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Photosynthesis of nanomaterials with optical resonances

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List of publications

This thesis is based on the following publications:

- *Localized photodeposition of catalysts using nanophotonic resonances in silicon photocathodes*, E. Kontoleta, S. H. C. Askes, L. Lai, E. C. Garnett, Beilstein J. Nanotechnol. **9**, 2097-2105 (2018). (**Chapter 2**)
- *Self-Optimized Catalysts: Hot-Electron Driven Photosynthesis of Catalytic Photocathodes*, E. Kontoleta, S. H. C. Askes, E. C. Garnett, ACS Appl. Mater. Interfaces **11**, 35713-35719 (2019). (**Chapter 3**)
- *Utilization of all hot-carriers in plasmonic nanostructures for selective deposition of nanomaterials*, E. Kontoleta, A. Tsoukala, S.H. C. Askes, E. Zoethout, H. Agrawal, E. C. Garnett., In preparation (2019). (**Chapter 4**)

Other publications by the author:

- *Over 70 % broadband integrated solar power in 1 μm Si cell with hyperuniform disorder nanostructuring*, N. Tavakoli, R. J. Spalding, G. Gkantzounis, C. Wan, Ruslan Röhrich, E. Kontoleta, M. Florescu, R. Sapienza, A. F. Koenderink, E. Alarcon-Llado, In preparation (2019).
- *Integrating Sphere Microscopy for Direct Absorption Measurements of Single Nanostructures*, S. A. Mann, B. Sciacca, Y. Zhang, J. Wang, E. Kontoleta, H. Liu, E. C. Garnett, ACS Nano **11** (2), 1412-1418, (2017).
- *The Role of Size and Dimerization of Decorating Plasmonic Silver Nanoparticles on the Photoelectrochemical Solar Water Splitting Performance of BiVO_4 Photoanodes*, M. Valenti, E. Kontoleta, I. Digdaya, M. P. Jonsson, G. Biskos, A. Schmidt-Ott, W. Smith, ChemNanoMat **2** (7), 739-747 (2016).

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