

List of publications

Dr. Gregor Kieslich, Liebig Fellow and TU Munich Junior Fellow

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Number of peer reviewed publications: 66

Number of citations: 3968, h-index: 29 (google scholar, May 2022)

66. S. Hallweger, C. Kaußler, G. Kieslich*. The structural complexity of perovskites. *Phys. Chem. Chem. Phys.* **2022**, 24, 9196-9202.
65. J. Song, R. Pallach, L. Frenzel-Beyme, P. Kolodzeiski, G. Kieslich, P. Vervoorts, C. L. Hobday, S. Henke. Tuning the High-Pressure Phase Behaviour of Highly Compressible Zeolitic Imidazolate Frameworks: From Discontinuous to Continuous Pore Closure by Linker Substitution. *Angew. Chem.* **2022**, 61, e202117565.
64. A. L. Semrau, S. V. Dummert, C. Eckel, S. Mackewicz, R. T. Weitz, G. Kieslich*. Synthetic Approaches Targeting Metal-Free Perovskite [HMDABCO](NH₄)₃ Thin Films. *Cryst. Growth. Des.* **2022**, 1, 406-413.
63. P. Vervoorts, J. Stebani, A. S. J. Méndez, G. Kieslich*. Structural Chemistry of Metal-Organic Frameworks under Hydrostatic Pressures. *ACS Materials Lett.* **2021**, 3, 1635-1651.
62. S. Burger, S. Grover, K. T. Butler, H. L. B. Boström, R. Grau-Crespo*, G. Kieslich*. Tilt and Shift Polymorphism in Molecular Perovskites. *Mater. Horiz.* **2021**, 8, 2444-2450.
61. L. Petters, S. Burger, S. Kronawitter, M. Drees, G. Kieslich*. Linear Negative Thermal Expansion in Pd(acac)₂. *CrystEngComm.* **2021**, 23, 5425-5429.
60. D. Ukaj, H. Bunzen, J. Berger, G. Kieslich, R. A. Fischer*. Charge-Transfer-Induced Electrical Conductivity in a Tetrathiafulvalene-Based Metal-Organic Framework. *Chem. Mater.* **2021**, 33, 2532-2542.
59. C. L. Hobday*, G. Kieslich*. Structural Flexibility in Crystalline Coordination Polymers: A Journey Along the Underlying Free Energy Landscape. *Dalton. Trans.* **2021**, 50, 3759-3768.
58. C. Kaußler, G. Kieslich*. crystalT: complexity and configurational entropy of crystal structures via information theory. *J. Appl. Cryst.* **2021**, 54, 306-316.
57. H. L. B. Boström*, G. Kieslich*. Influence of Metal Defects on the Mechanical Properties of ABX₃ Perovskite-Type Metal-formate Frameworks. *J. Phys. Chem. C.* **2021**, 125, 1467-1471.
56. P. Vervoorts, J. Keupp, A. Schneemann, C. L. Hobday, D. Daisenberger, R. A. Fischer, R. Schmid*, G. Kieslich*. Configurational Entropy Driven High-Pressure Behaviour of a Flexible Metal-Organic Framework. *Angew. Chem.* **2020**, 60, 787-793.
55. S. Burger, S. Kronawitter, H. L. B. Boström, J. K. Zareba, G. Kieslich*. A new polar perovskite coordination network with azaspiroundecane as A-site cation. *Dalton. Trans.* **2020**, 49, 10740-10744.
54. D. Bodesheim, G. Kieslich, M. Johnson, K. T. Butler*. Understanding the Balance of Entropy and Enthalpy in Hydrogen-Halide Noncovalent Bonding. *J. Phys. Chem. Lett.* **2020**, 11, 3495-3500.
53. C. Schneider, D. Bodesheim, J. Keupp, R. Schmid, G. Kieslich*. Retrofitting metal-organic frameworks. *Nat. Commun.* **2019**, 10, 4921.
52. Keith T. Butler*, P. Vervoorts, M. G. Ehrenreich, J. Armstrong, J. M. Skelton, G. Kieslich*. Experimental Evidence for Vibrational Entropy as Driving Parameter of Flexibility in the Metal-Organic Framework ZIF-4(Zn). *Chem. Mater.* **2019**, 31, 8366-8372.

