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### Wissenschaftlicher Werdegang

- 10/2000 - 10/2004**    Chemiestudium, Technische Universität Dresden  
Schwerpunkt: Anorganische Chemie, Analytische Chemie
- 11/2004 - 08/2005**    Diplomarbeit am Institut für Anorganische Chemie (IAC) der TU  
Dresden  
Betreuer: Prof. Dr. Stefan Kaskel  
Thema: „Synthese und Charakterisierung des porösen Koordinations-  
polymers  $\text{Mo}_3(\text{BTC})_2$ “  
(Note: 1,0)
- 09/2005 - 05/2007**    Bearbeitung eines Industrieprojekts am IAC der TU Dresden
- 07/2007 - 09/2011**    Promotion, Universität Potsdam  
Betreuer: Prof. Dr. Erich Kleinpeter  
Thema: „NMR-Spektroskopische Untersuchungen an potentiellen  
Chitinase-Inhibitoren im freien und protein-gebundenen Zustand“  
(Note: summa cum laude)
- 10/2011 - 12/2011**    Wahrnehmung eines Lehrauftrags an der Universität Potsdam
- 01/2012 - 08/2018**    Akademischer Rat am Institut für organische Chemie der  
Eberhard-Karls-Universität Tübingen:  
Leitung der NMR-Abteilung des Instituts für organische Chemie
- seit 09/2018**         Akademischer Oberrat am Institut für organische Chemie der  
Eberhard-Karls-Universität Tübingen:  
Leitung der NMR-Abteilung des Instituts für organische Chemie

## Publikationsliste:

### *Zeitschriftenbeiträge*

- 1) **Synthesis and properties of the metal-organic framework  $\text{Mo}_3(\text{BTC})_2$  (TUDMOF-1)**  
Markus Kramer, Ulrich Schwarz, Stefan Kaskel  
*J. Mater. Chem.* 16 (2006), 2245-2248.
- 2) **Improved Hydrogen Storage in the Metal-Organic Framework  $\text{Cu}_3(\text{BTC})_2$**   
Piotr Krawiec, Markus Kramer, Michal Sabo, Heidi Fröde, Stefan Kaskel  
*Adv. Eng. Mater.* 8 (2006), 293-296.
- 3) **DFT computational studies of hydrogen bonding-based diastereomeric complexes - Limitations and applications to enantiodifferentiation**  
Karel D. Klika, Markus Kramer, Erich Kleinpeter  
*J. Mol. Struct. (THEOCHEM)* 913 (2009), 257-253.
- 4) **Polyampholyte-modified ionic microemulsions**  
Mabya Fechner, Markus Kramer, Erich Kleinpeter, Joachim Koetz  
*Colloid Polym. Sci.* 287 (2009), 1145-1153.
- 5) **Structural studies of ionic liquid-modified microemulsions**  
Oscar Rojas, Joachim Koetz, Sabine Kosmella, Brigitte Tiersch, Philipp Wacker, Markus Kramer  
*J. Colloid Interface Sci.* 333 (2009), 782-790.
- 6) **STD-DOSY: A new NMR-method to analyze multi-component enzyme/substrate systems**  
Markus Kramer, Erich Kleinpeter  
*J. Magn. Reson.* 202 (2010), 245-249.
- 7) **Lectin-bound conformations and non-covalent interactions of glycomimetic analogs of thiochitobiose**  
Anja Fettke, Markus Kramer, Erich Kleinpeter  
*Tetrahedron* 66 (2010), 4079-4088.
- 8) **A conformational study of *N*-acetyl glucosamine derivatives utilizing residual dipolar couplings**  
Markus Kramer, Erich Kleinpeter  
*J. Magn. Reson.* 212 (2011), 174-185.
- 9) **1,4,8,11,15,18,22,25-Octafluorophthalocyaninato Zinc ( $\text{F}_8\text{PcZn}$ )**  
Göran Crucius, Alexey Lyubimtsev, Markus Kramer, Michael Hanack, Thomas Ziegler  
*Synlett* 23 (2012), 2501-2503.

