

COMPLETE LIST OF PUBLICATIONS

Peer-reviewed journal articles (in chronological order; the ten most important publications are listed in the CV)

- [1] J. Dannhäuser, W. Donaubaue, F. Hampel, M. Reiher, B. Le Guennic, B. Corzilius, K.-P. Dinse, and A. Hirsch: [\$\sigma\$ -Donor und \$\pi\$ -Acceptor Stacking Interactions in a trans-2-Linked C₆₀-Cobalt\(II\) Tetraphenylporphyrin Diad](#), *Angew. Chem. Int. Ed.* **45**, 3368–3372 (2006).
- [2] A. Gembus, B. Corzilius, R.-A. Eichel, K.-P. Dinse, S. Immel, D. Stumm, M. Flauaus, and H. Plenio: [Electron Paramagnetic Resonance Structure Investigation of Copper Complexation in a Hemicarcerand](#), *J. Phys. Chem. B* **110**, 15012–15020 (2006).
- [3] B. Corzilius*, A. Gembus, N. Weiden, K.-P. Dinse, and K. Hata: [EPR Characterization of Catalyst-free SWNT and N@C₆₀-based Peapods](#), *Phys. Status Solidi B* **243**, 3273–3276 (2006).
- [4] B. Corzilius, E. Ramić, and K.-P. Dinse: [HYSCORE Analysis of Nitrogen Hyperfine Interactions](#), *Appl. Magn. Res.* **30**, 499–512 (2006).
- [5] B. Corzilius, K.-P. Dinse, J. van Slageren, and K. Hata: [Low-temperature Anomaly of Microwave Absorption and AC Susceptibility of Single-Wall Carbon Nanotubes: Bulk Superconductivity and Weak Ferromagnetism](#), *Phys. Rev. B* **75**, 235416:1–7 (2007).
- [6] B. Corzilius, K.-P. Dinse, and K. Hata: [Single-Wall Carbon Nanotubes and Peapods Investigated by EPR](#), *Phys. Chem. Chem. Phys.* **9**, 6063–6072 (2007).
- [7] B. Corzilius*, S. Agarwal, K.-P. Dinse, and K. Hata: [Electron Paramagnetic Resonance and Non-resonant Microwave Absorption of Single Wall Carbon Nanotubes](#), *Phys. Status Solidi B* **244**, 3890–3895 (2007).
- [8] B. Corzilius, P. Jakes, N. Weiden, S. Agarwal, and K.-P. Dinse: [EPR Investigation of N@C₇₀ in Polycrystalline C₇₀ and Single Wall Carbon Nanotubes](#), *Mol. Phys.* **105**, 2161–2168 (2007).
- [9] B. Corzilius*, K.-P. Dinse, and K. Hata: [Probing the Electronic Properties of Single-Walled Carbon Nanotubes with Resonant and Non-resonant Microwave Absorption](#), *Physica E* **40**, 2327–2332 (2008).
- [10] B. Corzilius*, K.-P. Dinse, K. Hata, M. Haluška, V. Skákalová, and S. Roth: [SWNT Probed by Multi-frequency EPR and Nonresonant Microwave Absorption](#), *Phys. Status Solidi B* **245**, 2251–2254 (2008).
- [11] K.-P. Dinse, J. van Tol, A. Ozarowski, and B. Corzilius: [Multi-frequency EPR and DC Conductivity of Itinerant Spins in Single-Wall Carbon Nanotubes](#), *Appl. Magn. Reson.* **37**, 595–603 (2010).
- [12] A. B. Barnes, B. Corzilius, M. L. Mak-Jurkauskas, L. B. Andreas, V. S. Bajaj, Y. Matsuki, M. L. Belenky, J. Lugtenburg, J. R. Sirigiri, R. J. Temkin, J. Herzfeld, and R. G. Griffin: [Resolution and Polarization Distribution in Cryogenic DNP/MAS Experiments](#), *Phys. Chem. Chem. Phys.* **12**, 5861–5867 (2010).
- [13] M. Pashchanka, R. C. Hoffmann, O. Burghaus, B. Corzilius, G. Cherkashinin, and J. J. Schneider: [Polycrystalline ZnO and Mn-doped ZnO Nanorod Arrays with Variable Dopant Content via a Template Based Synthesis from Zn\(II\) and Mn\(II\) Schiff Base Type Single Source Molecular Precursors](#), *Solid State Sci.* **13**, 224–231 (2011).
- [14] E. Nanni, A. B. Barnes, Y. Matsuki, P. P. Woskov, B. Corzilius, R. G. Griffin, and R. J. Temkin: [Microwave Field Distribution in a Magic Angle Spinning Dynamic Nuclear Polarization NMR Probe](#), *J. Magn. Reson.* **210**, 16–23 (2011).
- [15] B. Corzilius, A. A. Smith, A. B. Barnes, C. Luchinat, I. Bertini, and R. G. Griffin: [High-Field Dynamic Nuclear Polarization with High-Spin Transition Metal Ions](#), *J. Am. Chem. Soc.* **133**, 5648–5651 (2011).
- [16] K. Yokoyama, A. A. Smith, B. Corzilius, R. G. Griffin, and J. Stubbe: [Equilibration of Tyrosyl Radicals \(Y₃₅₆•, Y₇₃₁•, Y₇₃₀•\) in the Radical Propagation Pathway of the Escherichia coli Class Ia Ribonucleotide Reductase](#), *J. Am. Chem. Soc.* **133**, 18420–18432 (2011).
- [17] A. A. Smith, B. Corzilius, A. B. Barnes, T. Maly, and R. G. Griffin: [Solid Effect Dynamic Nuclear Polarization and Polarization Pathways](#), *J. Chem. Phys.* **136**, 015101:1–16 (2012).

