nadine Mofaddel, et al. Surface modification of biomaterials based on cocoa shell with improved nitrate and Cr(VI) removal. *RSC Advances*, Royal Society of Chemistry, 2020, 10, pp.20009-20019.

Sven Poelmans, Maarten Nagels, Mélanie Mignot, Raf Dewil, Deirdre Cabooter, et al. Effect of ozonation as pre-treatment and polishing step on removal of ecotoxicity and alkylphenol ethoxylates from tank truck cleaning wastewater. *Journal of Water Process Engineering*, Elsevier, 2020, 37, pp.101441.

Arianna Giusti, Xuan-Bac Nguyen, Stanislav Kislyuk, Mélanie Mignot, Cecilia Ranieri, et al. Safety Assessment of Compounds after In Vitro Metabolic Conversion Using Zebrafish Eleuthero Embryos. *International Journal of Molecular Sciences*, MDPI, 2019, 20 (7), pp.1712.

Mélanie Mignot, Maarten Nagels, Sven Poelmans, Alexander Kensert, Jan Dries, et al. Fast liquid chromatography-tandem mass spectrometry methodology for the analysis of alkylphenols and their ethoxylates in wastewater samples from the tank truck cleaning industry. *Analytical and Bioanalytical Chemistry*, Springer Verlag, 2019, 411 (8), pp.1611-1621.

Mélanie Mignot, Clément de Saint Jores, Alain Tchaplà, Francois Boyer, Pascal Cardinaël, et al. New anthracenyl polar embedded stationary phases with enhanced aromatic selectivity, a combined experimental and theoretical study: Part 1-experimental study. *Journal of Chromatography A*, Elsevier, 2017, 1512, pp.9 - 21.

Mélanie Mignot, Benjamin Schammé, Vincent Tognetti, Laurent Joubert, Pascal Cardinaël, et al. Anthracenyl polar embedded stationary phases with enhanced aromatic selectivity. Part II: A density functional theory study. *Journal of Chromatography A*, Elsevier, 2017, 1519, pp.91-99.

Antoine Burel, Sander Brugman, Mélanie Mignot, Yohann Cartigny, Séverine Tisse, et al. Phenanthrene Purification: Comparison of Zone Melting and Co-Crystallization. *Chemical Engineering & Technology*, 2016, 39 (7), pp.1317-1325.

Benjamin Schammé, Mélanie Mignot, Nicolas Couvrat, Vincent Tognetti, Laurent Joubert, et al. Molecular Relaxations in Supercooled Liquid and Glassy States of Amorphous Quinidine: Dielectric Spectroscopy and Density Functional Theory Approaches. *Journal of Physical Chemistry B*, American Chemical Society, 2016, 120 (30), pp.7579-7592.

Mélanie Mignot, Aurélie Périat, Valerie Peulon-Agasse, Pascal Cardinaël, Jean-Luc Veuthey, et al. Evaluation of thermally pretreated silica stationary phases under hydrophilic interaction chromatography conditions. *Journal of Separation Science*, Wiley-VCH Verlag, 2016, 39 (9), pp.1611 - 1618.

Mélanie Mignot, Muriel Sebban, Alain Tchaplà, Olivier Mercier, Pascal Cardinaël, et al. Thermal pretreatments of superficially porous silica particles for high-performance liquid chromatography: Surface control, structural characterization and chromatographic evaluation. *Journal of Chromatography A*, Elsevier, 2015, 1419, pp.45-57.

Mélanie Mignot, Alain Tchaplà, Olivier Mercier, Nicolas Couvrat, Séverine Tisse, et al. High-Density Octadecyl Chemically Bonded Core-Shell Silica Phases for HPLC: Comparison of Microwave-Assisted and Classical Synthetic Routes, Structural Characterization and

Chromatographic Evaluation. *Chromatographia*, Springer Verlag, 2014, 77 (23-24), pp.1577 - 1588.