

List of publications: Prof. Dr. Thomas Wiegand

2023

- Bartalucci, E., Malär, A.A., Mehnert, A., Kleine Buning, J.B., Gunzel, L., Icker, M., **Wiegand, T.** (2023). Probing a Hydrogen-pi Interaction Involving a Trapped Water Molecule in the Solid State. *Angew Chem Int Ed Engl.* <https://doi.org/10.1002/anie.202217725>
- Lecoq, L., Brigandat, L., Huber, R., Fogeron, M. L., Wang, S., Dujardin, Briday, M., **Wiegand, T.**, Callon, M., Malär, A.A., Durantel, D., Burdette, D., Berke, J.M., Meier, B.H., Nassal, M.M., Böckmann, A. (2023). Molecular elucidation of drug-induced abnormal assemblies of the hepatitis B virus capsid protein by solid-state NMR. *Nat Commun*, 14(1), 471. <https://doi.org/10.1038/s41467-023-36219-3>
- Bartalucci, E., Schumacher, C., Hendrickx, L., Puccetti, F., d'Ancias Almeida Silva, I., Dervisoglu, R., Puttreddy, R., Bolm, C., **Wiegand, T.** (2023). Disentangling the Effect of Pressure and Mixing on a Mechanochemical Bromination Reaction by Solid-State NMR Spectroscopy. *Chem Eur J*, e202203466. <https://doi.org/10.1002/chem.202203466>

2022

- Lacabanne, D., **Wiegand, T.**, Di Cesare, M., Orelle, C., Ernst, M., Jault, J. M., Meier, B.H. Böckmann, A. (2022). Solid-State NMR Reveals Asymmetric ATP Hydrolysis in the Multidrug ABC Transporter BmrA. *J Am Chem Soc*, 144(27), 12431-12442. <https://doi.org/10.1021/jacs.2c04287>
- Lipiński, W.P., Zehnder, J., Abbas, M., Güntert, P., Spruijt, E., **Wiegand, T.** (2022). Fibrils emerging from droplets: Molecular guiding principles behind phase transitions of short peptide-based condensates. <https://doi.org/10.26434/chemrxiv-2022-6tz18>
- Malär, A. A., Sun, Q., Zehnder, J., Kehr, G., Erker, G., **Wiegand, T.** (2022). Proton-phosphorous connectivities revealed by high-resolution proton-detected solid-state NMR. *Phys Chem Chem Phys*, 24(13), 7768-7778. <https://doi.org/10.1039/d2cp00616b>
- Římal, V., Callon, M., Malär, A.A., Cadalbert, R., Torosyan, A., **Wiegand, T.**, Ernst, M., Böckmann, A., Meier, B.H. (2022). Correction of field instabilities in biomolecular solid-state NMR by simultaneous acquisition of a frequency reference. *Magnetic Resonance*, 3(1), 15-26. <https://doi.org/10.5194/mr-3-15-2022>