- [18] E. L. Dane, B. Corzilius, E. Rizzato, P. Stocker, T. Maly, A. A. Smith, R. G. Griffin, O. Ouari, P. Tordo, and T. M. Swager: [Rigid Orthogonal bis-TEMPO Biradicals with Improved Solubility for Dynamic Nuclear Polarization](#), *J. Org. Chem.* **77**, 1789–1797 (2012).
- [19] M. K. Kiesewetter, B. Corzilius, A. A. Smith, R. G. Griffin, and T. M. Swager: [Dynamic Nuclear Polarization with a Water-soluble Rigid Biradical](#), *J. Am. Chem. Soc.* **134**, 4538–4540 (2012).
- [20] B. Corzilius, A. A. Smith, and R. G. Griffin: [Solid Effect in Magic Angle Spinning Dynamic Nuclear Polarization](#), *J. Chem. Phys.* **137**, 054201:1–12 (2012).
- [21] A. A. Smith, B. Corzilius, J. A. Bryant, R. DeRocher, P. Woskov, R. J. Temkin, and R. G. Griffin: [A 140 GHz Pulsed EPR/212 MHz NMR Spectrometer for DNP Studies](#), *J. Magn. Reson.* **223**, 170–179 (2012).
- [22] O. Haze, B. Corzilius, A. A. Smith, R. G. Griffin, and T. M. Swager: [Water-Soluble Narrow-Line Radicals for Dynamic Nuclear Polarization](#), *J. Am. Chem. Soc.* **134**, 14287–14290 (2012).
- [23] E. Ravera, B. Corzilius, V. K. Michaelis, C. Rosa, R. G. Griffin, C. Luchinat, and I. Bertini: [Dynamic Nuclear Polarization of Sedimented Solutes](#), *J. Am. Chem. Soc.* **135**, 1641–1644 (2013).
- [24] V. K. Michaelis, A. A. Smith, B. Corzilius, O. Haze, T. M. Swager, and R. G. Griffin: [High Field ¹³C Dynamic Nuclear Polarization with a Radical Mixture](#), *J. Am. Chem. Soc.* **135**, 2935–2938 (2013).
- [25] T.-C. Ong, M. L. Mak-Jurkauskas, J. J. Walish, V. K. Michaelis, B. Corzilius, A. A. Smith, A. M. Clausen, J. C. Cheetham, T. M. Swager, and R. G. Griffin: [Solvent-Free Dynamic Nuclear Polarization of Amorphous and Crystalline Ortho-Terphenyl](#), *J. Phys. Chem. B* **117**, 3040–3046 (2013).
- [26] L. B. Andreas, A. B. Barnes, B. Corzilius, J. J. Chou, E. A. Miller, M. A. Caporini, M. M. Rosay, and R. G. Griffin: [Dynamic Nuclear Polarization Study of Inhibitor Binding to the M2₁₈₋₂₀ Proton Transporter from Influenza A](#), *Biochemistry* **52**, 2774–2782 (2013).
- [27] A. A. Smith, B. Corzilius, and R. G. Griffin: [Observation of strongly forbidden solid effect dynamic nuclear polarization transitions via electron-electron double resonance detected NMR](#), *J. Chem. Phys.* **139**, 214201:1–6 (2013).
- [28] V. K. Michealis, B. Corzilius, A. A. Smith, O. Haze, T. M. Swager, and R. G. Griffin: [Dynamic Nuclear Polarization of ¹⁷O: Direct Polarization](#), *J. Phys. Chem. B* **117**, 14894–14906 (2013).
- [29] J. Mao, D. Akhmetzyanov, O. Ouari, V. P. Denysenkov, B. Corzilius, J. Plackmeyer, P. Tordo, T. F. Prisner, and C. Glauibitz: [Host-Guest Complexes as Water-Soluble High-Performance DNP Polarizing Agents](#), *J. Am. Chem. Soc.* **135**, 19275–19281 (2013).
- [30] B. Corzilius, L. B. Andreas, A. A. Smith, Q. Z. Ni, and R. G. Griffin: [Paramagnet induced signal quenching in MAS–DNP experiments in frozen homogeneous solutions](#), *J. Magn. Reson.* **240**, 113–123 (2014).
- [31] E. Ravera, B. Corzilius, V. K. Michaelis, C. Luchinat, R. G. Griffin, and I. Bertini: [DNP-Enhanced MAS NMR of Bovine Serum Albumin Sediments and Solutions](#), *J. Phys. Chem. B* **118**, 2957–2965 (2014).
- [32] T. V. Can, M. A. Caporini, F. Mentink-Vigier, B. Corzilius, J. J. Walish, M. Rosay, W. E. Maas, M. Baldus, S. Vega, T. M. Swager and R. G. Griffin: [Overhauser effects in insulating solids](#), *J. Chem. Phys.* **141**, 064202:1–8 (2014).
- [33] B. Corzilius, V. K. Michaelis, S. A. Penzel, E. Ravera, A. A. Smith, C. Luchinat, and R. G. Griffin: [Dynamic Nuclear Polarization of ¹H, ¹³C, and ⁵⁹Co in a Tris\(ethylenediamine\)cobalt\(III\) Crystalline Lattice Doped with Cr\(III\)](#), *J. Am. Chem. Soc.* **136**, 11716–11727 (2014).
- [34] P. Wenk, M. Kaushik, D. Richter, M. Vogel, B. Suess, and B. Corzilius*: [Dynamic Nuclear Polarization of Nucleic Acid with Endogenously Bound Manganese](#), *J. Biomol. NMR* **63**, 97–109 (2015).
- [35] K. K. Frederick, V. K. Michaelis, B. Corzilius, T.-C. Ong, A. C. Jacavone, R. G. Griffin, and S. Lindquist: [Sensitivity Enhanced NMR Reveals Alterations in Protein Structure by Cellular Milieus](#), *Cell* **163**, 620–628 (2015).
- [36] B. Corzilius*: [Theory of solid effect and cross effect dynamic nuclear polarization with half-integer high-spin metal polarizing agents in rotating solids](#), *Phys. Chem. Chem. Phys.* **18**, 27190–27204 (2016).
- [37] M. Kaushik, T. Bahrenberg, T. V. Can, M. A. Caporini, R. Silvers, J. Heiliger, A. A. Smith, H. Schwalbe, R. G. Griffin, and B. Corzilius*: [Gd\(III\) and Mn\(II\) complexes for dynamic nuclear polarization: small molecular](#)

