

Katharina Franke

List of Publications by Year in descending order

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103
papers

4,532
citations

87723

38
h-index

106150

65
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103
all docs

103
docs citations

103
times ranked

4131
citing authors

#	ARTICLE	IF	CITATIONS
1	Competition of Superconducting Phenomena and Kondo Screening at the Nanoscale. <i>Science</i> , 2011, 332, 940-944.	6.0	339
2	End States and Subgap Structure in Proximity-Coupled Chains of Magnetic Adatoms. <i>Physical Review Letters</i> , 2015, 115, 197204.	2.9	294
3	Charged and metallic molecular monolayers through surface-induced aromatic stabilization. <i>Nature Chemistry</i> , 2013, 5, 187-194.	6.6	187
4	Long-Range Repulsive Interaction between Molecules on a Metal Surface Induced by Charge Transfer. <i>Physical Review Letters</i> , 2007, 99, 176103.	2.9	163
5	Single magnetic adsorbates on s-wave superconductors. <i>Progress in Surface Science</i> , 2018, 93, 1-19.	3.8	135
6	Vibrational Kondo Effect in Pure Organic Charge-Transfer Assemblies. <i>Physical Review Letters</i> , 2008, 101, 217203.	2.9	133
7	Quasicrystalline Epitaxial Single Element Monolayers on Icosahedral Al-Pd-Mn and Decagonal Al-Ni-Co Quasicrystal Surfaces. <i>Physical Review Letters</i> , 2002, 89, 156104.	2.9	124
8	Resonant Electron Heating and Molecular Phonon Cooling in Single C_{60} Junctions. <i>Physical Review Letters</i> , 2008, 100, 136801.	2.9	120
9	Protection of excited spin states by a superconducting energy gap. <i>Nature Physics</i> , 2013, 9, 765-768.	6.5	118
10	Exploring a Proximity-Coupled Co Chain on Pb(110) as a Possible Majorana Platform. <i>Nano Letters</i> , 2017, 17, 4473-4477.	4.5	118
11	Tunneling Processes into Localized Subgap States in Superconductors. <i>Physical Review Letters</i> , 2015, 115, 087001.	2.9	113
12	Formation of Dispersive Hybrid Bands at an Organic-Metal Interface. <i>Physical Review Letters</i> , 2008, 100, 156805.	2.9	105
13	Tuning the Magnetic Anisotropy of Single Molecules. <i>Nano Letters</i> , 2015, 15, 4024-4028.	4.5	98
14	Magnetic anisotropy in Shiba bound states across a quantum phase transition. <i>Nature Communications</i> , 2015, 6, 8988.	5.8	94
15	Spectroscopy of C_{60} single molecules: the role of screening on energy level alignment. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 184001.	0.7	91
16	Orbital Picture of Yu-Shiba-Rusinov Multiplets. <i>Physical Review Letters</i> , 2016, 117, 186801.	2.9	90
17	Tuning the Coupling of an Individual Magnetic Impurity to a Superconductor: Quantum Phase Transition and Transport. <i>Physical Review Letters</i> , 2018, 121, 196803.	2.9	84
18	Reducing the Molecule-Substrate Coupling in C_{60} -Based Nanostructures by Molecular Interactions. <i>Physical Review Letters</i> , 2008, 100, 036807.	2.9	83