2021

- Callon, M., Malär, A.A., Pfister, S., Rimal, V., Weber, M. E., **Wiegand, T.**, Zehnder, J., Chavez, M., Cadalbert, R., Deb, R., Dapp, A., Fogeron, M.L., Hunkeler, A., Lecoq, L., Torosyan, A., Zyla, D., Glockshuber, R., Jonas, S., Nassal, M., Ernst, M., Böckmann, A., Meier, B.H. (2021). Biomolecular solid-state NMR spectroscopy at 1200 MHz: the gain in resolution. *J Biomol NMR*, 75(6-7), 255-272. <https://doi.org/10.1007/s10858-021-00373-x>
- Chávez, M., **Wiegand, T.**, Malär, A.A., Meier, B.H., Ernst, M. (2021). Residual dipolar line width in magic-angle spinning proton solid-state NMR. *Magnetic Resonance*, 2(1), 499-509. doi:10.5194/mr-2-499-2021
- Kumari, P., Ghosh, D., Vanas, A., Fleischmann, Y., **Wiegand, T.**, Jeschke, G., Riek, R., Eichmann, C. (2021). Structural insights into alpha-synuclein monomer-fibril interactions. *Proc Natl Acad Sci U S A*, 118(10). <https://doi.org/10.1073/pnas.2012171118>
- Lecoq, L., Wang, S., Dujardin, M., Zimmermann, P., Schuster, L., Fogeron, M.L., Briday, M., Schledorn, M., **Wiegand, T.**, Cole, L., Montserret, R.; Bressanelli, S., Meier, B.H., Nassal, M., Böckmann, A. (2021). A pocket-factor-triggered conformational switch in the hepatitis B virus capsid. *Proc Natl Acad Sci U S A*, 118(17). <https://doi.org/10.1073/pnas.2022464118>
- Malär, A.A., Volker, L.A., Cadalbert, R., Lecoq, L., Ernst, M., Böckmann, A., Meier, B.H., **Wiegand, T.** (2021). Temperature-Dependent Solid-State NMR Proton Chemical-Shift Values and Hydrogen Bonding. *J Phys Chem B*, 125(23), 6222-6230. <https://doi.org/10.1021/acs.jpcc.1c04061>
- Malär, A.A., Wili, N., Volker, L. A., Kozlova, M. I., Cadalbert, R., Dapp, A., Weber, M.E., Zehnder, J., Eckert, H., Böckmann, A., Klose, D., Mulkidjanian, A.Y., Meier, B.H., **Wiegand, T.** (2021). Spectroscopic glimpses of the transition state of ATP hydrolysis trapped in a bacterial DnaB helicase. *Nat Commun*, 12(1), 5293. <https://doi.org/10.1038/s41467-021-25599-z>
- Zehnder, J., Cadalbert, R., Terradot, L., Ernst, M., Böckmann, A., Güntert, P., Meier, B.H. **Wiegand, T.** (2021). Paramagnetic Solid-State NMR to Localize the Metal-Ion Cofactor in an Oligomeric DnaB Helicase. *Chemistry*, 27(28), 7745-7755. <https://doi.org/10.1002/chem.202100462>
- Zehnder, J., Cadalbert, R., Yulikov, M., Kunze, G., **Wiegand, T.** (2021). Paramagnetic spin labeling of a bacterial DnaB helicase for solid-state NMR. *J Magn Reson*, 332, 107075. <https://doi.org/10.1016/j.jmr.2021.107075>

- Kumari, P., Gosh, D., Vanas, A., Fleischmann, Y., **Wiegand, T.**, Jeschke, G., Riek, R., Eichmann, C. (2021) Structural Insights into α -Synuclein Monomer-Fibril Interactions. *Proc. Natl. Acad. Sci. USA*, 118, e2012171118. <https://doi.org/10.1073/pnas.2012171118>