- [chelate polarizing agents and applications with site-directed spin labeling of proteins](#), *Phys. Chem. Chem. Phys.* **18**, 27205–27218 (2016).
- [38] D. Daube, V. Aladin, J. Heiliger, J.J. Wittmann, D. Barthelmes, C. Bengs, H. Schwalbe, and B. Corzilius*: [Heteronuclear Cross-relaxation under Solid-state Dynamic Nuclear Polarization](#), *J. Am. Chem. Soc.* **138**, 16572–16575 (2016).
- [39] M. Kaushik, M. Qi, A. Godt,* and B. Corzilius*: [Bis-Gadolinium Complexes for Solid Effect and Cross Effect Dynamic Nuclear Polarization](#), *Angew. Chem.* **134**, 4359–4363 (2017); *Angew. Chem. Int. Ed.* **56**, 4295–4299 (2017).
- [40] Q. Z. Ni, E. Markhasin, T. V. Can, B. Corzilius, K. O Tan, A. B. Barnes, E. Daviso, Y. Su, J. Herzfeld, and R. G. Griffin: [Peptide and Protein Dynamics and Low-Temperature/DNP Magic Angle Spinning NMR](#), *J. Phys. Chem. B* **121**, 4997–5006 (2017).
- [41] T. Wittmann, A. Mondal, C. B. L. Tschense, J.J. Wittmann, O. Klimm, R. Siegel, B. Corzilius, B. Weber, M. Kaupp, and J. Senker: [Probing Interactions of N-Donor Molecules with Open Metal Sites within Paramagnetic Cr-MIL-101: A Solid-State NMR Spectroscopic and Density Functional Theory Study](#), *J. Am. Chem. Soc.* **140**, 2135–2144 (2018).
- [42] F. J. Scott, E. P. Saliba, B. J. Albert, N. Alaniva, E. L. Sesti, C. Gao, N. C. Golota, E. J. Choi, A. P. Jagtap, J. J. Wittmann, M. Eckardt, W. Harneit, B. Corzilius, S. Th. Sigurdsson, and A. B. Barnes: [Frequency-agile gyrotron for electron decoupling and pulsed dynamic nuclear polarization](#), *J. Magn. Reson.* **289**, 45–54 (2018).
- [43] J. J. Wittmann, T. V. Can, M. Eckardt, W. Harneit, R. G. Griffin, and B. Corzilius: [High-precision measurement of the electron spin g factor of trapped atomic nitrogen in the endohedral fullerene N@C₆₀](#), *J. Magn. Reson.* **290**, 12–17 (2018).

Invited reviews and book chapters

- [44] M. Kaushik, D. Richter, and B. Corzilius*: [Dynamic Nuclear Polarization in Solid-state NMR](#), *G.I.T. Laboratory Journal Europe* 1-2/2016, 20.
- [45] D. Richter, M. Kaushik, and B. Corzilius*: [Dynamische Kernpolarisation: Die Empfindlichkeit in der Festkörper-NMR](#), *G.I.T. Labor-Fachzeitschrift* 4/2016, 35.
- [46] A. S. Lilly-Thankamony, J. J. Wittmann, M. Kaushik, and B. Corzilius*: [Dynamic nuclear polarization for sensitivity enhancement in modern solid-state NMR](#), *Prog. Nucl. Magn. Reson. Spectrosc.* **102–103**, 120–195 (2017).
- [47] B. Corzilius: Dynamic Nuclear Polarization, in: *Paramagnetism in Biomolecular NMR*, eds: C. Luchinat, G. Parigi, and E. Ravera, RSC Publishing, in print (2018).