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19	Change of the Magnetic Coupling of a Metal-Organic Complex with the Substrate by a Stepwise Ligand Reaction. <i>Nano Letters</i> , 2013, 13, 4840-4843.	4.5	78
20	Experimental Demonstration of a Two-Band Superconducting State for Lead Using Scanning Tunneling Spectroscopy. <i>Physical Review Letters</i> , 2015, 114, 157001.	2.9	73
21	Inducing the Rotation of a Single Phenyl Ring with Tunneling Electrons. <i>Journal of Physical Chemistry C</i> , 2007, 111, 14843-14848.	1.5	72
22	Reversing the Thermal Stability of a Molecular Switch on a Gold Surface: Ring-Opening Reaction of Nitrospiropyran. <i>Journal of the American Chemical Society</i> , 2009, 131, 12729-12735.	6.6	65
23	Gating the Charge State of Single Molecules by Local Electric Fields. <i>Physical Review Letters</i> , 2012, 108, 036801.	2.9	62
24	Electronic Structure and Luminescence of Quasi-Freestanding MoS ₂ Nanopatches on Au(111). <i>Nano Letters</i> , 2016, 16, 5163-5168.	4.5	61
25	Ferromagnetic Coupling of Mononuclear Fe Centers in a Self-Assembled Metal-Organic Network on Au(111). <i>Physical Review Letters</i> , 2012, 109, 267207.	2.9	60
26	Structure and electronic configuration of tetracyanoquinodimethane layers on a Au(111) surface. <i>International Journal of Mass Spectrometry</i> , 2008, 277, 269-273.	0.7	56
27	Trans to cis isomerization of an azobenzene derivative on a Cu(100) surface. <i>Applied Physics A: Materials Science and Processing</i> , 2008, 93, 241-246.	1.1	53
28	Wave-Function Hybridization in Yu-Shiba-Rusinov Dimers. <i>Physical Review Letters</i> , 2018, 120, 156803.	2.9	53
29	Effects of electron-vibration coupling in transport through single molecules. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 394002.	0.7	52
30	Dynamic Jahn-Teller effect in electronic transport through single C ₆₀ molecules. <i>Physical Review B</i> , 2008, 78, .	1.1	51
31	Modulation of Surface Charge Transfer through Competing Long-Range Repulsive versus Short-Range Attractive Interactions. <i>Journal of Physical Chemistry C</i> , 2011, 115, 18640-18648.	1.5	49
32	Site-Dependent Coordination Bonding in Self-Assembled Metal-Organic Networks. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 55-61.	2.1	46
33	Microscopic resolution of the interplay of Kondo screening and superconducting pairing: Mn-phthalocyanine molecules adsorbed on superconducting Pb(111). <i>Physical Review B</i> , 2013, 87, .	1.1	46
34	Scaling of Yu-Shiba-Rusinov energies in the weak-coupling Kondo regime. <i>Nature Communications</i> , 2017, 8, 2016.	5.8	45
35	Moiré structure of MoS ₂ on Au(111): Local structural and electronic properties. <i>Surface Science</i> , 2018, 678, 136-142.	0.8	45
36	Driving a Macroscopic Oscillator with the Stochastic Motion of a Hydrogen Molecule. <i>Science</i> , 2012, 338, 779-782.	6.0	44

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37	Origin of Moiré structures in C_{60} and their effect on molecular energy levels. Physical Review B, 2009, 80, .	4.1	41
38	Nucleation of ordered Fe islands on Al ₂ O ₃ /Ni ₃ Al(111). Surface Science, 2006, 600, 1804-1808.	0.8	40
39	Switching ability of nitro-spiropyran on Au(111): electronic structure changes as a sensitive probe during a ring-opening reaction. Journal of Physics Condensed Matter, 2011, 23, 484005.	0.7	36
40	Orbital Redistribution in Molecular Nanostructures Mediated by Metal-Organic Bonds. ACS Nano, 2014, 8, 10715-10722.	7.3	36
41	Yu-Shiba-Rusinov States in the Charge-Density Modulated Superconductor NbSe ₂ . Nano Letters, 2020, 20, 339-344.	4.5	36
42	Resonant heating and substrate-mediated cooling of a single C ₆₀ molecule in a tunnel junction. New Journal of Physics, 2008, 10, 065005.	1.2	35
43	Excitation of Jahn-Teller Active Modes during Electron Transport through Single C ₆₀ Molecules on Metal Surfaces. Journal of Physical Chemistry Letters, 2010, 1, 500-504.	2.1	33
44	Surface characterization of Mn _x Ge _{1-x} and Cr _y Mn _x Ge _{1-x} dilute magnetic semiconductors. Physical Review B, 2007, 75, .	1.1	32
45	Induction of a Photostationary Ring-Opening/Ring-Closing State of Spiropyran Monolayers on the Semimetallic Bi(110) Surface. Physical Review Letters, 2012, 109, 026102.	2.9	32
46	Visualizing the Role of Molecular Orbitals in Charge Transport through Individual Diarylethene Isomers. ACS Nano, 2016, 10, 10555-10562.	7.3	32
47	Diarylethene Molecules on a Ag(111) Surface: Stability and Electron-Induced Switching. Journal of Physical Chemistry C, 2015, 119, 4874-4883.	1.5	30
48	Magnetic Coupling of Gd_3 N@C Endohedral Fullerenes to a Substrate. Physical Review Letters, 2013, 111, 167203.	2.9	28
49	Electronic structure and excited state dynamics in a dicyanovinyl-substituted oligothiophene on Au(111). Physical Chemistry Chemical Physics, 2015, 17, 27118-27126.	1.3	25
50	Interfering Tunneling Paths through Magnetic Molecules on Superconductors: Asymmetries of Kondo and Yu-Shiba-Rusinov Resonances. Physical Review Letters, 2020, 125, 256805.	2.9	24
51	Structure and morphology of the tenfold surface of decagonal Al _{71.8} Ni _{14.8} Co _{13.4} in its low-temperature random tiling type-I modification. Physical Review B, 2004, 70, .	1.1	23
52	Resonant Andreev reflections probed by photon-assisted tunnelling at the atomic scale. Nature Physics, 2020, 16, 1222-1226.	6.5	23
53	Yu-Shiba-Rusinov states in real metals. Physical Review B, 2021, 103, .	1.1	23
54	Charge Redistribution and Transport in Molecular Contacts. Physical Review Letters, 2015, 115, 136101.	2.9	22

