

Curriculum Vitae – Gunnar Olsen

Personal data

Name & home address: Gunnar Olsen | 12 Thrush Cross Place, DH1 1PA, Durham, UK | +45 61759911 |
Birth date, Place, Gender: 28th of October, 1987, Lolland, Denmark, male
Citizen: Danish
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Language: Danish and English

Professional Summary

I am an organic synthetic chemist with a focus in heterocyclic compounds for supramolecular chemistry and single molecule properties. With a strong academic background and a wide international network thought out Europa and in China. Hands-on experience with multiple characterisation techniques several of with have been employed beyond basic characterisation for advanced property studies, (NMR, XPS, MS, IT, UV-vis, IR, Raman, AFM and electrochemistry). Have published 8 articles in peer-reviewed journals, h-index of 5 and a total number of citations of 66 (18-11-19 *scholar google*)

Working experience

- 01.2019 – present: Independent international postdoc funded by IRFD – FTP “Single Molecule Conductivity Sensing using Receptor Appended Organic Molecular Wires” hosted by Prof. Jan O Jeppesen (SDU, Denamrk), Prof. Martin R. Bryce (DU, UK), Prof. Wenjing Hong (XU, Xiamen, China).
- 03.2018 – 12.2018: Postdoc working on synthesis of molecular wires for the EU project Quantum Interference enhanced thermoelectricity “QuIET” in Prof. Martin R. Bryce’s group.
- 05.2016 – 02.2018: Postdoc working with molecular muscles based on rigid rotaxanes in Prof. Jan O Jeppesen’s group, Department of Physics, Chemistry and Pharmacy, University of Southern Denmark (SDU).
- 05.2013 – 05.2016: Ph.D, NanoChemistry group, Department of chemistry, Technical University of Denmark.
- 09.2014 – 11.2014: External Stay – Changchun Institute of Applied Chemistry, Changchun, China.
- 03.2012 – 04.2012: Lab Instructor in Organic Synthesis, Department of Physics and Chemistry, SDU.
- 06.2011 – 09.2011: Research assistant working with computational modelling of systems synthesized in BSc project, Kent A. Nielsen’s research group, SDU.

Education

- 05.2013 – 05.2016: Ph.D programme, Technical University of Denmark (DTU), Department of Chemistry Project ‘Supramolecular Derivation of Graphene Nanomaterials for Chemical Sensors’
- 07.2010 – 12.2012: M.Sc. Chemistry, Department of Physics, Chemistry and Pharmacy, University of Southern Denmark (SDU), Project ‘Supramolecular Polymers Composed of Tetrathiafulvalenecalix[4] pyrroles’
- 09.2006 – 07.2010 B.Sc. Chemistry and Biological Chemistry, Department of Physics and Chemistry, SDU Project ‘Synthesis of Tetrakis(tetrathiafulvalene)-calix[4]Pyrrole Containing Pyridine Units’

Publications

- [8] Naphtho [1, 2 - b: 5, 6 - b'] dithiophene Building Blocks and Their Complexation with Cyclobis (paraquat - p - phenylene), Morten Jensen, Gunnar Olsen, Rikke Kristensen, Kazuo Takimiya, Jan Oskar Jeppesen, *European Journal of Organic Chemistry* **2019**, DOI: 10.1002/ejoc.201901161
- [7] Exploring antiaromaticity in single-molecule junctions formed from biphenylene derivatives, Markus Gantenbein, Xiaohui Li, Sara Sangtarash, Jie Bai, Gunnar Olsen, Afaf Alqorashi, Wenjing Hong, Colin J Lambert, Martin R Bryce, *NanoScale* **2019**, 11, 20659.