51. P. Vervoorts, C. L. Hobday, M. G. Ehrenreich, D. Daisenberger, G. Kieslich*. The Zeolitic Imidazolate Framework ZIF-4 under Low Hydrostatic Pressures. *Z. Anorg. Allg. Chem.* **2019**, 645, 970-974.
50. C. Schneider, D. Bodesheim, M. G. Ehrenreich, V. Crocellà, J. Mink, R. A. Fischer, K. T. Butler, G. Kieslich*. Tuning the Negative Thermal Expansion Behavior of the Metal-Organic Framework Cu₃BTC₂ by Retrofitting. *J. Am. Chem. Soc.* **2019**, 141, 10504-10509.
49. D. C. Mayer, A. Manzi, R. Medishetty, B. Winkler, C. Schneider, G. Kieslich, A. Pöthig, J. Feldmann, R. A. Fischer*. Controlling Multi-Photon Absorption Efficiency by Chromophore Packing in Metal-Organic Frameworks. *J. Am. Chem. Soc.* **2019**, 141, 11594-11602.
48. A. Schneemann, R. Rudolf, S. J. Baxter, P. Vervoorts, I. Hante, K. Khaletskaya, S. Henke, G. Kieslich*, R. A. Fischer*. Flexibility control in alkyl ether-functionalized pillared-layered MOFs by a Cu/Zn mixed metal approach. *Dalton Trans.* **2019**, 48, 6564-6570.
47. W. Li, S. Watzel, H. El-sayed, Y. Liang, G. Kieslich, A. S. Bandarenka, K. Rodewald, B. Rieger, R. A. Fischer*. Unprecedented High Oxygen Evolution Activity of Electrocatalysts Derived from Surface-Mounted Metal-Organic Frameworks. *J. Am. Chem. Soc.* **2019**, 141, 5926-5933.
46. C. Ott, F. Reiter, M. Baumgartner, M. Pielmeier, A. Vogel, P. Walke, S. Burger, M. G. Ehrenreich, G. Kieslich*, D. Daisenberger, J. Armstrong, U. K. Thakur, P. Kumar, S. Chen, D. Donadio, L. S. Walter, R. T. Weitz, K. Shankar*, T. Nilges*. Flexible and Ultrasoft 1D Semiconductor and Heterostructure Systems Based on SnIP. *Adv. Funct. Mater.* **2019**, 29, 1900233.
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44. A. Regoutz, A. M. Ganose, L. Blumenthal, C. Schlueter, T.-L. Lee, G. Kieslich, A. K. Cheetham, G. Kerherve, Y.-S. Huang, R.-S. Chen, G. Vinai, T. Pincelli, G. Panaccione, K. H. L. Zhang, R. G. Egdell, J. Lischner, D. O. Scanlon, D. J. Payne*. Insights into the electronic structure of OsO₂ using soft and hard X-ray photoelectron spectroscopy in combination with density functional theory. *Phys. Rev. Materials* **2019**, 3, 025001.
43. S. Wannapaiboon, A. Schneemann, I. Hante, M. Tu, K. Epp, A. L. Semrau, C. Sternemann, M. Paulus, S. Baxter, G. Kieslich, R. A. Fischer*. Control of structural flexibility of layered-pillared metal-organic frameworks anchored at surfaces. *Nat. Commun.* **2019**, 10, 346.
42. G. Kieslich*, J. M. Skelton, J. Armstrong, Y. Wu, F. Wei, K. L. Svane, A. Walsh, K. T. Butler*. Hydrogen Bonding versus Entropy: Revealing the Underlying Thermodynamics of the Hybrid Organic-Inorganic Perovskites [CH₃NH₃]₃PbBr₃. *Chem. Mater.* **2018**, 30, 8782-8788.
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38. S. Dissegna, P. Vervoorts, C. L. Hobday, T. Düren, D. Daisenberger, A. J. Smith, R. A. Fischer*, G. Kieslich*. Tuning the Mechanical Response of Metal-Organic Frameworks by Defect-Engineering. *J. Am. Chem. Soc.* **2018**, 140, 11581-11584.
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36. C. Schneider, D. Ukaj, R. Koerver, A. A. Talin, G. Kieslich, S. P. Pujari, H. Zuilhof, J. Janek, M. D. Allendorf*, R. A. Fischer*. High electrical conductivity and high porosity in a Guest@MOF material: evidence of TCNQ ordering within Cu₃BTC₂ micropores. *Chem. Sci.* **2018**, 9, 7405-7412.
35. C. Dietrich, R. Koerver, M. W. Gaultois, G. Kieslich, G. Cibir, J. Janek*, W. G. Zeier*. Spectroscopic characterization of lithium thiophosphates by XPS and XAS – a model to help monitor interfacial reactions in all-solid-state batteries. *Phys. Chem. Chem. Phys.* **2018**, 20, 20088-20095.
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31. S. Henke, M. T. Wharmby, G. Kieslich, I. Hante, A. Schneemann, Y. Wu, D. Daisenberger, A. K. Cheetham*. Pore closure in the zeolitic imidazolate frameworks under mechanical pressure. *Chem. Sci.* **2018**, 9, 1654-1660.
30. K. L. Svane, A. C. Forse, C. P. Grey, G. Kieslich, A. K. Cheetham, A. Walsh, K. T. Butler*. How Strong is the Hydrogen Bond in Hybrid Perovskites? *Phys. Chem. Lett.* **2017**, 8, 6154-6159.
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27. S. Sun, Z. Deng, Y. Wu, F. Wei, F. H. Isikgor, F. Brivio, M. W. Gaultois, J. Ouyang, P.D. Bristowe, A. K. Cheetham*, G. Kieslich*. Variable temperature and high-pressure crystal chemistry of perovskite formamidinium lead iodide: A single crystal X-ray diffraction and computational study. *Chem. Commun.* **2017**, 53, 7537-7540.
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17. F. Wei, Z. Deng, S. Sun, F. Xie, G. Kieslich, D. M. Evans, M. A. Carpenter, P. D. Bristowe, A. K. Cheetham*. The synthesis, structure and electronic properties of a lead-free hybrid inorganic-organic double perovskites $(\text{MA})_2\text{KBiCl}_6$ (MA = methylammonium). *Mater. Horiz.* **2016**, 3, 328-332.
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