2020

- Knitsch, R., Brinkkotter, M., **Wiegand, T.**, Kehr, G., Erker, G., Hansen, M.R., Eckert, H. (2020). Solid-State NMR Techniques for the Structural Characterization of Cyclic Aggregates Based on Borane-Phosphane Frustrated Lewis Pairs. *Molecules*, 25(6). <https://doi.org/10.3390/molecules25061400>
- Lacabanne, D., Boudet, J., Malär, A.A., Wu, P., Cadalbert, R., Salmon, L., Allain, F.H., Meier, B.H., **Wiegand, T.** (2020). Protein Side-Chain-DNA Contacts Probed by Fast Magic-Angle Spinning NMR. *J Phys Chem B*, 124(49), 11089-11097. <https://doi.org/10.1021/acs.jpcc.0c08150>
- Lacabanne, D., **Wiegand, T.**, Wili, N., Kozlova, M. I., Cadalbert, R., Klose, D., Mulkidjanian, A.Y., Meier, B.H., Böckmann, A. (2020). ATP Analogues for Structural Investigations: Case Studies of a DnaB Helicase and an ABC Transporter. *Molecules*, 25(22). <https://doi.org/10.3390/molecules25225268>
- **Wiegand, T.**, Schledorn, M., Malär, A.A., Cadalbert, R., Dapp, A., Terradot, L., Meier, B.H. Böckmann, A. (2020). Nucleotide Binding Modes in a Motor Protein Revealed by (31) P- and (1) H-Detected MAS Solid-State NMR Spectroscopy. *Chembiochem*, 21(3), 324-330. <https://doi.org/10.1002/cbic.201900439>
- **Wiegand, T.** (2020). A solid-state NMR tool box for the investigation of ATP-fueled protein engines. *Prog Nucl Magn Reson Spectrosc*, 117, 1-32. <https://doi.org/10.1016/j.pnmrs.2020.02.001>
- **Wiegand, T.**, Lacabanne, D., Torosyan, A., Boudet, J., Cadalbert, R., Allain, F.H., Meier, B.H., Böckmann, A. (2020). Sedimentation Yields Long-Term Stable Protein Samples as Shown by Solid-State NMR. *Front Mol Biosci*, 7, 17. <https://doi.org/10.3389/fmolb.2020.00017>
- **Wiegand, T.**, Malär, A.A., Cadalbert, R., Ernst, M., Böckmann, A., Meier, B.H. (2020). Asparagine and Glutamine Side-Chains and Ladders in HET-s(218-289) Amyloid Fibrils Studied by Fast Magic-Angle Spinning NMR. *Front Mol Biosci*, 7, 582033. <https://doi.org/10.3389/fmolb.2020.582033>

2019

- Boudet, J., Devillier, J. C., **Wiegand, T.**, Salmon, L., Meier, B.H., Lipps, G., Allain, F.H. (2019). A Small Helical Bundle Prepares Primer Synthesis by Binding Two Nucleotides that Enhance Sequence-Specific Recognition of the DNA Template. *Cell*, 176(1-2), 154-166 e113. <https://doi.org/10.1016/j.cell.2018.11.031>
- Lacabanne, D., Fogeron, M. L., **Wiegand, T.**, Cadalbert, R., Meier, B.H., Böckmann, A. (2019). Protein sample preparation for solid-state NMR investigations. *Prog Nucl Magn Reson Spectrosc*, 110, 20-33. <https://doi.org/10.1016/j.pnmrs.2019.01.001>
- Lacabanne, D., Orelle, C., Lecoq, L., Kunert, B., Chuilon, C., **Wiegand, T.**, Ravaut, S., Jault, J.M., Meier, B.H., Böckmann, A. (2019). Flexible-to-rigid transition is central for substrate transport in the ABC transporter BmrA from *Bacillus subtilis*. *Commun Biol*, 2, 149. <https://doi.org/10.1038/s42003-019-0390-x>
- Lecoq, L., **Wiegand, T.**, Rodriguez-Alvarez, F.J., Cadalbert, R., Herrera, G.A., Del Pozo-Yauner, L., Meier, B.H., Böckmann, A. (2019). A Substantial Structural Conversion of the Native Monomer Leads to in-Register Parallel Amyloid Fibril Formation in Light-Chain Amyloidosis. *Chembiochem*, 20(8), 1027-1031. <https://doi.org/10.1002/cbic.201800732>
- Malär, A.A., Dong, S., Kehr, G., Erker, G., Meier, B. H., **Wiegand, T.** (2019). Characterization of H(2) -Splitting Products of Frustrated Lewis Pairs: Benefit of Fast Magic-Angle Spinning. *Chemphyschem*, 20(5), 672-679. <https://doi.org/10.1002/cphc.201900006>
- Malär, A.A., Smith-Penzel, S., Camenisch, G. M., **Wiegand, T.**, Samoson, A., Böckmann, A., Ernst, M., Meier, B.H. (2019). Quantifying proton NMR coherent linewidth in proteins under fast MAS conditions: a second moment approach. *Phys Chem Chem Phys*, 21(35), 18850-18865. <https://doi.org/10.1039/c9cp03414e>
- Torosyan, A., **Wiegand, T.**, Schledorn, M., Klose, D., Guntert, P., Böckmann, A., Meier, B.H. (2019). Including Protons in Solid-State NMR Resonance Assignment and Secondary Structure Analysis: The Example of RNA Polymerase II Subunits Rpo4/7. *Front Mol Biosci*, 6, 100. <https://doi.org/10.3389/fmolb.2019.00100>
- **Wiegand, T.**, Cadalbert, R., Lacabanne, D., Timmins, J., Terradot, L., Böckmann, A., Meier, B.H. (2019). The conformational changes coupling ATP hydrolysis and translocation in a bacterial DnaB helicase. *Nat Commun*, 10(1), 31. <https://doi.org/10.1038/s41467-018-07968-3>