- [6] Redox - Active Monopyrrolotetrathiafulvalene - Based Rotaxane Incorporating the Dihydroazulene/Vinylhepta-fulvene Photo/Thermoswitch, M.D. Kilde, R. Kristensen, G. Olsen, J.O. Jeppesen, M.B. Nielsen, *European Journal of Organic Chemistry* **2019**, 5532-5539.
- [5] Very Strong Binding for a Neutral Calix [4] pyrrole Receptor Displaying Positive Allosteric Binding, T. Duedal, K.A. Nielsen, G. Olsen, C.B.G. Rasmussen, J. Kongsted, E. Levillain, T. Breton, E. Miyazaki, K. Takimiya, S. Bähring, J.O. Jeppesen, *The Journal of organic chemistry* **2017**, 82, 2123-2128.
- [4] Probing the Role of Glycol Chain Lengths in π -Donor–Acceptor [2]Pseudorotaxanes Based on Monopyrrolo-Tetrathiafulvalene and Cyclobis(paraquat-p-phenylene), R. Kristensen, S.S. Andersen, G. Olsen, J.O. Jeppesen *The Journal of organic chemistry* **2017**, 82, 1371-1379 (including front cover).
- [3] Design and Sensing Properties of a Self - Assembled Supramolecular Oligomer, S. Bähring, L. Martín - Gomis, G. Olsen, K.A. Nielsen, D.S. Kim, T. Duedal, Á. Sastre-Santos, J.O. Jeppesen, J.L. Sessler, *Chemistry–A European Journal*, **2016**, 22, 1958-1967.
- [2] Crown-Ether Derived Graphene Hybrid Composite for Membrane-Free Potentiometric Sensing of Alkali Metal Ions, G. Olsen, J. Ulstrup, Q. Chi, *ACS applied materials & interfaces* **2015**, 8, 37-41.
- [1] Coordination - Driven Switching of a Preorganized and Cooperative Calix [4] pyrrole Receptor, S. Bähring, G. Olsen, P.C. Stein, J. Kongsted, K.A. Nielsen *Chemistry–A European Journal* **2013**, 19, 2768-2775.

Previous Supervisors

Postdoc – Martin R. Bryce (m.r.bryce@durham.ac.uk) Department of Chemistry, Durham University, (DU)

Postdoc – Jan O. Jeppesen (joj@sdu.dk) Department of Physics, Chemistry and Pharmacy, University of Southern Denmark (SDU)

PhD – Jens Ulstrup (ju@kemi.dtu.dk) Department of Chemistry, Technical University of Denmark (DTU)

PhD – Qijin Chi (cq@kemi.dtu.dk) Department of Chemistry, Technical University of Denmark (DTU)

External stay PhD – Li Niu (lniu@ciac.jl.cn) Engineering Laboratory for Modern Analytical Techniques c/o State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of sciences (CIAC)

International conference contributions

- Sep. 2019 MOST-M3 Molecular-Scale Thermoelectricity Materials, Measurements and Modelling, Selwyn College, Cambridge, UK (invited Speaker)
- Jul. 2019 ISNA-18, The 18th International Symposium on Novel Aromatic Compounds, Sapporo, Japan (Contributed speaker)
- Jun. 2019, F π -14, 14th International Symposium on Functional π -Electron Systems, Berlin, Germany (Poster)
- Jun. 2017, GRC & GRC 2017, Artificial Molecular Switches and Motors, Holderness, NH, US (Poster)
- Sep. 2016, GrapChina 2016, Qingdao, Shandong, China (Invited Speaker)
- Aug. 2015, Carbonhagen 2015 6th symposium on carbon and related nanomaterials, KU, Copenhagen, Denmark (poster)
- Jan. 2014, Linz Winter school and winter workshop on atomic force microscopy (AFM), Johannes Kepler University, Linz, Austria (poster)
- Nov. 2013, DTU Chemistry PhD symposium, Mærsk Mc-Kinney Møller Videntcenter, Sorø, Denmark (poster)
- Oct. 2012, Ceres Opening Ceremony, Eindhoven University of Technology, Institute of Complex Molecular Systems, Holland
- Feb. 2012, International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC-7), University of Otago, Dunedin, New Zealand (poster)

Teaching activities

Lab instructor at SDU in organic synthesis KE506 (48 hours) in 2016 & 2016, organic chemistry KE505 (30 hours) at SDU in 2012 and at DTU in introduction to chemistry and chemical engineering 28001 (108 hours) 2014 & 2015 and in general chemistry 26000 (24 hours) 2014. Combined Lecturer and lab instructor in illustrated inorganic chemistry (48 hours) at DTU.