Daniel Wegner – Full List of Publications (09-2024)

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1. N. S. Sivakumar, J. Aretz, S. Scherb, M. van Midden Mavrič, N. Huijgen, U. Kamber, D. Wegner, A. A. Khajetoorians, M. Rösner, Nadine Hauptmann, *Influence of surface relaxations on atomic-resolution imaging of a charge density wave material*, arXiv:2407.17231.
2. * T.-C. Hung, Y. Godinez Loyola, M. Steinbrecher, B. Kiraly, A. A. Khajetoorians, N. L. Doltsinis, C. A Strassert and D. Wegner, *Activating the fluorescence of a Ni(II) complex by energy transfer*, Journal of the American Chemical Society 146, 8858 (2024).
3. * T.-C. Hung, R. Robles, B. Kiraly, J. H. Strik, B. A. Rutten, A. A. Khajetoorians, N. Lorente and D. Wegner, *Bipolar single-molecule electroluminescence and electrofluorochromism*, Physical Review Research 5, 033207 (2023).
4. * E. Sierda, D. Badrtdinov, B. Kiraly, E. Knol, X. Huang, M. I. Katsnelson, G. C. Groenenboom, D. Wegner, M. Rösner and A. A. Khajetoorians, *Quantum simulator to emulate lower-dimensional molecular structure*, Science 380, 1048 (2023).
5. B. Verlhac, L. Niggli, A. Bergman, U. Kamber, A. Bagrov, D. Iuşan, L. Nordström, M. I. Katsnelson, D. Wegner, O. Eriksson, A. A. Khajetoorians, *Thermally-induced magnetic order from glassiness in elemental neodymium*, Nature Physics 18, 905 (2022).
6. * W. Jolie, T.-C. Hung, L. Niggli, B. Verlhac, N. Hauptmann, D. Wegner, A. A. Khajetoorians, *Creating Tunable Quantum Corrals on a Rashba Surface Alloy*, ACS Nano 16, 4876 (2022).
7. * T.-C. Hung, B. Kiraly, J. H. Strik, A. A. Khajetoorians, and D. Wegner, *Plasmon-Driven Motion of an Individual Molecule*, Nano Letters 21, 5006 (2021).
8. * U. Kamber, A. Bergman, A. Eich, D. Iuşan, M. Steinbrecher, N. Hauptmann, L. Nordström, M. I. Katsnelson, D. Wegner, O. Eriksson, A. A. Khajetoorians, *Self-induced spin glass state in elemental and crystalline neodymium*, Science 368, 966 (2020).
9. N. Hauptmann, S. Haldar, T.-C. Hung, W. Jolie, M. Gutzeit, D. Wegner, S. Heinze and A. A. Khajetoorians, *Quantifying exchange forces of a spin spiral on the atomic scale*, Nature Communications 11, 1197 (2020).
10. B. Kiraly, E. J. Knol, K. Volckaert, D. Biswas, A. N. Rudenko, D. A. Prishchenko,V. G. Mazurenko, M. I. Katsnelson, P. Hofmann, D. Wegner, and A. A. Khajetoorians, *Anisotropic Two-Dimensional Screening at the Surface of Black Phosphorus*, Physical Review Letters 123, 216403 (2019).
11. A. A. Khajetoorians, D. Wegner, A. F. Otte and I. Swart, *Creating designer quantum states of matter atom-by-atom*, Nature Reviews Physics 1, 703 (2019).
12. M. R. Slot, S. N. Kempkes, E. J. Knol, W. M. J. van Weerdenburg, J. J. van den Broeke, D. Wegner, D. Vanmaekelbergh, A. A. Khajetoorians, C. M. Smith, and I. Swart, *p-Band Engineering in Artificial Electronic Lattices*, Physical Review X 9, 011009 (2019).
13. B. Kiraly, A. N. Rudenko, W. M. J. van Weerdenburg, D. Wegner, M. I. Katsnelson, and A. A. Khajetoorians, *An orbitally derived single-atom magnetic memory*, Nature Communications 9, 3904 (2018).
14. N. Hauptmann, M. Dupé, T.-C. Hung, A. K. Lemmens, D. Wegner, B. Dupé, and A. A. Khajetoorians, *Revealing the correlation between real-space structure and chiral magnetic order at the atomic scale*, Physical Review B 97, 100401(R) (2018).

15. H. von Allwörden, A. Eich, E. J. Knol, J. Hermenau, A. Sonntag, J. W. Gerritsen, D. Wegner, and A. A. Khajetoorians, *Design and performance of an ultra-high vacuum spin-polarized scanning tunneling microscope operating at 30 mK and in a vector magnetic field,* Review of Scientific Instruments 89, 033902 (2018).