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55	Electronic States and Exciton Dynamics in Dicyanovinyl-Sexithiophene on Au(111). <i>Journal of Physical Chemistry C</i> , 2016, 120, 27268-27275.	1.5	22
56	Site-specific bonding of copper adatoms to pyridine end groups mediating the formation of two-dimensional coordination networks on metal surfaces. <i>Physical Review B</i> , 2014, 89, .	1.1	21
57	High-Resolution Vibronic Spectra of Molecules on Molybdenum Disulfide Allow for Rotamer Identification. <i>ACS Nano</i> , 2018, 12, 11698-11703.	7.3	21
58	Quantum spins and hybridization in artificially-constructed chains of magnetic adatoms on a superconductor. <i>Nature Communications</i> , 2022, 13, 2160.	5.8	20
59	Active Intramolecular Conformational Dynamics Controlling the Assembly of Azobenzene Derivatives at Surfaces. <i>ChemPhysChem</i> , 2008, 9, 71-73.	1.0	19
60	Disentangling electron- and electric-field-induced ring-closing reactions in a diarylethene derivative on Ag(111). <i>Journal of Physics Condensed Matter</i> , 2017, 29, 294001.	0.7	18
61	Control of Oxidation and Spin State in a Single-Molecule Junction. <i>ACS Nano</i> , 2018, 12, 3172-3177.	7.3	18
62	Atypical charge redistribution over a charge-transfer monolayer on a metal. <i>New Journal of Physics</i> , 2013, 15, 083048.	1.2	16
63	Achieving Epitaxy between Incommensurate Materials by Quasicrystalline Interlayers. <i>Physical Review Letters</i> , 2007, 99, 036103.	2.9	15
64	Conformational adaptation and manipulation of manganese tetra(4-pyridyl)porphyrin molecules on Cu(111). <i>Journal of Chemical Physics</i> , 2017, 146, .	1.2	15
65	Enhanced charge transfer in a monolayer of the organic charge transfer complex TTF-TNAP on Au(111). <i>Journal of Physics Condensed Matter</i> , 2012, 24, 354003.	0.7	14
66	Electroluminescence of copper-nitride nanocrystals. <i>Physical Review B</i> , 2014, 90, .	1.1	14
67	Photon-assisted resonant Andreev reflections: Yu-Shiba-Rusinov and Majorana states. <i>Physical Review B</i> , 2020, 102, .	1.1	14
68	Quantum Magnetism and Topological Superconductivity in Yu-Shiba-Rusinov Chains. <i>Physical Review Letters</i> , 2022, 128, 036801.	2.9	13
69	Visualizing Intramolecular Distortions as the Origin of Transverse Magnetic Anisotropy. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6563-6567.	2.1	12
70	Magnetic-field-induced transition in a quantum dot coupled to a superconductor. <i>Physical Review Research</i> , 2020, 2, .	1.3	12
71	Investigation of the twofold decagonal Al _{71.8} Ni _{14.8} Co _{13.4} (10000) surface by SPA-LEED and He diffraction. <i>Surface Science</i> , 2004, 561, 121-126.	0.8	11
72	Adsorption of N ₂ O on Cu(100): a combined scanning tunneling microscopy and density functional theory study. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 1640.	1.3	11

