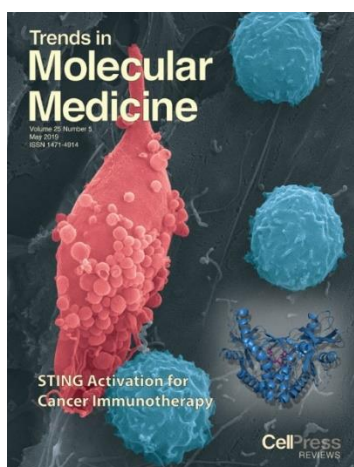


### **Articles under review/ in preparation**

- (34) Berger, G.; Hocine, S.; Hanessian, S. 4,5-Methano- and ethano-L-prolines as organocatalysts, in preparation.
- (33) Berger, G.; Marloye, M.; Prévost, M. Computer-aided design of small molecules for cancer immunotherapy, in preparation.
- (32) Berger, G. Theoretical insights into the osmium(VI) nitrido and its reactivity toward S-donors, in preparation.
- (31) Marloye, M.; Mathieu, V.; Debaille, V.; Nowicki, M. O.; Meyer, F.; Lawler, S. E.; Dufrasne, F.; Berger, G. Self-assembling neurosphere-potent amphiphilic Ru<sup>II</sup> and Os<sup>II</sup> metal-arene complexes with enhanced cellular uptake, in preparation.
- (30) Marloye, M.; Dufrasne, F.; Meyer, F.; Berger, G. Biotinyl and morpholino Ru<sup>II</sup>/Os<sup>II</sup> metal-arene complexes: synthesis, structural and electronic properties, antiproliferative effects, in preparation.

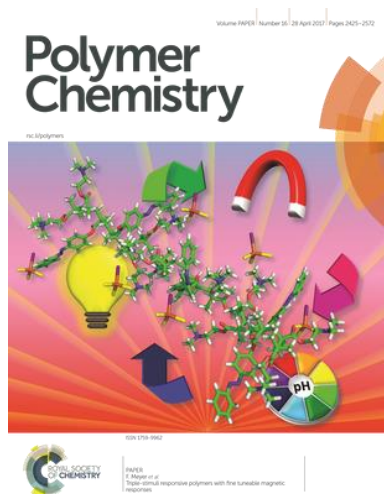
### **Articles in peer-reviewed international journals**

- (29) Marloye, M.; Lawler, S. E.; Berger, G. Current patent status of STING agonists for cancer immunotherapy, *Pharm. Pat. Anal.*, accepted manuscript.
- (28) Yang D.; Guy Vandebussche G.; Vertommenand D.; Wohlkönig A.; Berger G.; Khan M.S.; Zeng S.; Soumillion P.; Fontaine V. Methyl arachidonyl fluorophosphonate inhibits Mycobacterium tuberculosis TesA thioesterase, *FEBS Lett.*, accepted manuscript.
- (27) Kim, J.H.; Mertens, R.T.; Agarwal, A.; Parkin, S.; Berger, G.; Awuah, S.G. Direct intramolecular carbon(sp<sup>2</sup>)-nitrogen(sp<sup>2</sup>) reductive elimination from gold(III), *Dalton Trans.*, **2019**, **48**, 6273-6282.
- (26) Berger, G.; Marloye M.; Lawler S.E. Pharmacological modulation of the STING pathway for cancer immunotherapy, *Trends Mol. Med.* **2019**, **25**(5), 412-427, [Front Cover](#).

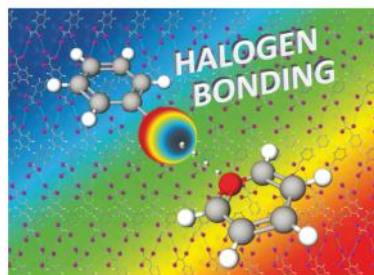


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- (24) Berger, G.; Soubhye, J.; Robijns, K.; Meyer, F. Crystal packing and theoretical analysis of halogen- and hydrogen-bonded hydrazones from pharmaceuticals, *Acta Cryst.* **2018**, **B74**, 618-627.
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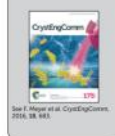


Highlighting a research work performed in the Laboratory of Macromolecules and Supramolecular Nanomaterials, Université Libre de Bruxelles (ULB), Brussels, Belgium.