- 10) Chemical Nature of Carbonaceous Materials from Biomass by Hydrothermal Carbonization and Low Temperature Conversion**  
B. Weber, E. A. Stadlbauer, S. Eichenauer, C. Koch, K. Albert, M. Kramer, D. Steffens  
*J. Biobased Mater. Bioenergy* 7 (2013), 367-365.
- 11) Identification and Quantification of Protein Adducts Formed by Metabolites of 1-Methoxy-3-indolylmethyl Glucosinolate in Vitro and in Mouse Models**  
G. Barknowitz, W. Engst, S. Schmidt, M. Bernau, B. Monien, M. Kramer, S. Florian, H. Glatt  
*Chem. Res. Toxicol.* 27 (2014), 188-199.
- 12) Assignment of functional groups in Gram-positive bacteria**  
B. Buszewski, E. Dziubakiewicz, P. Pomastowski, K. Hryniewicz, J. Ploszaj-Pyrek, E. Talik, M. Kramer, K. Albert  
*J. Anal. Bioanal. Tech.* 6 (2015), 1-8.
- 13) Surface-crosslinked poly(3-mercaptopropyl)methylsiloxane-coatings on silica as new platform for low-bleed mass spectrometry-compatible functionalized stationary phases synthesized via thiol-ene click reaction**  
Zimmermann, Aleksandra; Horak, Jeannie; Sievers-Engler, Adrian; Sanwald, Corinna; Lindner, Wolfgang; Kramer, Markus; Laemmerhofer, Michael  
*Journal of Chromatography A* 1436 (2016), 73-83.
- 14) A new quinolinone and its natural/artificial derivatives from a shark gill-derived fungus *Penicillium crustosum* AP2T1**  
Y. Zhang, J. Mu, F. Essmann, Y. Feng, M. Kramer, H.-Y. Bao, S. Grond  
*Nat. Prod. Res.* 31(9) (2017), 985-989.
- 15) A new acetylenic compound and other bioactive metabolites from a shark gill-derived *Penicillium* strain**  
Zhang, Yi; Feng, Yan; Kramer, Markus; Essmann, Frank; Grond, Stephanie  
*Records of Natural Products* 11(1) (2017), 31-36.
- 16) N-Propyl-N'-2-pyridylurea-modified silica as mixed-mode stationary phase with moderate weak anion exchange capacity and pH-dependent surface charge reversal**  
Baeurer, Stefanie; Polnick, Stefan; Sanchez-Munoz, Orlando L.; Kramer, Markus; Laemmerhofer, Michael  
*Journal of Chromatography A* 1560 (2018), 45-54.

- 17) **Stable-bond polymeric reversed-phase/weak anion-exchange mixed-mode stationary phases obtained by simultaneous functionalization and crosslinking of a poly(3-mercaptopropyl)methylsiloxane-film on vinyl silica via thiol-ene double click reaction**  
Baeurer, Stefanie; Zimmermann, Aleksandra; Woiwode, Ulrich; Sanchez-Munoz, Orlando L.; Kramer, Markus; Horak, Jeannie; Lindner, Wolfgang; Bicker, Wolfgang; Laemmerhofer, Michael  
*Journal of Chromatography A* 1593 (2019), 110-118.
- 18) **SOMC@Periodic Mesoporous Silica Nanoparticles: Meerwein-Ponndorf-Verley Reduction Promoted by Immobilized Rare-Earth-Metal Alkoxides**  
Bock, Lorenz; Tran, Xuan; Liang, Yucang; Kramer, Markus; Maichle-Moessmer, Caecilia; Anwander, Reiner  
*Organometallics* 39(7) (2020), 1046-1058.
- 19) **Quadruple target evaluation of diversity-optimized halogen-enriched fragments (heflibs) reveals substantial ligand efficiency for ap2-associated protein kinase 1 (AAK1)**  
Dammann, Marcel; Kramer, Markus; Zimmermann, Markus; Boeckler, Frank M.  
*Frontiers in Chemistry* 9 (2021), 815567.
- 20) **Nocathioamides, uncovered by a Tunable Metabologenomic Approach, define a Novel Class of Chimeric Lanthipeptides**  
Saad, Hamada; Aziz, Saefuddin; Gehringer, Matthias; Kramer, Markus; Straetener, Jan; Berscheid, Anne; Brotz-Oesterhelt, Heike; Gross, Harald  
*Angew. Chem. Int. Ed.* 16(30) (2021), 16472-16479.
- 21) **Controllable organosilane monolayer density of surface bonding using silatranes for thiol functionalization of silica particles for liquid chromatography and validation of microanalytical method for elemental composition determination**  
Christian Geibel; Johannes Theiner; Marc Wolter; Markus Kramer; Wolfgang Lindner; Michael Lämmerhofer  
*Journal of Chromatography A* 1653 (2021), 462418-462420.
- 22) **Revisiting a challenging p53 binding site: a diversity-optimized HEFLib reveals diverse binding modes in T-p53C-Y220C**  
Stahlecker, Jason; Klett, Theresa; Schwer, Martin; Jaag, Simon; Dammann, Marcel; Ernst, Larissa N.; Braun, Michael B.; Zimmermann, Markus O.; Kramer, Markus; Laemmerhofer, Michael; Stehle, Thilo; Coles, Murray; Boeckler, Frank M.  
*RSC Medicinal Chemistry* 13(12) (2022), 1575-1586.

