

List of publications of Hennie Valkenier

Contributions to collective works

2007

Van Esch, J., Valkenier, H., Hartwig, S., & Hecht, S. (2007). Foldamers at Interfaces. In S. Hecht & I. Huc (Eds.), *Foldamers: Structure, Properties, and Applications* (pp. 403-426). Weinheim: Wiley-VCH.

Peer-reviewed journal articles

2023

Chvojka, M., Madea, D., Valkenier, H., & Šindelá#, V. (2023). Tuning CH Hydrogen Bond#Based Receptors toward Picomolar Anion Affinity via the Inductive Effect of Distant Substituents. *Angewandte Chemie*. doi:10.1002/anie.202318261

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Chvojka, M., Singh, A., Cataldo, A., Torres Huerta, A., Konopka, M., Šindelá#, V., & Valkenier, H. (2023). The Lucigenin Assay: Measuring Anion Transport in Lipid Vesicles. *Analysis & sensing*. doi:10.1002/anse.202300044

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Cataldo, A., Norvaisa, K., Halgreen, L., Bodman, S. E., Bartik, K., Butler, S. J., & Valkenier, H. (2023). Transmembrane Transport of Inorganic Phosphate by a Strapped Calix[4]pyrrole. *Journal of the American Chemical Society*, 145, 16310-16314. doi:10.1021/jacs.3c04631

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Dascalu, A.-E., Halgreen, L., Torres Huerta, A., & Valkenier, H. (2022). Dynamic covalent chemistry with azines. *Chemical communications*, 87(15), 9829-9838. doi:10.1039/D2CC03523E

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Maslowska-Jarzyna, K., Cataldo, A., Marszalik, A., Ignatikova, I., Butler, S. S., Stachowiak, R., Chmielewski, M., & Valkenier, H. (2022). Dissecting transmembrane bicarbonate transport by 1,8-di(thio)amidocarbazoles. *Organic & biomolecular chemistry*, 20(38), 7658-7663. doi:10.1039/d2ob01461k

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De Simone, N. A., Chvojka, M., Lapešová, J., Martinez Crespo, L., Slávik, P., Sokolov, J., Butler, S., Valkenier, H., & Šindelá#, V. (2022). Monofunctionalized Fluorinated Bambusurils and Their Conjugates for Anion Transport and Extraction. *Journal of organic chemistry*, 87, 9829-9838. doi:10.1021/acs.joc.2c00870

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Zahim, S., Ajami, D., Laurent, P., Valkenier, H., Reinaud, O., Luhmer, M., & Jabin, I. (2020). Synthesis and Binding Properties of a Tren-Capped Hexahomotrioxacalix[3]arene. *ChemPhysChem*, 21(1), 83-89. doi:10.1002/cphc.201900951

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2023

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Active participation in international conferences and symposiums

2023

Valkenier, H. (2023). *Transport of anions across membranes by synthetic receptors: overcoming challenges in phosphate, bicarbonate, and fluoride transport*. Paper session presented at Merck Organic Chemistry Symposium, (2023: 30/11/2023-1/12/2023: Blankenberge, Belgium).

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Chvojka, M., Valkenier, H., & Šindelá#, V. (2023). *FLUORINATED BAMBUSURILS - Effects of substituents on anion binding and anion transport*. Paper session presented at The Joint Conference on Calixarenes Cucurbiturils (16.07.2023-21.07.2023: Tel Aviv, Israel).

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Valkenier, H. (2023). *Overcoming challenges in anion transport: a story on phosphate, bicarbonate, and fluoride transport*. Paper session presented at 5th ERC Grantees Conference (11-13 July 2023: Edinburgh, United Kingdom).

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Valkenier, H. (2023). *Overcoming challenges in anion transport: a story on phosphate, bicarbonate, and fluoride transport*. Paper session presented at International Symposium on Macrocyclic and Supramolecular Chemistry (25-29 July 2023: Reykjavik, Iceland).

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Chvojka, M., Valkenier, H., & Šindelá#, V. (2023). *Novel fluorinated bambusurils and their anion binding and transport properties*. Poster session presented at 17th International Symposium on Macrocyclic and Supramolecular Chemistry (25.6.2023-29.6.2023: Reykavík, Iceland).

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2022

Halgreen, L., Torres Huerta, A., Tumanov, N., Wouters, J., Bartik, K., & Valkenier, H. (2022). *Tetrahydrazone macrocycle with optimal flexibility for binding of anions of varying sizes*. Paper session presented at Merck Organic Chemistry Symposium (1-2 December 2022: Blankenberge).

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Chvojka, M., Valkenier, H., & Šindelá#, V. (2022). *Bambusurils with Fluorinated Substituents: Effects on Binding and Transport Properties*. Poster session presented at 56th Conference Advances in organic, bioorganic and pharmaceutical chemistry (10.-12.11.2022: Špindler#v Mlýn).