2018

- Keller, K., **Wiegand, T.**, Cadalbert, R., Meier, B.H., Böckmann, A., Jeschke, G., Yulikov, M. (2018). High-spin Metal Centres in Dipolar EPR Spectroscopy. *Chimia (Aarau)*, 72(4), 216-220. <https://doi.org/10.2533/chimia.2018.216>
- Lecoq, L., Wang, S., **Wiegand, T.**, Bressanelli, S., Nassal, M., Meier, B.H., Böckmann, A. (2018a). Localizing Conformational Hinges by NMR: Where Do Hepatitis B Virus Core Proteins Adapt for Capsid Assembly? *Chemphyschem*, 19(11), 1336-1340. <https://doi.org/10.1002/cphc.201800211>
- Lecoq, L., Wang, S., **Wiegand, T.**, Bressanelli, S., Nassal, M., Meier, B.H., Böckmann, A. (2018b). Solid-state [(13)C-(15)N] NMR resonance assignment of hepatitis B virus core protein. *Biomol NMR Assign*, 12(1), 205-214. <https://doi.org/10.1007/s12104-018-9810-y>
- Wang, L., Kehr, G., Daniliuc, C.G., Brinkkotter, M., **Wiegand, T.**, Wubker, A.L., Eckert, H., Liu, L., Brandenburg, J.G., Grimme, S., Erker, G. (2018). Solid state frustrated Lewis pair chemistry. *Chem Sci*, 9(21), 4859-4865. <https://doi.org/10.1039/c8sc01089g>
- **Wiegand, T.**, Hunkeler, A., Dapp, A., Verasdonck, J., Cadalbert, R., Bousset, L., Meli, R., Böckmann, A., Meier, B.H. (2018). CONFINE-MAS: a magic-angle spinning NMR probe that confines the sample in case of a rotor explosion. *J Biomol NMR*, 72(3-4), 171-177. <https://doi.org/10.1007/s10858-018-0218-x>
- **Wiegand, T.**, Cadalbert, R., von Schroetter, C., Allain, F.H., Meier, B.H. (2018). Segmental isotope labelling and solid-state NMR of a 12 x 59 kDa motor protein: identification of structural variability. *J Biomol NMR*, 71(4), 237-245. <https://doi.org/10.1007/s10858-018-0196-z>

2017

- Jian, Z., Kehr, G., Daniliuc, C. G., Wibbeling, B., **Wiegand, T.**, Siedow, M., Ecker, H., Bursch, M., Grimme, S., Erker, G. (2017). CO-Reduction Chemistry: Reaction of a CO-Derived Formylhydridoborate with Carbon Monoxide, with Carbon Dioxide, and with Dihydrogen. *J Am Chem Soc*, 139(18), 6474-6483. <https://doi.org/10.1021/jacs.7b02548>
- **Wiegand, T.**, Lacabanne, D., Keller, K., Cadalbert, R., Lecoq, L., Yulikov, M., Terradot, L., Jeschke, G., Meier, B.H., Böckmann, A. (2017). Solid-state NMR and EPR Spectroscopy of Mn(2+) -Substituted ATP-Fueled Protein Engines. *Angew Chem Int Ed Engl*, 56(12), 3369-3373. <https://doi.org/10.1002/anie.201610551>
- **Wiegand, T.**, Liao, W.C., Ong, T.C., Dapp, A., Cadalbert, R., Coperet, C., Böckmann, A., Meier, B.H. (2017). Protein-nucleotide contacts in motor proteins detected by DNP-enhanced solid-state NMR. *J Biomol NMR*, 69(3), 157-164. <https://doi.org/10.1007/s10858-017-0144-3>

