

## Scientific output

### Publications in peer reviewed journals

K. Hammarling, M. Sandberg, M. Engholm, H. Andersson, H-E. Nilsson. "Synthesis, curing behavior and swell tests of pH-responsive coatings from acryl-terminated oligo( $\beta$ -amino esters)". Chemosensors 2018, 6, 10. DOI: <https://doi.org/10.3390/chemosensors6010010>

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K. Laxman, D. Kimoto, A. Sahakyan, J. Dutta. "Nanoparticulate dielectric overlayer for enhanced electric fields in a capacitive deionization device". ACS Applied Materials & Interfaces 2018, 10, 6. DOI: <https://doi.org/10.1021/acsmami.7b16540>

R. Sun, P. Zhang, Peng, É. G. Bajnóczi, A. Neagu, C.-W. Tai, I. Persson, M. Strømme, O. Cheung, "Amorphous calcium carbonate constructed from nanoparticle aggregates with unprecedented surface area and mesoporosity". ACS Applied Materials & Interfaces 2018, 10. DOI: <https://doi.org/10.1021/acsmami.8b03939>

I. Pochard, M. Vall, J. Eriksson, C. Farineau, O. Cheng, S. Frykstrand, K. Welch, M. Strømme. "Amine-functionalised mesoporous magnesium carbonate: Dielectric spectroscopy studies of interactions with water and stability". Materials Chemistry and Physics 2018, 216. DOI: <https://doi.org/10.1016/j.matchemphys.2018.05.053>

C. Xu, C. Ruan, Y. Li, J. Lindh, M. Strømme. "High-performance activated carbons synthesized from nanocellulose for CO<sub>2</sub> capture and extremely selective removal of volatile organic compounds". Advanced Sustainable Systems 2018, 2, 1700147. DOI: <https://doi.org/10.1002/adsu.201700147>

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M. Engholm, K. Hammarling, H. Andersson, M. Sandberg, H-E. Nilsson. "A bio-compatible fiber optic pH sensor based on a thin core interferometric technique". Photonics 2019, 6, 11. DOI: <https://doi.org/10.3390/photonics6010011>

X. Kong, S. Li, M. Strømme, C. Xu, "Synthesis of porous organic polymers with tunable amine loadings for CO<sub>2</sub> capture: Balanced physisorption and chemisorption". Nanomaterials 2019, 9, 7. DOI: <https://doi.org/10.3390/nano9071020>

K. Laxman, A. Husain, A. Nasser, M. Al Abri, J. Dutta. "Tailoring the pressure drop and fluid distribution of a capacitive deionization device". Desalination 2019, 449. DOI: <https://doi.org/10.1016/j.desal.2018.10.021>

J. Nordstrand, J. Dutta. "Dynamic Langmuir Model: A simpler approach to modeling capacitive deionization." Journal of Physical Chemistry C 2019, 123, 26. DOI: <https://doi.org/10.1021/acs.jpcc.9b04198>

J. Nordstrand, K. Laxman, M. T. Z. Myint, J. Dutta. "An Easy-to-Use Tool for Modeling the Dynamics of Capacitive Deionization." Journal of Physical Chemistry A 2019, 123, 30. DOI: <https://doi.org/10.1021/acs.jpca.9b05503>

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#### **Masters theses**

- J. Hultberg. "Point source carbon capture by porous inorganic carbonates", Uppsala University, 2018.
- J. Rostami. "Zwitterionic Acetylated Cellulose Nanofibres for Design of Smart Water Filter Systems", KTH Royal Institute of Technology, 2018.
- R. Löfgren. "Metal ion adsorption of highly mesoporous magnesium carbonate", Uppsala University, 2019.
- L. Calmanovici Pacoste. "Use of MMC for Treatment of Pharmaceutical Residues in Wastewater", 2019, Uppsala University, 2019.