Organotin photoresists for extreme ultraviolet lithography

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Publication list

This thesis is based on the following publications:

1. Y. Zhang, J. Haitjema, X. Liu, F. Johansson, A. Lindblad, S. Castellanos, N. Ottosson and A. M. Brouwer, "Photochemical conversion of tin-oxo cage compounds studied using hard x-ray photoelectron spectroscopy", *J. Micro/Nanolitho. MEMS MOEMS*, 2017, **16**, 023510. [Chapter 3]
2. Y. Zhang, J. Haitjema, X. Liu, F. Johansson, A. Lindblad, N. Ottosson, S. Castellanos, A. M. Brouwer, "Influence of thermal process on the chemical reaction and the reaction yield in a model organotin EUV photoresist", *Manuscript in preparation.* [Chapter 4]
3. Y. Zhang, J. Haitjema, X. Liu, F. Johansson, A. Lindblad, S. Castellanos, N. Ottosson, A. M. Brouwer, "The relationship between photon absorption of tin-nanocages and the efficiency of photochemical reaction", *Manuscript in preparation.* [Chapter 5]
4. J. Haitjema, Y. Zhang, M. Vockenhuber, D. Kazazis, Y. Ekinci and A. M. Brouwer, "Extreme ultraviolet patterning of tin-oxo cages", *J. Micro/Nanolitho. MEMS MOEMS*, 2017, **16**, 7. [Chapter 6]
5. Y. Zhang, J. Haitjema, M. Baljozovic, F. Johansson, N. Sadegh, M. Vockenhuber, D. Kazazis, I. Pollentier, J. D. Keelor, D. De Simone, A. Lindblad, T. A. Jung, Y. Ekinci, S. Castellanos, A. M. Brouwer, "The photoreaction mechanism of tin oxo cages under EUV exposure", *Manuscript in preparation.* [Chapter 7]
6. Y. Zhang, J. Haitjema, M. Baljozovic, M. Vockenhuber, D. Kazazis, T. A. Jung, Y. Ekinci and A. M. Brouwer, "Dual-tone Application of a Tin-Oxo Cage Photoresist Under E-beam and EUV Exposure", *J. Photopolym. Sci. Technol.*, 2018, **31**, 249-255. [Chapter 8]

Other publications:

- J. Haitjema, Y. Zhang, N. Ottosson and A. M. Brouwer, "Photoreactions of Tin Oxo Cages, Model EUV Photoresists", *J. Photopolym. Sci. Technol.*, 2017, **30**, 99-102.
- J. Haitjema, Thomas Schlathölter, Yu Zhang, Rebecka Lindblad, Martin Timm, Tobias Lau, Ronnie Hoekstra, Albert M. Brouwer, Soft X-ray Fragmentation of Tin-oxo Cage Ions, *submitted*.
- K. T. L. Trinh, Y. Zhang and N. Y. Lee, "One-step DNA purification and amplification on an integrated plastic microdevice for on-site identification of foodborne pathogens", *Anal. Chim. Acta*, 2018, **1040**, 63-73. (co-first author)
- M. L. Ha, Y. Zhang and N. Y. Lee, "A functionally integrated thermoplastic microdevice for one-step solid-phase-based nucleic acid purification and isothermal amplification for facile detection of foodborne pathogen", *Biotechnol. Bioeng.*, 2016, **113**, 2614-2623. (co-first author)

- W. Wu, K. T. L. Trinh, Y. Zhang and N. Yoon Lee, "Portable plastic syringe as a self-actuated pump for long-distance uniform delivery of liquid inside a microchannel and its application for flow-through polymerase chain reaction on chip", *RSC Advances*, 2015, **5**, 12071-12077.
- Y. Zhang, K. T. L. Trinh, I.-S. Yoo and N. Y. Lee, "One-step glass-like coating of polycarbonate for seamless DNA purification and amplification on an integrated monolithic microdevice", *Sens. Actuators B Chem.*, 2014, **202**, 1281-1289.
- Q. Sun, D. H. Kim, S. S. Park, N. Y. Lee, Y. Zhang, J. H. Lee, K. Cho and J. H. Cho, "Transparent, Low-Power Pressure Sensor Matrix Based on Coplanar-Gate Graphene Transistors", *Adv. Mater.*, 2014, **26**, 4735-4740.
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