2016

- Gardiennet, C., **Wiegand, T.**, Bazin, A., Cadalbert, R., Kunert, B., Lacabanne, D., Gutsche, I., Terradot, L., Meier, B.H., Böckmann, A. (2016). Solid-state NMR chemical-shift perturbations indicate domain reorientation of the DnaG primase in the primosome of *Helicobacter pylori*. *J Biomol NMR*, 64(3), 189-195. <https://doi.org/10.1007/s10858-016-0018-0>
- **Wiegand, T.**, Gardiennet, C., Cadalbert, R., Lacabanne, D., Kunert, B., Terradot, L., Böckmann, A., Meier, B.H. (2016). Variability and conservation of structural domains in divide-and-conquer approaches. *J Biomol NMR*, 65(2), 79-86. <https://doi.org/10.1007/s10858-016-0039-8>
- **Wiegand, T.**, Gardiennet, C., Ravotti, F., Bazin, A., Kunert, B., Lacabanne, D., Cadalbert, R., Guntert, P., Terradot, L., Böckmann, A., Meier, B.H. (2016). Solid-state NMR sequential assignments of the N-terminal domain of HpDnaB helicase. *Biomol NMR Assign*, 10(1), 13-23. <https://doi.org/10.1007/s12104-015-9629-8>
- **Wiegand, T.**, Cadalbert, R., Gardiennet, C., Timmins, J., Terradot, L., Böckmann, A., Meier, B.H. (2016). Monitoring ssDNA Binding to the DnaB Helicase from *Helicobacter pylori* by Solid-State NMR Spectroscopy. *Angew Chem Int Ed Engl*, 55(45), 14164-14168. <https://doi.org/10.1002/anie.201607295>

2015

- de Oliveira, M., Jr., **Wiegand, T.**, Elmer, L. M., Sajid, M., Kehr, G., Erker, G., Magon, C.J., Eckert, H. (2015). Solid-state EPR strategies for the structural characterization of paramagnetic NO adducts of frustrated Lewis pairs (FLPs). *J Chem Phys*, 142(12), 124201. <https://doi.org/10.1063/1.4916066>
- Feldmann, K.O., **Wiegand, T.**, Ren, J., Eckert, H., Breternitz, J., Groh, M. F., Müller, U., Ruck, M., Maryasin, B., Ochsenfeld, C., Schon, O., Karaghiosoff, K., Weigand, J.J. (2015). [P3Se4](+): A

Binary Phosphorus-Selenium Cation. *Chemistry*, 21(27), 9697-9712.

<https://doi.org/10.1002/chem.201406476>

- **Wiegand, T.**, Siedow, M., Eckert, H., Kehr, G., & Erker, G. (2015). Structural Characterization of Frustrated Lewis Pairs and Their Reaction Products Using Modern Solid-State NMR Spectroscopy Techniques. *Israel Journal of Chemistry*, 55(2), 150-178. <https://doi.org/10.1002/ijch.201400149>