Conference proceedings

- [48] B. Corzilius, A. Gembus, K.-P. Dinse, F. Simon, and H. Kuzmany: [Carbon Nanotubes Investigated by N@C₆₀ and N@C₇₀ Spin Probes](#), in: *Electronic Properties of Novel Nanostructures*, eds. H. Kuzmany, J. Fink, M. Mehring, and S. Roth, AIP Conference Proceedings 786, Melville, New York, 2005, pp. 291-295.
- [49] B. Corzilius, A. Gembus, N. Weiden, and K.-P. Dinse: [Preparation and EPR Characterization of N@C₆₀-based Peapods](#), in: *Electronic Properties of Novel Nano-structures*, eds. H. Kuzmany, J. Fink, M. Mehring, and S. Roth, AIP Conference Proceedings 786, Melville, New York, 2005, pp. 317-320.
- [50] E. Nanni, A. B. Barnes, Y. Matsuki, P. P. Woskov, B. Corzilius, R. G. Griffin, and R. J. Temkin: [Optimization of THz Wave Coupling into Samples in DNP/NMR Spectroscopy](#), *35th International Conference on Infrared, Millimeter and Terahertz Waves (IRMMW-THz)*, IEEE, New York, 2010.

Patents

- [51] T. M. Swager, R. G. Griffin, O. Haze, B. Corzilius, and A. A. Smith. Radical Polarizing Agents for Dynamic Nuclear Polarization, U.S. Patent 8,715,621, filed March 15, 2012, and issued May 6, 2014.

Invited talks

- [52] B. Corzilius and K.-P. Dinse: N@C₆₀ in carbon nanotubes – One-dimensional spin chain or pseudo-liquid?, *Workshop on N@C₆₀-based quantum computing*, Freie Universität Berlin, Berlin, Germany, 2005.
- [53] B. Corzilius, S. Agarwal, K.-P. Dinse, J. van Slageren, and K. Hata: Microwave absorption and weak magnetic ordering in single wall carbon nanotubes – An indication for superconductivity in bulk SWNT, *XXIst International Winterschool on Electronic Properties of Novel Materials*, Kirchberg, Austria, 2007.
- [54] B. Corzilius, S. Agarwal, K.-P. Dinse, J. van Slageren, and K. Hata: Resonant and non resonant microwave absorption as tools for investigating the electronic properties of SWNT and peapods – EPR investigation of N@C₇₀ peapods, *3rd Workshop on Carbon-based Quantum Computing*, Freie Universität Berlin, Berlin, Germany, 2007.
- [55] B. Corzilius, K.-P. Dinse, and K. Hata: Resonant and non resonant microwave absorption of single wall carbon nanotubes, *4th Workshop on Carbon-based Quantum Computing*, Freie Universität Berlin, Berlin, Germany, 2008.
- [56] B. Corzilius, K.-P. Dinse, and K. Hata: Resonant and non-resonant microwave absorption of single wall carbon nanotubes, Francis Bitter Magnet Laboratory, Massachusetts Institute of Technology, Cambridge, MA, USA, 2008.
- [57] B. Corzilius: Pulsed dynamic nuclear polarization for solid state NMR at high magnetic field, Max-Planck-Institut für Polymerforschung, Mainz, Germany, 2009.
- [58] B. Corzilius, A. A. Smith, and R. G. Griffin: The Solid Effect Revisited, *NYSBC DNP Symposium*, New York Structural Biology Center, New York, NY, USA, 2010.
- [59] B. Corzilius: Novel Concepts in High-Field DNP – Cryogenic MAS, low- γ nuclei and polarizing agents, Biomolekulares Magnetresonanzzentrum (BMRZ), Goethe-Universität, Frankfurt am Main, Germany, 2010.
- [60] B. Corzilius, A. A. Smith, O. Haze, M. K. Kiesewetter, C. Luchinat, I. Bertini, T. M. Swager, and R. G. Griffin: Novel Polarizing Agents for High-Field Dynamic Nuclear Polarization, *EU COST action in Hyperpolarisation Spin Physics and Methodology in NMR and MRI at EUROMAR 2012*, Dublin, Ireland, 2012.
- [61] B. Corzilius: Solid-State Dynamic Nuclear Polarization at High Magnetic Fields - Past, Present, and Future Aspects, *IPTC Workshop*, Hirschegg, Austria, 2013.
- [62] B. Corzilius: New Methods in Solid-state Dynamic Nuclear Polarization, *IPTC Seminar*, Goethe-Universität, Frankfurt am Main, Germany, 2013.
- [63] B. Corzilius: Dynamic nuclear polarization: The quest for the ideal polarizing agent, Johannes-Gutenberg-Universität, Mainz, Germany, 2013.
- [64] B. Corzilius: Developments in MAS DNP: Towards the investigation of endogenous polarizing agents, *EMBO Workshop: Magnetic resonance for cellular structural biology*, Principina Terra, Italy, 2014.
- [65] B. Corzilius: The importance of polarizing agents and the chemical environment in MAS DNP, *EU COST action in Hyperpolarisation Spin Physics and Methodology in NMR and MRI at EUROMAR 2014*, Zürich, Switzerland, 2014.
- [66] B. Corzilius: Paramagnet-induced signal quenching and relaxation in MAS DNP, *EU COST action in Hyperpolarisation Spin Physics and Methodology in NMR and MRI at EUROMAR 2014*, Zürich, Switzerland, 2014.
- [67] B. Corzilius: Dynamic Nuclear Polarization and Solid-State NMR, plenary session, *EMBO Practical Course: Solution and solid-state NMR of paramagnetic molecules*, Sesto Fiorentino, Italy, 2014.
- [68] B. Corzilius: Exercises on Solid-State NMR, practical session, *EMBO Practical Course: Solution and solid-state NMR of paramagnetic molecules*, Sesto Fiorentino, Italy, 2014.