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Singh, A., Torres Huerta, A., Vanderlinden, T., Renier, N., Martinez Crespo, L., Tumanov, N., Wouters, J., Bartik, K., Jabin, I., & Valkenier, H. (2022). *Calixarene with halogen bond donors for anion transport*. Poster session presented at 5th International Symposium on Halogen Bonding (ISXB5).

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Torres Huerta, A., Dascalu, A.-E., Halgreen, L., & Valkenier, H. (2022). *Dynamic covalent chemistry with azines*. Paper session presented at Symposium on "Dynamic Covalent Chemistry (DCC) in water" (24 October 2022: Enschede, The Netherlands).

Chvojka, M., De Simone, N. A., Lapešová, J., Martinez Crespo, L., Valkenier, H., & Šindelá#, V. (2022). *Monofunctionalized fluorinated bambusurils*. Poster session presented at Journé Scientifique SRC 2022 The many facets of mechanochemistry (18.10.2022: Liège).

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Valkenier, H. (2022). *Crossing Barriers: Synthetic Receptors for the Transmembrane Transport of Ions*. Paper session presented at Journée Scientifique de Société Royale de Chimie (18 October 2022: Liège, Belgium).

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Torres Huerta, A., Dascalu, A.-E., Halgreen, L., & Valkenier, H. (2022). *Dynamic covalent chemistry with azines*. Paper session presented at EuChemS (2022: 28/08/2022-1/09/2022: Lisbon, Portugal).

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Valkenier, H. (2022). *Transmembrane Transport of Ions by Calixarene-based Receptors*. Paper session presented at Calix2022 (16th International Conference on Calixarenes: 10-14 July 2022: New Orleans, Louisiana, USA).

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Chvojka, M., De Simone, N. A., Lapešová, J., Martinez Crespo, L., Valkenier, H., & Šindelá#, V. (2022). *Monofunctionalized fluorinated bambus[6]urils*. Poster session presented at 17th Belgian Organic Synthesis Symposium (3.-8.7.2022: Namur).

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Cataldo, A., Park, G., Chvojka, M., Troian Gautier, L., Šindelá#, V., Gabbai, F., Butler, S., & Valkenier, H. (2022). *Transmembrane transport of fluoride: a new way to look at it*. Poster session presented at International Symposium of Macrocyclic and Supramolecular Chemistry (ISMCS2022) (19-24 June 2022: Eugene, Oregon, USA).

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Cataldo, A., Park, G., Chvojka, M., Šindelá#, V., Gabbai, F., Butler, S., & Valkenier, H. (2022). *Transmembrane transport of fluoride: shedding light on it*. Paper session presented at Kroese-Duijsters Symposium (30 May 2022: Leiden, Netherlands).

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Valkenier, H. (2022). *Selective Transport of Ions: from Transporters to Assays*. Paper session presented at Kroese-Duijster Symposium on Molecular Receptors and Machines in Lipid Bilayer Membranes (30-31 May 2022: Leiden, The Netherlands).

<https://dipot.ulb.ac.be/dspace/bitstream/2013/345164/3/kroese-duijsters-2022-abstract-Valkenier.pdf>

Chvojka, M., De Simone, N. A., Lapešová, J., Martinez Crespo, L., Valkenier, H., & Šindelá#, V. (2022). *Monofunctionalized fluorinated bambus[6]urils*. Poster session presented at 1st International Supramolecular Chemistry Summer School (29.5.-2.6.2022: Santa Margherita di Pula, Italy).

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Renier, N., Reinaud, O., Jabin, I., & Valkenier, H. (2022). *Exploring Copper(I) Transmembrane Transport : From Receptors to Transporters*. Poster session presented at Rencontres de Chimie Organique Biologique (18: 20-24 March 2022: Aussois).

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Martinez Crespo, L., Halgreen, L., Soares, M., Marques, I., Félix, V., & Valkenier, H. (2022). *Hydrazones in Anion Transporters: The Detrimental Effect of a Second Binding Site*. Poster session presented at #RSCPoster Twitter Conference (2022: 1-2 March 2022: Online).

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2021

Cataldo, A., Park, G., Butler, S., Gabbai, F., & Valkenier, H. (2021). *Direct monitoring of transmembrane transport of fluoride via fluorometric method*. Paper session presented at 1st Women in Supramolecular Chemistry (WISC) workshop (06-08 September 2021).

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Valkenier, H. (2021). *Monitoring Transmembrane Transport of Ions using Fluorescence Spectroscopy*. Paper session presented at WISC/vMASC workshop (1st: 6-8 September 2021: Cagliari, Italy).