2014

- Erdmann, M., **Wiegand, T.**, Blumenberg, J., Eckert, H., Ren, J., Daniliuc, C.G., Kehr, G., Erker, G. (2014). Formation, structural characterization, and reactions of a unique cyclotrimeric vicinal Lewis pair containing (C₆F₅)₂P-Lewis base and (C₆F₅)BH-Lewis acid components. *Dalton Trans*, 43(40), 15159-15169. <https://doi.org/10.1039/C4DT02081B>
- Malberg, J., Bodensteiner, M., Paul, D., **Wiegand, T.**, Eckert, H., Wolf, R. (2014). Preparation of an organometallic molecular square by self-assembly of phosphorus-containing building blocks. *Angew Chem Int Ed Engl*, 53(10), 2771-2775. <https://doi.org/10.1002/anie.201309493>
- **Wiegand, T.**, Eckert, H., Ren, J., Brunklaus, G., Fröhlich, R., Daniliuc, C.G., Lubbe, G., Bussmann, K., Kehr, G., Erker, G., Grimme, S. (2014). Indirect "no-bond" (3)(1)P...(3)(1)P spin-spin couplings in P,P-[3]ferrocenophanes: insights from solid-state NMR spectroscopy and DFT calculations. *J Phys Chem A*, 118(12), 2316-2331. <https://doi.org/10.1021/jp500172b>
- **Wiegand, T.**, Ludeker, D., Brunklaus, G., Bussmann, K., Kehr, G., Erker, G., Eckert, H. (2014). Polymorphism in P,P-[3]ferrocenophanes: insights from an NMR crystallographic approach. *Dalton Trans*, 43(33), 12639-12647. <https://doi.org/10.1039/C4DT01071J>
- **Wiegand, T.**, Sajid, M., Kehr, G., Erker, G., Eckert, H. (2014). Solid-state NMR strategies for the structural characterization of paramagnetic NO adducts of Frustrated Lewis Pairs (FLPs). *Solid State Nucl Magn Reson*, 61-62, 19-27. <https://doi.org/10.1016/j.ssnmr.2014.04.001>
- **Wiegand, T.**, Siedow, M., Eckert, O., Mobus, J., Daniliuc, C.G., Kehr, G., Erker, G., Eckert, H. (2014). Solid-state NMR studies for the determination of ¹¹B electric field-gradient tensor orientations in P/B Frustrated Lewis Pairs and related systems. *Solid State Nucl Magn Reson*, 61-62, 8-14. <https://doi.org/10.1016/j.ssnmr.2014.03.002>

2013

- Bartsch, T., **Wiegand, T.**, Ren, J., Eckert, H., Johrendt, D., Niehaus, O., Eul, M., Pottgen, R. (2013). Phosphide oxides RE₂AuP₂O (RE = La, Ce, Pr, Nd): synthesis, structure, chemical bonding, magnetism, and ³¹P and ¹³⁹La solid state NMR. *Inorg Chem*, 52(4), 2094-2102. <https://doi.org/10.1021/ic302475u>
- Eckert, O., Miera, G.G., **Wiegand, T.**, Eckert, H., Schirmer, B., Petersen, J.L., Daniliuc, C.G., Fröhlich, R., Grimme, S., Kehr, G., Erker, G. (2013). Remarkable coordination behavior of alkyl isocyanides toward unsaturated vicinal frustrated P/B Lewis pairs. *Chemical Science*, 4(6). <https://doi.org/10.1039/C3SC00082F>
- Malberg, J., **Wiegand, T.**, Eckert, H., Bodensteiner, M., Wolf, R. (2013). Copper(I) and Silver(I) Complexes of 1,3-Diphosphacyclobutadiene Sandwich Anions: Synthesis, Crystal Structures, and Solution and Solid-State NMR Spectroscopic Characterization. *European Journal of Inorganic Chemistry*, 2014(10), 1638-1651. <https://doi.org/10.1002/ejic.201301173>
- Malberg, J., **Wiegand, T.**, Eckert, H., Bodensteiner, M., Wolf, R. (2013). Gold(I) and silver(I) complexes of diphosphacyclobutadiene cobaltate sandwich anions. *Chemistry*, 19(7), 2356-2369. <https://doi.org/10.1002/chem.201203606>
- Sajid, M., Kehr, G., **Wiegand, T.**, Eckert, H., Schwickert, C., Pottgen, R., Cardenas, A.J., Warren, T.H., Fröhlich, R., Daniliuc, C.G., Erker, G. (2013). Noninteracting, vicinal frustrated P/B-Lewis pair at the norbornane framework: synthesis, characterization, and reactions. *J Am Chem Soc*, 135(24), 8882-8895. <https://doi.org/10.1021/ja400338e>
- Sajid, M., Klose, A., Birkmann, B., Liang, L., Schirmer, B., **Wiegand, T.**, Eckert, H., Lough, A.J., Fröhlich, R., Daniliuc, C.G., Grimme, S., Stephan, D.W., Kehr, G., Erker, G. (2013). Reactions of phosphorus/boron frustrated Lewis pairs with SO₂. *Chem. Sci.*, 4(1), 213-219. <https://doi.org/10.1039/c2sc21161k>
- **Wiegand, T.**, Eckert, H., Grimme, S. (2013). Solid-State NMR as a Spectroscopic Tool for Characterizing Phosphane-Borane Frustrated Lewis Pairs. In G. Erker & D. W. Stephan (Eds.), *Frustrated Lewis Pairs I: Uncovering and Understanding* (pp. 291-345). Berlin, Heidelberg: Springer Berlin Heidelberg. https://doi.org/10.1007/128_2012_386
- **Wiegand, T.**, Eckert, H., Grimme, S., Malberg, J., Wolf, R. (2013). Solid state NMR studies and chemical shift calculations of a gold(I) complex with a diphosphacyclobutadiene cobaltate sandwich anion. *Solid State Nucl Magn Reson*, 53, 13-19. <https://doi.org/10.1016/j.ssnmr.2013.03.001>

