

Publikationen Sebastian Schuhmann:

1. S. Schuhmann, G. Guthausen "Produkt- und Prozesscharakterisierung mittels NMR-Messmethoden", Chemie in unserer Zeit, **ciuz.20200009R1, in press** (2020).
2. J.W. Simkins, S. Schuhmann, G. Guthausen, M. Heijnen, S.L. Codd, J.D. Seymour: "Characterization of biofilm distribution in hollow fiber membranes using Compressed Sensing Magnetic Resonance Imaging", Journal of Membrane Science **594**: 117437 (2020) DOI: 10.1016/j.memsci.2019.117437.
3. F. Klemens, S. Schuhmann, R. Balbierer, G. Guthausen, H. Nirschl, G. Thäter, M.J. Krause: "Noise reduction of flow MRI measurements using a lattice Boltzmann based topology optimisation approach", Computers & Fluids **197**: 104391 (2020) DOI: 10.1016/j.compfluid.2019.104391.
4. N. Schork, S. Schuhmann, O. Gruschke, D. Groß, K. Zick, H. Nirschl, G. Guthausen: "Recent MRI and diffusion studies of food structures", Annual Reports on NMR Spectroscopy **100** (2020) DOI: 10.1016/bs.arnmr.2020.02.002.
5. R. Balbierer, R. Gordon, S. Schuhmann, N. Willenbacher, H. Nirschl, G. Guthausen: "Sedimentation of lithium–iron–phosphate and carbon black particles in opaque suspensions used for lithium-ion-battery electrodes", Journal of Materials Science **54**(7): 5682-5694 (2019) DOI: 10.1007/s10853-018-03253-2.
6. N. Schork, S. Schuhmann, H. Nirschl, G. Guthausen: "In situ measurement of deposit layer formation during skim milk filtration by MRI", Magnetic Resonance in Chemistry **57**: 738-748 (2019) DOI: 10.1002/mrc.4826.
7. S. Schuhmann, J.W. Simkins, N. Schork, S.L. Codd, J.D. Seymour, M. Heijnen, F. Saravia, H. Horn, H. Nirschl, G. Guthausen: "Characterization and quantification of structure and flow in multichannel polymer membranes by MRI", Journal of Membrane Science **570**: 472-480 (2019) DOI: 10.1016/j.memsci.2018.10.072.
8. F. Klemens, S. Schuhmann, G. Guthausen, G. Thäter, M.J. Krause: "CFD-MRI: A coupled measurement and simulation approach for accurate fluid flow characterisation and domain identification", Computers & Fluids **166**: 218-224 (2018) DOI: 10.1016/j.compfluid.2018.02.022.
9. M.-L. Maier, S. Milles, S. Schuhmann, G. Guthausen, H. Nirschl, M.J. Krause: "Fluid flow simulations verified by measurements to investigate adsorption processes in a static mixer", Computers & Mathematics with Applications **76**: 2744-2757 (2018) DOI: 10.1016/j.camwa.2018.08.066.
10. N. Schork, S. Schuhmann, F. Arndt, S. Schütz, G. Guthausen, H. Nirschl: "MRI investigations of filtration: Fouling and cleaning processes", Microporous and Mesoporous Materials **269**: 60-64 (2018) DOI: 10.1016/j.micromeso.2017.05.042.
11. S. Schuhmann, N. Schork, K. Beller, H. Nirschl, T. Oerther, G. Guthausen: "In-situ characterization of deposits in ceramic hollow fiber membranes by compressed sensing RARE-MRI", AIChE Journal **64**(11): 4039–4046 (2018) DOI: 10.1002/aic.16201.
12. F. Arndt, S. Schuhmann, G. Guthausen, S. Schütz, H. Nirschl: "In situ MRI of alginate fouling and flow in ceramic hollow fiber membranes", Journal of Membrane Science **524**: 691-699 (2017) DOI: 10.1016/j.memsci.2016.11.079.
13. N. Schork, H.-J. Heidebrecht, R. Schopf, F. Arndt, S. Schuhmann, G. Guthausen, H. Nirschl, U. Kulozik: "Milk protein fractionation by means of microfiltration, An in-situ investigation of fouling formation on hollow fiber membranes – Part 3", International Dairy Magazine **10**: 3 (2017).

14. F. Arndt, H.-J. Heidebrecht, N. Schork, S. Schuhmann, U. Kulozik, S. Schütz, H. Nirschl, G. Guthausen, *Deposit layer formation during skim milk dead-end filtration with ceramic hollow fiber membranes using magnetic resonance imaging*, in *Proceedings of the XIII International Conference on the Applications of Magnetic Resonance in Food Science*, J. van Duynhoven and G. Guthausen Editors. 2016, impublications: MR in Food 2016. p. 55-59.