

Publications of Research Area A7:

1. Martin Grashei, Christian Hundshammer, Frits H.A. van Heijster, Geoffrey J. Topping, Franz Schilling; *'pH Dependence of T2 for Hyperpolarizable ¹³C-Labelled Small Molecules Enables Spatially Resolved pH Measurement by Magnetic Resonance Imaging'*, *Pharmaceuticals* (2021), 14 (4), pp. 327, 2021 (cover page)
2. Markus Berninger, Pablo Rodriguez-Gonzalez, Franz Schilling, Bernhard Haller, Thorsten Lichtenstein, Andreas B. Imhoff, Ernst J. Rummeny, Martina Anton, Stephan Vogt, Tobias D. Henning; *'Bifunctional Labeling of Rabbit Mesenchymal Stem Cells for MR Imaging and Fluorescence Microscopy'*, *Molecular Imaging and Biology* (2020); 22:303-312
3. Christian Hundshammer, Martin Grashei, Alexandra Greiner, Steffen J. Glaser, Franz Schilling; *'pH Dependence of T1 for ¹³C-Labelled Small Molecules Commonly Used for Hyperpolarized Magnetic Resonance Imaging'*, *ChemPhysChem* (2019); 20:798-802
4. Simone Köcher, Stephan Düwel, Christian Hundshammer, Steffen J. Glaser, Franz Schilling, Josef Granwehr, Christoph Scheurer; *'Ab Initio Simulation of pH-Sensitive Biomarkers in Magnetic Resonance Imaging'*, *The Journal of Physical Chemistry A* (2018); 122(40):7983-7990
5. Christian Hundshammer, Stephan Düwel, David Ruseckas, Geoffrey Topping, Piotr Dzien, Christoph Müller, Benedikt Feuerecker, Jan-Bernd Hövener, Axel Haase, Markus Schwaiger, Steffen J. Glaser, Franz Schilling; *'Hyperpolarized Amino Acid Derivatives as Multivalent Magnetic Resonance pH Sensor Molecules'*, *Sensors* (2018); 18(2):600
6. Stephan Düwel, Christian Hundshammer, Malte Gersch, Benedikt Feuerecker, Katja Steiger, Achim Buck, Axel Walch, Axel Haase, Steffen J. Glaser, Markus Schwaiger and Franz Schilling; *'Imaging of pH in vivo using hyperpolarized ¹³C-labeled zymonic acid'*, *Nature Communications* (2017); 8:15126
7. Christian Hundshammer, Stephan Düwel, Simone Köcher, Malte Gersch, Benedikt Feuerecker, Christoph Scheurer, Axel Haase, Steffen J. Glaser, Markus Schwaiger, Franz Schilling; *'Deuteration of hyperpolarized ¹³C-labelled zymonic acid enables*

sensitivity-enhanced dynamic MRI of pH; ChemPhysChem (2017); 18(18):2422-2425
(cover page)

8. Christian Hundshammer, Stephan Düwel, Franz Schilling[§]; *'Imaging of Extracellular pH Using Hyperpolarized Molecules'*, Israel Journal of Chemistry (2017); 57(9)788-799