**Title:** Halogen bonding in a multi-connected 1,2,2-trisubstituted alkene involving general and/or special donors: a crystallographic and DFT study

The 3D structure of 0,2,2-trisubstituted alkenes highlighted four different arrangements connected by 1-1 type C-halogen bonds. Interactions involving the sulfur atom general to primary amine moieties are confirmed by DFT calculations. However, an increasing number of connected sites tends to weaken the interactions, consistent with a competitive phenomenon.

As featured in:



See F. Meyer et al. *CrystEngComm*, 2015, 16, 13268.



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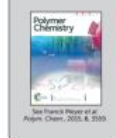


Highlighting a research topic investigated in the Université Libre de Bruxelles (ULB), Brussels, Belgium.

Halogen bonding in polymer science: from crystal engineering to functional supramolecular polymers and materials

Halogen bonding (HB) has been established in polymer science for self-assembly, organizing and templating the formation of macromolecular compounds. Applications in surface functionalization, synthetic materials, soft, supramolecular and magnetic materials, fluorescent and catalytic, separation and inclusion techniques are reviewed. The halogen bonds appear particularly relevant for designing smart materials and further applications in bio- and nanotechnologies.

As featured in:



See F. Meyer et al. *Polym. Chem.* 2015, 6, 3559.



www.rsc.org/polymers

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\* \* \*

### **Active participation in national and international conferences**

- (14) “Modern computational tools in catalysis, drug synthesis and design: recent examples from my research” Oral presentation, European Workshop in Drug Synthesis – Certosa di Pontignano, Siena (Italy), May 2018
- (13) “Explorations of Metal-Based Anticancer Therapeutics”, Group Seminar (H. Wennemers Lab), ETH Zürich, November 2017.
- (12) “Explorations of Metal-Based Anticancer Therapeutics”, Invited Lecture, University of Tabasco – Mexico, October 2017.
- (11) “Explorations of Metal-Based Anticancer Therapeutics”, Award Talk, Journées Franco-Belges de Pharmacochimie, Spa – Belgium, September 2017
- (10) “Structural Properties of 4,5-Methanoprolines and their Oligomers: An Unprecedented Crystalline PP1I-type Helical Tetramer”, Oral presentation, Tenth European Workshop in Drug Design – Certosa di Pontignano, Siena (Italy), May 2015
- (9) “Bifunctional Cooperative Catalysis Toward Tertiary  $\beta$ -Ketols: A Theoretical Mechanistic Study”, Poster, Tenth European Workshop in Drug Design – Certosa di Pontignano, Siena (Italy), May 2015
- (8) “4,5-Methanoprolines, bifunctional-catalyzed aldol reactions and the chemistry of benzodiazidodiazines: from the bench to the theory”, Oral presentation, Year-End Symposium (Hanessian Group), Université de Montréal – Montreal, November 2014
- (7) “Synthesis and in vitro characterization of anticancer platinum(II) coordinates: NCI Compare and FTIR spectroscopy for drug candidate profiling”, Poster, International Congress on Bioinorganic Chemistry – Grenoble, July 2013
- (6) Vicinal Diamines through N-Activated Chiral Aziridines: Synthesis and Conceptual Density Functional Theory Study”, Poster, 13<sup>th</sup> Belgian Organic Synthesis Symposium – Leuven, July 2012
- (5) “Regioselective Opening of N-Activated Aziridines: A Quantum Chemical Study”, Poster, Journée Scientifique de la Société Royale de Chimie – Louvain-La-Neuve, October 2012
- (4) “Chiral Diamines through the Regioselective Opening of Nitrogen-Activated Aziridines: Synthesis and Quantum Chemical Study”, Oral presentation, PhD Day – Bruxelles (ULB), October 2012
- (3) “Insight into the Structure-Activity Relationships of Platinum(II) Anticancer Coordinates”, Poster, PhD Day – Bruxelles (ULB), October 2012
- (2) “Synthesis and In Vitro Anticancer Properties of Platinum Derivatives” Oral presentation, 25<sup>èmes</sup> Journées franco-belges de pharmacochimie – Liège, May 2011
- (1) “Fourier Transform Infrared (FTIR) Spectroscopy to Monitor the Cellular Impact of Newly Synthesized Platinum Derivatives”, Oral presentation, PhD Day – Mons, May 2010