- [69] B. Corzilius: Dynamic Nuclear Polarization with Endogenous Polarizing Agents, *56th ENC*, Pacific Grove, CA, USA, 2015.
- [70] B. Corzilius: "Endogenous paramagnetic sites as polarizing agents for dynamic nuclear polarization in frozen solids", *COST WGM on "Paramagnetic relaxation and spin hyperpolarization"*, Paris, France, 2015.
- [71] B. Corzilius: DNP—Quo Vadis?, *Summer School on Nuclear Spin Hyperpolarization Techniques*, Southampton, UK, 2015.
- [72] B. Corzilius: Dynamic nuclear polarization of paramagnetic biomolecules, *EUROMAR 2015*, Prague, Czech Republic, 2015.
- [73] B. Corzilius: Dynamic nuclear polarization of proteins and nucleic acid with internal paramagnetic sites, Columbia University, New York, NY, USA, 2015.
- [74] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Saarbrücken, Germany, 2015.
- [75] B. Corzilius: Theory of Dynamic Nuclear Polarisation, *2nd G-NMR school*, Frankfurt, Germany, 2016.
- [76] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *Physikalisch-Chemisches Kolloquium*, Westfälische Wilhelms-Universität Münster, Münster, Germany, 2016.
- [77] B. Corzilius: Selective inversion of ¹³C resonances by DNP-driven and paramagnetically enhanced nuclear cross relaxation, *pNMR Training Workshop at EUROMAR 2016*, Aarhus, Denmark, 2016.
- [78] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, **Felix Bloch Lecture**, *GDCh FGMR 38th Annual Meeting*, Düsseldorf, Germany, 2016.
- [79] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, CNRS Institut des Sciences Analytiques / Centre de RMN à Très Haut Champs, ENS Lyon, Lyon, France, 2016
- [80] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *Connecting EPR, ssNMR and DNP for the study of complex biomolecules*, Schloss Ringberg, Kreuth, Germany, 2016.
- [81] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, Institute of Molecules and Materials, Radboud University, Nijmegen, The Netherlands, 2017.
- [82] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Niederrhein*, Hochschule Niederrhein, Krefeld, Germany, 2017.
- [83] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *Kolloquium des Instituts für Physikalische und Theoretische Chemie*, Rheinische Friedrich-Wilhelms-Universität Bonn, Germany, 2017.
- [84] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, Leibniz Institute for Molecular Pharmacology, Berlin, Germany, 2017.
- [85] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Halle (Saale)*, Martin-Luther-Universität Halle-Wittenberg, Germany, 2017.
- [86] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Leipzig*, Universität Leipzig, Germany, 2017.
- [87] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Aachen*, RWTH Aachen, Germany, 2017.
- [88] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, Forschungszentrum Jülich, Germany, 2017.
- [89] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Bochum*, Ruhr-Universität Bochum, Germany, 2017.

- [90] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Bayreuth*, Universität Bayreuth, Germany, 2017.
- [91] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Siegen*, Universität Siegen, Germany, 2017.
- [92] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Kassel*, Universität Kassel, Germany, 2017.
- [93] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *Organisch-Chemisches Kolloquium*, Karlsruher Institut für Technologie, Karlsruhe, Germany, 2017.
- [94] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Darmstadt*, Technische Universität Darmstadt, Germany, 2017.
- [95] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *GDCh-Kolloquium Ortsverband Stuttgart*, Universität Stuttgart, Germany, 2017.
- [96] B. Corzilius: Dynamic nuclear polarization using endogenous metal ions for sensitivity-enhanced NMR of biomolecules, *Biophysikalisch-chemisches Kolloquium*, Technische Universität München, Germany, 2017.
- [97] B. Corzilius: Novel mechanisms of polarization propagation under MAS DNP, *TSRC Workshop: Emerging Methodologies for Paramagnetic NMR and Dynamic Nuclear Polarization in Biological and Inorganic Materials*, Telluride, CO, USA, 2017.
- [98] B. Corzilius: Novel mechanisms of polarization propagation under MAS DNP, **Regitze R. Vold Memorial Prize Lecture**, *10th Alpine Conference on Solid-state NMR*, Chamonix, France, 2017.
- [99] B. Corzilius: Theory of Dynamic Nuclear Polarisation, *3rd G-NMR school*, Berlin, Germany, 2017.

Oral conference contributions (presenting author underlined)