- 23) High Plasticity of the Amicetin Biosynthetic Pathway in *Streptomyces* sp. SHP 22-7 Led to the Discovery of Streptocytosine P and Cytosaminomycins F and G and Facilitated the Production of 12F-Plicacetin**  
Niraj Aryal; Junhong Chen; Keshab Bhattarai; Oliver Hennrich; Ira Handayani; Markus Kramer; Jan Straetener; Tatjana Wommer; Anne Berscheid; Silke Peter; Norbert Reiling; Heike Broetz-Oesterhelt; Christian Geibel; Michael Laemmerhofer; Yvonne Mast; Harald Gross  
*Journal of Natural Products* 85(3) (2022), 530-539.
- 24) Study of microheterogeneity of silatrane-based silica surface bonding chemistry and its optimization for the synthesis of chiral stationary phases for enantioselective liquid chromatography**  
Geibel, Christian; Kramer, Markus; Laemmerhofer, Michael  
*Journal of Chromatography A* 1674 (2022), 463138
- 25)  $[(\text{CH}_3)\text{Al}(\text{CH}_2)]_{12}$ : Methylaluminomethylene (MAM-12)**  
Spiridopoulos, Georgios; Kramer, Markus; Kracht, Felix; Maichle-Mossmer, Cacilia; Anwander, Reiner  
*Chemistry - A European Journal* 28(48) (2022), e202200823
- 26) Development and chromatographic exploration of stable-bonded cross-linked amino silica against classical amino phases**  
Wolter, Marc; Geibel, Christian; Olfert, Matthias; Su, Min; Bicker, Wolfgang; Kramer, Markus; Lindner, Wolfgang; Lammerhofer, Michael  
*Journal of Separation Science* 45(17) (2022), 3286-3300.
- 27) Screening of a Halogen-Enriched Fragment Library Leads to Unconventional Binding Modes**  
Dammann, Marcel; Stahlecker, Jason; Zimmermann, Markus O.; Klett, Theresa; Rotzinger, Kilian; Kramer, Markus; Coles, Murray; Stehle, Thilo; Boeckler, Frank M.  
*Journal of Medicinal Chemistry* 65(21) (2022), 14539-14552.
- 28) Principles and Applications of CF<sub>2</sub>X Moieties as Unconventional Halogen Bond Donors in Medicinal Chemistry, Chemical Biology, and Drug Discovery**  
Sebastian Vaas, Markus O. Zimmermann, Dieter Schollmeyer, Jason Stahlecker, Marc U. Engelhardt, Janosch Rheinganz, Bernhard Drotleff, Matthias Olfert, Michael Lämmerhofer, Markus Kramer, Thilo Stehle, and Frank M. Boeckler\*  
*Journal of Medicinal Chemistry* 66(15) (2023), 10202–10225.

*Buchbeiträge*

- 1) **Pulsed Field Gradients and Diffusion Ordered NMR Spectroscopy**  
in "G. Gauglitz, D. S. Moore, Handbook of Spectroscopy, 2<sup>nd</sup> Edition, Wiley-VCH"
- 2) **Residual Dipolar Couplings (RDC) in Structural Analysis**  
in "G. Gauglitz, D. S. Moore, Handbook of Spectroscopy, 2<sup>nd</sup> Edition, Wiley-VCH"
- 3) **Suspended-State NMR Spectroscopy (High-Resolution Magic Angle Spinning (HR-MAS) NMR spectroscopy)**  
in "G. Gauglitz, D. S. Moore, Handbook of Spectroscopy, 2<sup>nd</sup> Edition, Wiley-VCH"