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Halgreen, L., Valkenier, H., & Martinez Crespo, L. (2021). *Dynamic combinatorial chemistry with imines for the development of phosphate receptors*. Poster session presented at 1st Women in Supramolecular Chemistry (WISC) workshop (06-09-2021 to 08-09-2021: Cagliari, Italy).

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Singh, A., Torres Huerta, A., Valkenier, H., Jabin, I., Martinez Crespo, L., Renier, N., Vanderlinden, T., Tumanov, N., & Wouters, J. (2021). *Calixarenes with halogen bond donors for anion transport*. Poster session presented at 1st Women in Supramolecular Chemistry (WISC) workshop (6th - 8th September 2021).

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Martinez Crespo, L., Halgreen, L., Soares, M., Marques, I., Félix, V., & Valkenier, H. (2021). *Hydrazones in Anion Transporters: The Detrimental Effect of a Second Binding Site*. Poster session presented at WISC-vMASC workshop (31 August 2021: online).

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Martinez Crespo, L., Halgreen, L., Soares, M., Marques, I., Félix, V., & Valkenier, H. (2021). *Hydrazones in Anion Transporters: The Detrimental Effect of a Second Binding Site*. Poster session presented at International Symposium on Macrocyclic and Supramolecular Chemistry (13 July 2021: online).

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Singh, A., Jabin, I., & Valkenier, H. (2021). *Calixarenes with halogen bond donors for anion transport*. Paper session presented at EDT-CHIM 2021 (20th May 2021).

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Valkenier, H., Martinez Crespo, L., & Butler, S. (2021). *Direct monitoring of bicarbonate transport by anion receptors*. Paper session presented at ACS Spring meeting (online).

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Martinez Crespo, L., Hewitt, S. H., De Simone, N. A., Šindelá#, V., Davis, A. P., Butler, S., & Valkenier, H. (2021). *Transmembrane Bicarbonate Transport Unraveled*. Poster session presented at SupraMat (11-12 February 2021: online).

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Renier, N., Jabin, I., & Valkenier, H. (2021). *Exploring Cu(I) transmembrane transport*. Paper session presented at vMASC early career seminar series (2021-02-04).


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2020

Valkenier, H., Martinez Crespo, L., & Butler, S. (2020). *Bicarbonate Transport ?!* Paper session presented at RSC virtual Macrocyclic and Supramolecular Chemistry Meeting (vMASC) (16-17 December 2020: online).

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Valkenier, H. (2020). *Macrocyclic Receptors for the Transmembrane Transport of Ions*. Paper session presented at CHAINS (8-9 December 2020: online).

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Singh, A., Jabin, I., & Valkenier, H. (2020). *Calixarenes with halogen bond donors for anion transport*. Poster session presented at CHAINS 2020 (8th - 9th December 2020: Netherlands).

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Halgreen, L., Martinez Crespo, L., & Valkenier, H. (2020). *The effect of (acyl)hydrazones and multiple binding sites on transmembrane anion transport*. Poster session presented at International Symposium on Macrocyclic and Supramolecular Chemistry (25-08-2020: Online).

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Martinez Crespo, L., Hewitt, S. H., De Simone, N. A., Šindelá#, V., Davis, A. P., Butler, S., & Valkenier, H. (2020). *Direct monitoring of bicarbonate transport*. Poster session presented at ISMSC (25 August 2020: Twitter).

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2019

Valkenier, H., Akrawi, O., Juršek, P., Sleziaková, K., Lízal, T., Šindelář, V., & Bartik, K. (2019). *Bambus[6]uril macrocycles as powerful anion receptors and highly effective Cl⁻/HCO₃⁻ transmembrane transporters*. Poster session presented at RSC Macrocyclic and Supramolecular Chemistry meeting (16-17 December 2019: University of Kent, United Kingdom).

 <https://dipot.ulb.ac.be/dspace/bitstream/2013/299237/4/20191216posterBUs-MASC.pdf>

 <https://dipot.ulb.ac.be/dspace/bitstream/2013/299237/3/masc2019-oral-abstract-VALKENIER.pdf>

Martinez Crespo, L., Halgreen, L., & Valkenier, H. (2019). *Dynamic covalent chemistry in anion transporters*. Poster session presented at RSC Macrocyclic and Supramolecular Chemistry meeting (16-17 December 2019: University of Kent, Canterbury, United Kingdom).

 <https://dipot.ulb.ac.be/dspace/bitstream/2013/330590/3/Poster49MASC2019.pdf>

Renier, N., Reinaud, O., Jabin, I., & Valkenier, H. (2019). *Exploring Copper(I) Transmembrane Transport: From Receptors to Transporters*. Poster session presented at Current trends in membrane protein biophysics.

Halgreen, L., Martinez Crespo, L., & Valkenier, H. (2019). *Synthesis of acylhydrazide and aldehyde building blocks for use in Dynamic Combinatorial organic phosphate recognition*. Poster session presented at Merck Organic Chemistry Symposium (05-12-2019: Blankenberge, Belgium).