- [100] B. Corzilius, R.-A. Eichel, K.-P. Dinse, J. Dannhäuser, and A. Hirsch: Electronic spin properties of a Co(II)-porphyrin-C₆₀-Dyad, *Tag der Fullerene*, Rathen, Germany, 2005.
- [101] B. Corzilius, S. Agarwal, K.-P. Dinse, J. van Slageren, and K. Hata: Probing the electronic properties of SWNT bulk samples by resonant and non-resonant microwave absorption – Evidence for bulk superconductivity and weak ferromagnetism, *E-MRS Spring Meeting, Symposium L: Electron Transport in Low-Dimensional Carbon Structures*, Strasbourg, France, 2007.
- [102] B. Corzilius, P. Jakes, K.-P. Dinse, and K. Hata: EPR investigation of N@C_{60/70}- and La@C₈₂-derived peapods, *213th ECS Meeting*, Phoenix, AZ, USA, 2008.
- [103] B. Corzilius, A. A. Smith, T. Maly, C. D. Joye, P. Woskov, J. R. Sirigiri, R. J. Temkin, and R. G. Griffin: Time domain dynamic nuclear polarization at high magnetic field, *2nd DNP Symposium*, Königstein, Germany, 2009.
- [104] B. Corzilius, A. A. Smith, C. Luchinat, O. Haze, I. Bertini, T. Swager, and R. G. Griffin: Novel Concepts of High-Field DNP: The Solid Effect Revisited, *32nd FGMR Discussion Meeting and Joint Benelux MR Symposium*, Münster, Germany, 2010.
- [105] B. Corzilius, A. A. Smith, A. B. Barnes, C. Luchinat, I. Bertini, and R. G. Griffin: High-Field Dynamic Nuclear Polarization with High-Spin Transition Metal Ions, *52nd ENC*, Pacific Grove, CA, USA, 2011.
- [106] B. Corzilius, A. A. Smith, C. Luchinat, I. Bertini, and R. G. Griffin: Insights into High Field DNP with the Solid Effect: Polarization Pathways and High Spin Metal Ion Polarizing Agents, *EUROMAR 2011*, Frankfurt, Germany, 2011.
- [107] B. Corzilius, A. A. Smith, C. Luchinat, I. Bertini, and R. G. Griffin: High-Field Dynamic Nuclear Polarization with High-Spin Transition Metal Ions, *3rd DNP Symposium*, Lausanne, Switzerland, 2011.
- [108] B. Corzilius, V. K. Michaelis, S. A. Penzel, E. Ravera, A. A. Smith, C. Luchinat, and R. G. Griffin: Dynamic Nuclear Polarization of ¹H, ¹³C, and ⁵⁹Co in Polycrystalline Co(en)₃Cl₃•NaCl•6H₂O Doped with Cr(III), *4th DNP Symposium*, Helsingør, Denmark, 2013.

- [109] B. Corzilius: Inter- and intramolecular paramagnetic interactions in light of solid-state DNP: Towards DNP using endogenous polarizing agents, *EUROMAR 2014*, Zürich, Switzerland, 2014.
- [110] B. Corzilius: Direct Solid Effect of ^1H , ^{13}C , and ^{15}N with Gd(III) – Towards DNP using endogenous polarizing agents, *36th FGMR Discussion Meeting*, Berlin, Germany, 2014.
- [111] B. Corzilius: Solid-state dynamic nuclear polarization using endogenous paramagnetic sites, *114th General Assembly of the German Bunsen Society for Physical Chemistry*, Bochum, Germany, 2015.
- [112] B. Corzilius: Dynamic Nuclear Polarization with Endogenous Polarizing Agents, *Hyperpolarized Magnetic Resonance*, Egmond aan Zee, The Netherlands, 2015.
- [113] M. Kaushik, D. Richter, and B. Corzilius: Gd(III) DOTA as polarizing agent at high field: Solid Effect vs Cross Effect Dynamic Nuclear Polarization, *Hyperpolarized Magnetic Resonance*, Egmond aan Zee, The Netherlands, 2015.
- [114] B. Corzilius: Dynamic Nuclear Polarization with Endogenous Polarizing Agents, *GDCh FGMR 37th FGMR Annual Discussion Meeting: Joint Discussion Meeting of the German and British Magnetic Resonance Societies and Priority Programme 1601*, Darmstadt, Germany, 2015.
- [115] B. Corzilius: Cross effect dynamic nuclear polarization with bis-Gd(III) complexes, *EUROMAR 2016*, Aarhus, Denmark, 2016.
- [116] M. Kaushik, M. Qi, A. Godt, and B. Corzilius: Gd $^{3+}$ as polarizing agent at high field: solid effect vs. cross effect dynamic nuclear polarization, *Rocky Mountain Conference for Analytical Chemistry*, Breckenridge, Colorado, USA, 2016.
- [117] M. Kaushik, M. Qi, A. Godt, and B. Corzilius: Dynamic nuclear polarization enhanced solid-state NMR using bis-Gd $^{3+}$ polarizing agents, *RNA structural biology*, Bad Homburg, Germany, 2016.
- [118] B. Corzilius: Novel mechanisms of polarization propagation under MAS DNP, *39th FGMR Annual Discussion Meeting 2017: Joint Discussion Meeting of the French and German Magnetic Resonance Societies*, Bayreuth, Germany, 2017.
- [119] M. Kaushik, M. Qi, A. Godt, and B. Corzilius: Bis-Gadolinium Complexes for Solid Effect and Cross Effect Dynamic Nuclear Polarization, **Ernst Award Prize Lecture**, *39th FGMR Annual Discussion Meeting 2017: Joint Discussion Meeting of the French and German Magnetic Resonance Societies*, Bayreuth, Germany, 2017.