2012

- Bender, G., **Wiegand, T.**, Eckert, H., Fröhlich, R., Daniliuc, C.G., Muck-Lichtenfeld, C., Ndambuki, S., Ziegler, T., Kehr, G., Erker, G. (2012). Binding of molecular magnesium hydrides to a zirconocene-enyne template. *Angew Chem Int Ed Engl*, 51(35), 8846-8849. <https://doi.org/10.1002/anie.201203372>
- Plois, M., **Wiegand, T.**, Wolf, R. (2012). Novel Ruthenium(II) Aluminate Anions: Building Blocks of Unique Cage Structures. *Organometallics*, 31(24), 8469-8477. <https://doi.org/10.1021/om300705x>
- **Wiegand, T.**, Eckert, H., Ekkert, O., Fröhlich, R., Kehr, G., Erker, G., Grimme, S. (2012). New insights into frustrated Lewis pairs: structural investigations of intramolecular phosphane-borane adducts by using modern solid-state NMR techniques and DFT calculations. *J Am Chem Soc*, 134(9), 4236-4249. <https://doi.org/10.1021/ja210160k>
- Wu, P., **Wiegand, T.**, Eckert, H., Gjikaj, M. (2012). New hypodiphosphates of the alkali metals: Synthesis, crystal structure and vibrational spectra of the hypodiphosphates(IV). *J Solid State Chem*, 194, 212-218. <https://doi.org/10.1016/j.jssc.2012.05.015>

2011

- Rojas, R. S., Peoples, B. C., Cabrera, A. R., Valderrama, M., Fröhlich, R., Kehr, G., Erker, G., **Wiegand, T.**, Eckert, H. (2011). Synthesis and Structure of Bifunctional Zirconocene/Borane Complexes and Their Activation for Ethylene Polymerization. *Organometallics*, 30(23), 6372-6382. <https://doi.org/10.1021/om200536z>
- **Wiegand, T.**, Eckert, H., Grimme, S., Hoppe, D., Ruck, M. (2011). Structural characterization of phosphorus-based networks and clusters: ³¹P MAS NMR spectroscopy and magnetic shielding calculations on Hittorf's phosphorus. *Chemistry*, 17(31), 8739-8748. <https://doi.org/10.1002/chem.201003560>