

Selected Publications

1. **Towards graphyne molecular electronics**

Li, Z.; Smeu, M, Arnaud Rives, Maraval, V.; Chauvin, R.; Ratner, M. A.; Borguet, E. *Nature Communications* 6:6321, doi:10.1038/ncomms7321 (2015).

2. **Hapticity-Dependent Charge Transport through Carbodithioate- Terminated [5, 15- Bis (phenylethynyl) porphinato] zinc (II) Complexes in Metal-Molecule-Metal,**

Li, Z.; Smeu, M.; Park, T-H, Rawson, J.; Xing, Y.; Therien, M.; Ratner, M. A.; Borguet, E. *Nano Letters* 14, 5493-5499 (2014).

3. **Orientation-Controlled Single Molecule Junctions**

Mamaghani, S.; Li, Z.; Borguet, E.

Angewandte Chemie International Edition, 53, 9771-9774 (2014).

4. **Regulating a Benzodifuran Single Molecule Redox Switch via Electrochemical Gating and Optimization of Molecule/Electrode Coupling**

Li, Z.; Li, H.; Chen, S.; Froehlich, T.; Schönenberger, C.; Calame, M; Decurtins, S.; Liu, S. X.; Eric Borguet,

Journal of the American Chemical Society, 136, 8867-8870 (2014).

5. **Single Molecule Sensing of Environmental pH – An STM Break Junction and NEGF-DFT Approach**

Li, Z.; Smeu, M.; Afsari, S.; Xing, Y.; Ratner, M. A.; Borguet, E.

Angewandte Chemie International Edition, 53, 1098-1102 (2014).

6. **Effect of Anchoring Groups on Single Molecule Charge Transport through Porphyrins**

Li, Z.; Smeu, M.; Ratner, M. A.; Borguet, E.

Journal of Physical Chemistry C 117, 14890-14898 (2013).

7. **Determining Charge Transfer Pathways through Single Porphyrin Molecules Using STM Break Junctions**

Li, Z.; Borguet, E.

Journal of the American Chemical Society, 134, 63-66 (2012).

8. **Quasi-Ohmic Single Molecule Charge Transport through Highly Conjugated meso-to-meso Ethyne-Bridged Porphyrin Wires**
Li, Z.; Park, T-H.; Rawson, J.; Therien, M. J.; Borguet, E
Nano Letters 12, 2722-2727 (2012).
9. **Ambipolar Transport in an Electrochemically Gated Single-Molecule Field-Effect Transistor**
Diez-Perez, I, Li, Z.; Guo, S.; Madden, C.; Huang, H.; Che, Y.; Yang, X.; Zang, L.; Tao, N.J.
ACS Nano 6, 7044-7052 (2012).
10. **Gate-controlled Electron Transport in Coronenes As A Bottom-up Approach Towards Graphene Transistors**
Diez-Perez, I.*; Li, Z.*; Li, J.; Zhang, C.; Yang, X.; Zang, L.; Dai, Y.; Feng, X.; Muellen, K.; Tao, N.J.
Nature Communications (*equal contribution) DOI: 10.1038/ncomms1029 (2010).
11. **From Redox Gating to Quantized Charging**
Li, Z.; Liu, Y.; Mertens, S.; Pobelov, I.; Wandlowski, Th.
Journal of the American Chemical Society 132, 8187-8193 (2010).
12. **A Scanning Probe Microscopy Study of Annulated Redox-Active Molecules at a Liquid/Solid Interface: The Overruling of the Alkyl Chain Paradigm**
Liu, B.; Ran, Y.; Li, Z.; Liu, S.-X.; Jia, C.; Decurtins, S.; Wandlowsk, Th.
Chemistry - A European Journal 16, 5008-5012 (2010).
13. **Structure Formation and Annealing of Isophthalic Acid at the Electrochemical Au(111)/Electrolyte Interface**
Li, Z.; Wandlowski, Th.
Journal of Physical Chemistry C 113, 7821-7825 (2009).
14. **Phase Transition of Two-Dimensional Chiral Supramolecular Nanostructure tuned by Electrochemical Potential**
Su, G. J.; Li, Z.; Aguilar-Sanchez, R.
Analytical Chemistry 81, 8741-8748 (2009).

15. Electrolyte Gating in Redox-active Tunneling Junctions - An Electrochemical STM Approach

Pobelov, I.; Li, Z.; Wandlowski, Th.

Journal of the American Chemical Society 130, 16045-16054 (2008).

16. Electrochemical Gate-controlled Electron Transport of Redox-active Single Perylene Molecular Junctions

Li, C.; Mishchenko, A.; Li, Z.; Pobelov, I.; Wandlowski, Th.; Li, X.Q.; Würthner, F.; Bagrets, A.; Evers, F.

Journal of Physics: Condensed Matter 20, 374122(1-11) (2008).

17. From Self-Assembly to Charge Transport with Single Molecules - An Electrochemical Approach

Han, B.; Li, Z.; Li, C.; Pobelov, I.; Su, G. J.; Aguilar-Sanchez, R.; Wandlowski, Th. *Topics in Current Chemistry* 287, 181-255 (2009).

18. Conductance of Redox-active Single Molecular Junctions: An Electrochemical Approach

Li, Z.; Pobelov, I.; Han, B.; Wandlowski, Th.; Błaszczuk, A.; Mayor, M.

Nanotechnology, 18, 044018(1-8) (2007).

19. Scanning Tunneling Microscopy / Spectroscopy Studies of ω -(4'-methyl-biphenyl-4-yl) alkanethiols on Au(111),

Su, G. J.; Aguilar-Sanchez, R.; Li, Z.; Pobelov, I.; Homberger, M.; Simon, U.; Wandlowski, Th.

ChemPhysChem 8 (7), 1037-1048 (2007).

20. Potential-induced Redox Switching in Viologen Self-assembled Monolayers: An ATR-SEIRAS Approach

Han, B.; Li, Z.; Wandlowski, Th. Błaszczuk, A.; Mayor, M.

Journal of Physical Chemistry C 111(37), 13855-13863 (2007).

21. Adsorption and Self-assembly of Aromatic Carboxylic Acids on Au/Electrolyte Interfaces

Han, B.; Li, Z.; Wandlowski, Th.

Analytical & Bioanalytical Chemistry 388 (1), 121-129 (2007).

22. Two-dimensional Assembly and Local Redox-activity of Molecular Hybrid Structures in an Electrochemical Environment

Li, Z.; Han, B.; Mészáros, G.; Wandlowski, Th.; Błaszczuk, A.; Mayor, M.

Faraday Discussions 131, 121-143 (2006).

23. Supramolecular Nanostructures of 1,3,5-Benzene-tricarboxylic Acid at Electrified Au(111)/0.05 M H₂SO₄ Interfaces: An in situ Scanning Tunneling Microscopy Study

Li, Z.; Han, B.; Wan, L. J.; Wandlowski, Th.

Langmuir 21 (15), 6915-6928 (2005).

24. In situ ATR-SEIRAS Study of Adsorption and Phase Formation of Trimesic Acid on Au(111-25 nm) Film Electrodes

Han, B.; Li, Z.; Pronkin, S.; Wandlowski, Th.

Canadian Journal of Chemistry 82 (10), 1481-1494 (2004).