Poster conference contributions (presenting author underlined)

- [120] B. Corzilius, A. Gembus, N. Weiden, and K.-P. Dinse: Preparation and pulsed EPR study of N@C $_{60}$ peapods, *DFG Abschlusskolloquium SPP 1051 (Highfield EPR)*, Hünfeld, Germany, 2005.
- [121] B. Corzilius, A. Gembus, N. Weiden, and K.-P. Dinse: Preparation and EPR characterisation of N@C $_{60}$ and N@C $_{70}$ based peapods, *XIXth International Winterschool on Electronic Properties of Novel Materials*, Kirchberg, Austria, 2005.
- [122] B. Corzilius, A. Gembus, N. Weiden, and K.-P. Dinse: Preparation and EPR characterisation of N@C $_{60}$ and N@C $_{70}$ based peapods, *EPR Summerschool*, Naurod, Germany, 2005.
- [123] B. Corzilius, A. Gembus, N. Weiden, K.-P. Dinse, and K. Hata: Preparation and EPR characterization of N@C $_{60}$ -based peapods, *XXth International Winterschool on Electronic Properties of Novel Materials*, Kirchberg, Austria, 2006.
- [124] B. Corzilius, K.-P. Dinse, K. Hata, M. Haluska, V. Skakalova, and S. Roth: SWNT probed by multi-frequency EPR and non-resonant microwave absorption, *XXIInd International Winterschool on Electronic Properties of Novel Materials*, Kirchberg, Austria, 2008.
- [125] B. Corzilius, K.-P. Dinse, and K. Hata: Electronic properties of single-walled carbon nanotubes investigation by multi-frequency EPR and non-resonant microwave absorption, *30th Annual Discussion Meeting and Tutorial on Magnetic Resonance in Chemistry and Biology*, Regensburg, Germany, 2008.
- [126] B. Corzilius, A. B. Barnes, T. Maly, E. Markhasin, T.-C. Ong, L. B. Andreas, A. A. Smith, A. V. Markin, N. N. Smirnova, and R. G. Griffin: Structural dynamics of Alanine-prolyl-glycine Studied by Low-Temperature

- ssNMR and Direct Polarization of Low- γ Nuclei via DNP, *Rocky Mountain Conference on Analytical Chemistry*, Snowmass, CO, USA, 2010.
- [127] B. Corzilius, A. A. Smith, A. B. Barnes, C. Luchinat, I. Bertini, and R. G. Griffin: High-Field Dynamic Nuclear Polarization with High-Spin Transition Metal Ions, *52nd ENC*, Pacific Grove, CA, USA, 2011.
- [128] B. Corzilius, A. A. Smith, C. Luchinat, I. Bertini, and R. G. Griffin: High-Field Dynamic Nuclear Polarization with High-Spin Transition Metal Ions, *3rd DNP Symposium*, Lausanne, Switzerland, 2011.
- [129] B. Corzilius, A. A. Smith, O. Haze, M. K. Kieseewetter, C. Luchinat, I. Bertini, T. M. Swager, and R. G. Griffin: Novel Polarizing Agents for High-Field Dynamic Nuclear Polarization, *EUROMAR 2012*, Dublin, Ireland, 2012.
- [130] B. Corzilius, L. Andreas, A. A. Smith, Q. Z. Ni, and R. G. Griffin: The quest for the hidden spins: Paramagnet-induced signal quenching and relaxation in MAS DNP, *55th ENC*, Boston, MA, USA, 2014.
- [131] D. Richter, M. Kaushik, and B. Corzilius: Investigation of endogenous paramagnetic centers for dynamic nuclear polarization, *EMBO Workshop: Magnetic resonance for cellular structural biology*, Principina Terra, Italy, 2014.
- [132] M. Kaushik, D. Richter, and B. Corzilius: Investigation of Dynamic Nuclear Polarization transfer mechanism in molecular and crystalline model systems, *EUROMAR 2014*, Zürich, Switzerland, 2014.
- [133] D. Richter, M. Kaushik, and B. Corzilius: Investigation of endogenous paramagnetic centers for dynamic nuclear polarization, *EMBO Practical Course: Solution and solid-state NMR of paramagnetic molecules*, Sesto Fiorentino, Italy, 2014.
- [134] M. Kaushik, D. Richter, and B. Corzilius: Investigation of Dynamic Nuclear Polarization transfer mechanism in molecular and crystalline model systems, *EMBO Practical Course: Solution and solid-state NMR of paramagnetic molecules*, Sesto Fiorentino, Italy, 2014.
- [135] D. Richter, M. Kaushik, and B. Corzilius: Investigation of endogenous paramagnetic centers for dynamic nuclear polarization, *36th FGMR Discussion Meeting*, Berlin, Germany, 2014.
- [136] M. Kaushik, D. Richter, and B. Corzilius: Dynamic nuclear polarization with Gd(III) at high field – Competition between solid and cross effect in ¹³C and ¹⁵N DNP, *36th FGMR Discussion Meeting*, Berlin, Germany, 2014.
- [137] P. Wenk, D. Richter, M. Kaushik, and B. Corzilius: Paramagnetic metal ion binding to RNA characterized by magnetic resonance for site-specific dynamic nuclear polarization, *36th FGMR Discussion Meeting*, Berlin, Germany, 2014.
- [138] M. Kaushik, D. Richter, and B. Corzilius: Gd(III) DOTA as polarizing agent at high field: Solid Effect vs Cross Effect Dynamic Nuclear Polarization, *Summer School on Nuclear Spin Hyperpolarization Techniques*, Southampton, UK, 2015.
- [139] D. Richter, M. Kaushik, and B. Corzilius: Investigation of proteins with endogenously bound Gd³⁺ for dynamic nuclear polarization (DNP), *Summer School on Nuclear Spin Hyperpolarization Techniques*, Southampton, UK, 2015.
- [140] T. Bahrenberg, J. Knauer, I. Stais, R. Silvers, F. Sochor, C. Richter, H. Schwalbe, and B. Corzilius: Site-directed spin labeling using lanthanoide ions for DNP-enhanced MAS-NMR spectroscopy on proteins, *Summer School on Nuclear Spin Hyperpolarization Techniques*, Southampton, UK, 2015.
- [141] M. Kaushik, D. Richter, and B. Corzilius: Gd(III) DOTA as polarizing agent at high field: Solid Effect vs. Cross Effect Dynamic Nuclear Polarization, *Hyperpolarized Magnetic Resonance*, Egmond aan Zee, The Netherlands, 2015.
- [142] D. Richter, M. Kaushik, and B. Corzilius: Investigation of proteins with endogenously bound Gd³⁺ for dynamic nuclear polarization (DNP), *Hyperpolarized Magnetic Resonance*, Egmond aan Zee, The Netherlands, 2015.
- [143] M. Kaushik, D. Richter, and B. Corzilius: Gd(III) DOTA as polarizing agent at high field: Solid Effect vs Cross Effect Dynamic Nuclear Polarization, *GDCh FGMR 37th Annual Meeting: Joint Discussion Meeting of the German and British Magnetic Resonance Societies and Priority Programme 1601*, Darmstadt, Germany, 2015.
- [144] D. Richter, M. Kaushik, and B. Corzilius: Investigation of proteins with endogenously bound Gd³⁺ for dynamic nuclear polarization (DNP), *GDCh FGMR 37th Annual Meeting: Joint Discussion Meeting of the German and British Magnetic Resonance Societies and Priority Programme 1601*, Darmstadt, Germany, 2015.