16. N. Hauptmann, J. W. Gerritsen, D. Wegner, and A. A. Khajetoorians, *Sensing Noncollinear Magnetism at the Atomic Scale Combining Magnetic Exchange and Spin-Polarized Imaging*, Nano Letters 17, 5660 (2017).
17. V. Obersteiner, M. Scherbela, L. Hörmann, D. Wegner, and O. T. Hofmann, *Structure Prediction for Surface-Induced Phases of Organic Monolayers: Overcoming the Combinatorial Bottleneck*, Nano Letters 17, 4453 (2017).
18. * J. Donner, J.-P. Broschinski, B. Feldscher, A. Stammler, H. Bögge, T. Glaser, and D. Wegner, *Correlating electronic and magnetic coupling in large magnetic molecules via scanning tunneling microscopy*, Physical Review B 95, 165441 (2017).
19. A. Eich, N. Rollfing, F. Arnold, C. Sanders, P. R. Ewen, M. Bianchi, M. Dendzik, M. Michiardi, J.-L. Mi, M. Bremholm, D. Wegner, P. Hofmann and A. A. Khajetoorians, *Absence of superconductivity in ultrathin layers of FeSe synthesized on a topological insulator*, Physical Review B 94, 125437 (2016).
20. A. Bruix, J. A. Miwa, N. Hauptmann, D. Wegner, S. Ulstrup, S. S. Grønborg, C. E. Sanders, M. Dendzik, A. Grubišić Čabo, M. Bianchi, J. V. Lauritsen, A. A. Khajetoorians, B. Hammer and P. Hofmann, *Single-layer MoS_2 on Au(111): Band gap renormalization and substrate interaction*, Physical Review B 93, 165422 (2016).
21. J. Sanning, L. Stegemann, P. R. Ewen, C. Schwermann, C. G. Daniliuc, D. D. Zhang, N. Lin, L. Duan, D. Wegner, N. L. Doltsinis and C. A. Strassert, *Colour-tunable asymmetric cyclometalated Pt(II) complexes and STM-assisted stability assessment of ancillary ligands for OLEDs*, Journal of Materials Chemistry C 4, 2560 (2016).
22. * J. Donner, J.-P. Broschinski, T. Glaser, and D. Wegner, *Deposition and Self-Assembly of Large Magnetic Molecules*, Journal of Physical Chemistry C 119, 28660 (2015).
23. * J. Sanning, P. R. Ewen, L. Stegemann, J. Schmidt, C. G. Daniliuc, T. Koch, N. L. Doltsinis, D. Wegner and C. A. Strassert, *Scanning-Tunneling-Spectroscopy-Directed Design of Tailored Deep-Blue Emitters,* Angewandte Chemie Int. Ed. 54, 786 (2015).
24. * P. R. Ewen, J. Sanning, T. Koch, N. L. Doltsinis, C. A. Strassert and D. Wegner, *Spectroscopic mapping and selective electronic tuning of molecular orbitals in phosphorescent organometallic complexes - a new strategy for OLED materials,* Beilstein Journal of Nanotechnology 5, 2248 (2014).
25. T. Deilmann, P. Krüger, M. Rohlfing, D. Wegner, *Adsorption and STM imaging of TCNE on Ag(001): An ab inito study*, Physical Review B 89, 045405 (2014).
26. * P. R. Ewen, J. Sanning, N. L. Doltsinis, M. Mauro, C. A. Strassert, and D. Wegner, *Unraveling orbital Hybridization of Triplet Emitters at the Metal-Organic Interface*, Physical Review Letters 111, 267401 (2013).
27. * M. Steinbrecher, H. Harutyunyan, C. R. Ast, and D. Wegner, *Rashba-type spin splitting from interband scattering in quasiparticle interference maps*, Physical Review B 87, 245436 (2013).
28. * D. Wegner, R. Yamachika, X. Zhang, Y. Wang, M. F. Crommie, and N. Lorente, *Adsorption site determination of a molecular monolayer via inelastic tunneling*, Nano Letters 13, 2346 (2013).
29. * H. Harutyunyan, M. Callsen, T. Allmers, V. Caciuc, S. Blügel, N. Atodiresei, and D. Wegner, *Hybridisation at the organic-metal interface: a surface-scientific analogue of Hückel's rule?*, Chemical Communications 49, 5993 (2013).