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Martinez Crespo, L., Halgreen, L., & Valkenier, H. (2019). *Dynamic covalent chemistry in anion transporters*. Poster session presented at NanoScience Days (8-9 October 2019: Jyväskylä, Finland).

 <https://dipot.ulb.ac.be/dspace/bitstream/2013/317317/3/Poster3.pdf>

Blond, P., Mattiuzzi, A., Valkenier, H., Troian Gautier, L., Doneux, T., Goormaghtigh, E., Raussens, V., & Jabin, I. (2019). *Grafting of Oligo(ethylene glycol) functionalized Calix[4]arene-tetra-diazonium Salts on Germanium and Gold Surfaces for Biosensing Applications* flash presentation "Grafting of Calix[4]arene on Germanium and Gold for Biosensing Applications". Poster session presented at European Conference on the Spectroscopy of Biological Molecules (19-22/08/2019: Dublin).

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Valkenier, H. (2019). *Macrocyclic anion carriers*. Paper session presented at 21st European Symposium on Organic Chemistry (ESOC2019) (14-18 July 2019: Vienna, Austria).

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Valkenier, H. (2019). *Macrocyclic receptors for transmembrane transport*. Paper session presented at XI Young Investigator Workshop (11-13 July 2019: Vienna, Austria).

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Valkenier, H., Juršek, O., Puttreddy, R., Novák, M., Sparkes, H. A., Marek, R., Rissanen, K., & Davis, A. P. (2019). *Anion Recognition by a Bioactive Diureidodecalin Anionophore*. Poster session presented at International Symposium on Macrocyclic and Supramolecular Chemistry 2019 (2-6 June 2019: Lecce, Italy).

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Renier, N., Reinaud, O., Jabin, I., & Valkenier, H. (2019). *Exploring Copper(I) Transmembrane Transport*. Poster session presented at International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC 2019).

<https://dipot.ulb.ac.be/dspace/bitstream/2013/304917/3/PosterISMSCNR.pdf>

Renier, N., Reinaud, O., Jabin, I., & Valkenier, H. (2019). *Exploring Copper(I) Transmembrane Transport: From Receptors to Transporters*. Poster session presented at Ecole Doctorale de Chimie (EDT-CHIM).

Valkenier, H. (2019). *Synthetic Receptors for the Transmembrane Transport of Anions*. Paper session presented at General Scientific Meeting of the Belgian Physical Society (22 Mei 2019: Brussels, Belgium).

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2018

Valkenier, H., Akrawi, O., Juršek, P., Sleziaková, K., Lízal, T., Sindeláková, V., & Bartik, K. (2018). *Bambus[6]uril macrocycles as powerful anion receptors and highly effective Cl⁻/HCO₃⁻ transmembrane transporters*. Poster session presented at Young Belgian Magnetic Resonance Scientist (17: 6-7 December 2018: Spa, Belgium).

Grauwels, G., Valkenier, H., Jabin, I., & Bartik, K. (2018). *Repositioning chloride transmembrane transporters: their potential for organic ion-pairs*. Poster session presented at YBMRS.

Renier, N., Reinaud, O., Jabin, I., & Valkenier, H. (2018). *Exploring Copper(I) Transmembrane Transport: From Receptors to Transporters*. Poster session presented at Young Belgian Magnetic Resonance Scientists (YBMRS).

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Valkenier, H., Akrawi, O., Juršek, P., Sleziaková, K., Lízal, T., Sindeláková, V., & Bartik, K. (2018). *Bambus[6]uril macrocycles as powerful anion receptors and highly effective Cl⁻/HCO₃⁻ transmembrane transporters*. Poster session presented at Solvay Workshop on Chiral Symmetry Breaking at Molecular Level (28-30 November 2018: Brussels, Belgium).

Grauwels, G., Valkenier, H., Jabin, I., & Bartik, K. (2018). *Calix[6]arene tris(thio)ureas as novel carriers for the transmembrane transport of chloride and organic ion-pairs*. Poster session presented at ISMSC 2018.

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Member of Ph.D. jury

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Meena, R. (2024). *Design, Synthesis and Characterization of molecular semiconductors tailored to couple with vacuum field* (Unpublished doctoral dissertation). Université libre de Bruxelles, Faculté des Sciences – Chimie, Bruxelles.

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Chair of Ph.D. jury

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Gosselin, B. (2024). *Development of a New Generation of Plasmonic Nanomaterials as Promising Colorimetric Reporters for Lateral Flow Assay* (Unpublished doctoral dissertation). Université libre de Bruxelles, Ecole polytechnique de Bruxelles – Chimie et Science des Matériaux, Bruxelles.

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