- [145] M. Kaushik, M. Qi, A. Godt, and B. Corzilius: Gd³⁺ as polarizing agent at high field: solid effect vs cross effect dynamic nuclear polarization, *Rocky Mountain Conference for Analytical Chemistry*, Breckenridge, Colorado, USA, 2016.
- [146] J. Heiliger, D. Daube, and B. Corzilius: Site-directed spin labeling of a protein with Gd(III) for MAS NMR dynamic nuclear polarization, *GDCh FGMR 38th Annual Meeting*, Düsseldorf, Germany, 2016.
- [147] C. Bengs, D. Daube, J. Heiliger, and B. Corzilius: Methyl induced cross-relaxation during dynamic nuclear polarization, *GDCh FGMR 38th Annual Meeting*, Düsseldorf, Germany, 2016.
- [148] M. Kaushik, M. Qi, A. Godt, and B. Corzilius: Gd³⁺ as polarizing agent at high field: solid effect vs cross effect dynamic nuclear polarization, *Connecting EPR, ssNMR and DNP for the study of complex biomolecules*, Schloss Ringberg, Kreuth, Germany, 2016.
- [149] J. Heiliger, D. Daube, and B. Corzilius: Site-directed spin labeling of a protein with Gd(III) for MAS NMR dynamic nuclear polarization, *Connecting EPR, ssNMR and DNP for the study of complex biomolecules*, Schloss Ringberg, Kreuth, Germany, 2016.
- [150] A. S. Lilly Thankamony, N. C. Kunjir, M. Kaushik, S. Th. Sigurdsson, and B. Corzilius: Study of paramagnetic effects in DNP NMR using gadolinium-terpyridine complexes, *EUROMAR 2017, Warsaw, Poland*, 2017.
- [151] J. Heiliger, E. Cetiner, H. Schwalbe, and B. Corzilius: Site-directed spin labeling of a protein with Gd(III) for MAS NMR dynamic nuclear polarization, *EUROMAR 2017, Warsaw, Poland*, 2017.
- [152] M. Kaushik, M. Qi, A. Godt, and B. Corzilius: Aspects of high-spin polarizing agents for dynamic nuclear polarization, *10th Alpine Conference on Solid-state NMR*, Chamonix, France, 2017.
- [153] V. Aladin, J. J. Wittmann, M. Vogel, B. Suess, and B. Corzilius: Dynamic nuclear polarization on tetracycline binding aptamer, *39th FGMR Annual Discussion Meeting 2017: Joint Discussion Meeting of the French and German Magnetic Resonance Societies*, Bayreuth, Germany, 2017.
- [154] D. Daube, M. Kaushik, D. Barthelmes, M. Vogel, H. Schwalbe, B. Suess, and B. Corzilius: Investigation of proteins with endogenous paramagnetic centers for dynamic nuclear polarization (DNP), *39th FGMR Annual Discussion Meeting 2017: Joint Discussion Meeting of the French and German Magnetic Resonance Societies*, Bayreuth, Germany, 2017.
- [155] J. Heiliger, E. Cetiner, H. Schwalbe, and B. Corzilius: Site-directed spin labeling of a protein with Gd(III) for MAS NMR dynamic nuclear polarization, *39th FGMR Annual Discussion Meeting 2017: Joint Discussion Meeting of the French and German Magnetic Resonance Societies*, Bayreuth, Germany, 2017.
- [156] M. Kaushik, M. Qi, A. Godt, and B. Corzilius: Aspects of high-spin polarizing agents for dynamic nuclear polarization, *39th FGMR Annual Discussion Meeting 2017: Joint Discussion Meeting of the French and German Magnetic Resonance Societies*, Bayreuth, Germany, 2017.
- [157] A. S. Lilly Thankamony, N. C. Kunjir, M. Kaushik, S. Th. Sigurdsson, and B. Corzilius: Paramagnetic effects in Gd-terpyridine complexes, *39th FGMR Annual Discussion Meeting 2017: Joint Discussion Meeting of the French and German Magnetic Resonance Societies*, Bayreuth, Germany, 2017.