30. C. Tao, J. Sun, X, Zhang, R. Yamachika, D. Wegner, Y. Bahri, G. Samsonidze, M. L. Cohen, S. G. Louie, T. D. Tilly, R. A. Segalman, and M. F. Crommie, *Spatial resolution of a type II heterojunction in a single bipolar molecule*, Nano Letters 9, 3963 (2009).
31. * D. Wegner, R. Yamachika, X. Zhang, Y. Wang, T. Baruah, M. R. Pederson, B. M. Bartlett, J. R. Long, and M. F. Crommie, *Tuning Molecule-Mediated Spin Coupling in Bottom-Up Fabricated Vanadium-TCNE Nanostructures*, Physical Review Letters 103, 087205 (2009).
32. * D. Wegner and G. Kaindl, *Indication of a non-magnetic surface layer on a magnetic single crystal*, Physical Review B 79, 140406(R) (2009).
33. R. Yamachika, X. Lu, D. Wegner, Y. Wang, A. Wachowiak, M. Grobis, L. M. C. Beltran, J. R. Long, M. Pederson, and M. F. Crommie, *Local Electronic Properties of Titanocene Chloride Dimer Molecules on a Metal Surface*, Journal of Physical Chemistry C 113, 677 (2009).
34. S. Bedwani, D. Wegner, M. F. Crommie, and A. Rochefort, *Strongly reshaped organic-metal interfaces: Tetracyanoethylene on Cu(100)*, Physical Review Letters 101, 216105 (2008).
35. * D. Wegner, R. Yamachika, Y. Wang, V. W. Brar, B. M. Bartlett, J. R. Long, and M. F. Crommie, *Single-Molecule Charge Transfer and Bonding at an Organic/Inorganic Interface: Tetracyanoethylene on Noble Metals*, Nano Letters 8, 131 (2008).
36. Y. Wang, E. Kioupakis, X. H. Lu, D. Wegner, R. Yamachika, J. E. Dahl, R. M. K. Carlson, S. G. Louie and M. F. Crommie, *Spatially resolved electronic and vibronic properties of single diamondoid molecules*, Nature Materials 7, 38 (2008).
37. * D. Wegner, A. Bauer, and G. Kaindl, *Effect of impurities on Tamm-like lanthanide-metal surface states*, Physical Review B 76, 113410 (2007).
38. * D. Wegner, A. Bauer, and G. Kaindl, *Magnon-broadening of exchange-split surface states on lanthanide metals*, Physical Review B 73, 165415 (2006).
39. * D. Wegner, A. Bauer, A. Rehbein and G. Kaindl, *Exchange splittings of lanthanide (0001)-surface states and their dependences on short-range magnetic order*, Japanese Journal of Applied Physics 45, 1941 (2006).
40. * D. Wegner, A. Bauer and G. Kaindl, *Influence of morphology on quantum-well states of Yb on W(110)*, Japanese Journal of Applied Physics 45, 1937 (2006).
41. * D. Wegner, A. Bauer, Yu. M. Koroteev, G. Bihlmayer, E. V. Chulkov, P. M. Echenique, and G. Kaindl, *Surface electronic structures of La(0001) and Lu(0001)*, Physical Review B 73, 115403 (2006).
42. * D. Wegner, A. Bauer, and G. Kaindl, *Electronic Structure and Dynamics of Quantum-Well States in thin Yb-Metal Films*, Physical Review Letters 94, 126804 (2005).
43. A. Rehbein, D. Wegner, G. Kaindl, and A. Bauer, *Temperature dependence of lifetimes of Gd(0001) surface states*, Physical Review B 67, 033403 (2003).
44. G. Meyer, T. Crecelius, A. Bauer, D. Wegner, I. Mauch, and G. Kaindl, *Magneto-optical near-field microscopy of ultrathin films in ultrahigh vacuum*, Journal of Microscopy 210, 209 (2003).
45. A. Bauer, A. Mühlig, D. Wegner, and G. Kaindl, *Lifetime of Surface States on (0001)-Surfaces of Lanthanide Metals*, Physical Review B 65, 075421 (2002).
46. D. Wegner, U. Conrad, J. Güdde, G. Meyer, T. Crecelius, and A. Bauer, *In-plane magnetization of garnet films imaged by proximal probe nonlinear magneto-optical microscopy*, Journal of Applied Physics 88, 2166 (2000).
47. A. Bauer, B. L. Petersen, T. Crecelius, G. Meyer, D. Wegner, and G. Kaindl, *Magnetic domain imaging with a scanning near-field optical microscope using a modified Sagnac interferometer*, Journal of Microscopy 194, 507 (1999).