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73	Magnetic anisotropy in surface-supported single-ion lanthanide complexes. <i>Physical Review B</i> , 2016, 94, .	1.1	11
74	Requirement on Aromatic Precursor for Graphene Formation. <i>Journal of Physical Chemistry C</i> , 2016, 120, 9821-9825.	1.5	11
75	Surface-orientation- and ligand-dependent quenching of the spin magnetic moment of Co porphyrins adsorbed on Cu substrates. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 12688-12696.	1.3	11
76	Vibrational Excitation Mechanism in Tunneling Spectroscopy beyond the Franck-Condon Model. <i>Physical Review Letters</i> , 2020, 124, 116804.	2.9	11
77	Real-space anisotropy of the superconducting gap in the charge-density wave material 2H-NbSe ₂ . <i>Npj Quantum Materials</i> , 2022, 7, .	1.8	11
78	Surface phonons in quasicrystals. <i>Progress in Surface Science</i> , 2004, 75, 227-236.	3.8	10
79	Spontaneous Formation of Triptycene Supramolecules on Surfaces. <i>Journal of Physical Chemistry B</i> , 2006, 110, 20089-20092.	1.2	10
80	Electronic valence bands in decagonal Al-Ni-Co. <i>Physical Review B</i> , 2003, 68, .	1.1	9
81	Topological states engineered in narrow strips of graphene. <i>Nature</i> , 2018, 560, 175-176.	13.7	9
82	•••Radical Formation by Pyrrolic H Abstraction of Phthalocyanine Molecules on Molybdenum Disulfide. <i>ACS Nano</i> , 2019, 13, 7031-7035.	7.3	9
83	Low-energy surface phonons of decagonal and icosahedral quasicrystals by inelastic He-atom scattering. <i>Physical Review B</i> , 2003, 68, .	1.1	8
84	Epitaxial interfaces between half-crystals of quasicrystalline and periodic material. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 314004.	0.7	8
85	Monolayers of MoS ₂ on Ag(111) as decoupling layers for organic molecules: resolution of electronic and vibronic states of TCNQ. <i>Beilstein Journal of Nanotechnology</i> , 2020, 11, 1062-1071.	1.5	8
86	Electronic structure of an iron porphyrin derivative on Au(111). <i>Journal of Physics Condensed Matter</i> , 2019, 31, 044002.	0.7	7
87	Band Formation at Interfaces Between N-Heteropolycycles and Gold Electrodes. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 947-951.	2.1	7
88	Moiré Tuning of Spin Excitations: Individual Fe Atoms on MoS_2 on $\text{Cu}(111)$. <i>ACS Nano</i> , 2021, 15, 10000-10006.	7.3	7
89	Quantum Yu-Shiba-Rusinov dimers. <i>Physical Review B</i> , 2022, 105, .	1.1	7
90	Correlation of Kondo effect and molecular conformation of the acceptor molecule in the TTF-TCNE charge transfer complex. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 454002.	0.7	6

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91	Direct observation of intrinsic surface magnetic disorder in amorphous superconducting films. <i>Physical Review B</i> , 2022, 105, .	1.1	5
92	Reversible electron-induced <i>cis</i> → <i>trans</i> isomerization mediated by intermolecular interactions. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 394016.	0.7	4
93	Self-assembly of tetracyanonaphtho-quinodimethane (TNAP) based metal-organic networks on Pb(111): Structural, electronic, and magnetic properties. <i>Applied Surface Science</i> , 2016, 373, 2-7.	3.1	4
94	Mapping the perturbation potential of metallic and dipolar tips in tunneling spectroscopy on MoS_2 . <i>Physical Review B</i> , 2019, 100, .	1.1	3
95	Correlation of Vibrational Excitations and Electronic Structure with Submolecular Resolution. <i>Journal of Physical Chemistry C</i> , 2019, 123, 7425-7430.	1.5	3
96	Direct Imaging of the Induced FRET Effect in Molecular Self-Assembly. <i>Small</i> , 2019, 15, 1804713.	5.2	3
97	Metal-Organic Superlattices Induced by Long-Range Repulsive Interactions on a Metal Surface. <i>Journal of Physical Chemistry C</i> , 2021, 125, 18494-18500.	1.5	3
98	LEED study of the potassium-induced reconstruction of Cu(110). <i>Journal of Physics Condensed Matter</i> , 2001, 13, 3961-3967.	0.7	2
99	Correlated insulator by the slice. <i>Nature Physics</i> , 2020, 16, 128-129.	6.5	2
100	Electronic Properties of Tetraazaperopyrene Derivatives on Au(111): Energy-Level Alignment and Interfacial Band Formation. <i>Journal of Physical Chemistry C</i> , 2021, 125, 19969-19979.	1.5	2
101	Shot-noise measurements of single-atom junctions using a scanning tunneling microscope. <i>Review of Scientific Instruments</i> , 2022, 93, 023702.	0.6	2
102	Electron Transfer Phenomena at the Molecular Scale. <i>Frontiers of Nanoscience</i> , 2011, 2, 51-75.	0.3	1
103	Resolution of Intramolecular Dipoles and a Push-Back Effect of Individual Molecules on a Metal Surface. <i>Journal of Physical Chemistry C</i> , 2022, 126, 7667-7673.	1.5	1