Wolfgang M Heckl

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Self-Assembled Two-Dimensional Molecular Host-Guest Architectures From Trimesic Acid. Single Molecules, 2002, 3, 25-31.	0.9	373
2	Surface mediated synthesis of 2D covalent organic frameworks: 1,3,5-tris(4-bromophenyl)benzene on graphite(001), Cu(111), and Ag(110). Chemical Communications, 2009, , 4456.	4.1	300
3	Self-Assembly of Trimesic Acid at the Liquidâ^'Solid Interfacea Study of Solvent-Induced Polymorphism. Langmuir, 2005, 21, 4984-4988.	3.5	292
4	Incorporation and Manipulation of Coronene in an Organic Template Structure. Langmuir, 2004, 20, 9403-9407.	3.5	233
5	Reversible Phase Transitions in Self-Assembled Monolayers at the Liquidâ^'Solid Interface: Temperature-Controlled Opening and Closing of Nanopores. Journal of the American Chemical Society, 2010, 132, 5084-5090.	13.7	223
6	Synthesis of Well-Ordered COF Monolayers: Surface Growth of Nanocrystalline Precursors <i>versus</i> Direct On-Surface Polycondensation. ACS Nano, 2011, 5, 9737-9745.	14.6	211
7	Solvent Induced Polymorphism in Supramolecular 1,3,5-Benzenetribenzoic Acid Monolayers. Journal of Physical Chemistry B, 2006, 110, 10829-10836.	2.6	206
8	Carboxylic Acids: Versatile Building Blocks and Mediators for Two-Dimensional Supramolecular Self-Assembly. Langmuir, 2009, 25, 11307-11321.	3.5	197
9	Inverting dynamic force microscopy: From signals to time-resolved interaction forces. Proceedings of the United States of America, 2002, 99, 8473-8478.	7.1	196
10	Isoreticular Two-Dimensional Covalent Organic Frameworks Synthesized by On-Surface Condensation of Diboronic Acids. ACS Nano, 2012, 6, 7234-7242.	14.6	194
11	Room-Temperature Scanning Tunneling Microscopy Manipulation of Single C60 Molecules at the Liquidâ^'Solid Interface:  Playing Nanosoccer. Journal of Physical Chemistry B, 2004, 108, 11556-11560.	2.6	193
12	Thermodynamical Equilibrium of Binary Supramolecular Networks at the Liquidâ^'Solid Interface. Journal of the American Chemical Society, 2008, 130, 8502-8507.	13.7	177
13	Thermomechanical noise of a free v-shaped cantilever for atomic-force microscopy. Ultramicroscopy, 2001, 86, 207-215.	1.9	161
14	Fourier transformed atomic force microscopy: tapping mode atomic force microscopy beyond the Hookian approximation. Surface Science, 2000, 457, 219-228.	1.9	150
15	Higher harmonics imaging in tapping-mode atomic-force microscopy. Review of Scientific Instruments, 2003, 74, 5111-5114.	1.3	138
16	Self-Assembly of Benzeneâ^'Dicarboxylic Acid Isomers at the Liquid Solid Interface:Â Steric Aspects of Hydrogen Bonding. Journal of Physical Chemistry B, 2004, 108, 13652-13655.	2.6	113
17	Chiral symmetry breaking during the self-assembly of monolayers from achiral purine molecules. Journal of Molecular Evolution, 1996, 43, 419-424.	1.8	111
18	Self-Assembly at the Prebiotic Solidâ^'Liquid Interface:  Structures of Self-Assembled Monolayers of Adenine and Guanine Bases Formed on Inorganic Surfaces. Journal of Physical Chemistry B, 1998, 102, 5914-5922.	2.6	110

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19	On-surface polymerization of 1,4-diethynylbenzene on Cu(111). Chemical Communications, 2013, 49, 2900.	4.1	97
20	Tapping-mode atomic force microscopy and phase-imaging in higher eigenmodes. Applied Physics Letters, 1999, 74, 3296-3298.	3.3	95
21	Structural investigations on native collagen type I fibrils using AFM. Biochemical and Biophysical Research Communications, 2007, 354, 27-32.	2.1	89
22	Dynamics of Grain Boundaries in Two-Dimensional Hydrogen-Bonded Molecular Networks. Small, 2005, 1, 532-539.	10.0	88
23	The role of self-assembled monolayers of the purine and pyrimidine bases in the emergence of life. , 1998, 28, 283-310.		87
24	The Role of Kinetics versus Thermodynamics in Surface-Assisted Ullmann Coupling on Gold and Silver Surfaces. Journal of the American Chemical Society, 2019, 141, 4824-4832.	13.7	83
25	Spectroscopy of the anharmonic cantilever oscillations in tapping-mode atomic-force microscopy. Applied Physics Letters, 2000, 77, 3293-3295.	3.3	80
26	On the Scalability of Supramolecular Networks â^' High Packing Density vs Optimized Hydrogen Bonds in Tricarboxylic Acid Monolayers. Langmuir, 2010, 26, 10708-10716.	3.5	72
27	Homology modeling of human Tollâ€like receptors TLR7, 8, and 9 ligandâ€binding domains. Protein Science, 2009, 18, 1684-1691.	7.6	70
28	Aromatic interaction vs.hydrogen bonding in self-assembly at the liquid–solid interface. Chemical Communications, 2009, , 680-682.	4.1	66
29	Born–Haber Cycle for Monolayer Self-Assembly at the Liquid–Solid Interface: Assessing the Enthalpic Driving Force. Journal of the American Chemical Society, 2013, 135, 14854-14862.	13.7	66
30	Inhibition of Toll-like receptors TLR4 and 7 signaling pathways by SIGIRR: A computational approach. Journal of Structural Biology, 2010, 169, 323-330.	2.8	63
31	Cut out or poke in—the key to the world of single genes: laser micromanipulation as a valuable tool on the look-out for the origin of disease. Genetic Analysis, Techniques and Applications, 1997, 14, 1-8.	1.5	61
32	Coronene on Ag(111) Investigated by LEED and STM in UHV. Journal of Physical Chemistry B, 2002, 106, 4482-4485.	2.6	61
33	Mediated Coadsorption at the Liquidâ^'Solid Interface:Â Stabilization through Hydrogen Bonds. Journal of Physical Chemistry B, 2005, 109, 14074-14078.	2.6	61
34	Self-programmable, self-assembling two-dimensional genetic matter. Origins of Life and Evolution of Biospheres, 2000, 30, 81-99.	1.9	59
35	Determination of elastic properties of single aerogel powder particles with the AFM. Ultramicroscopy, 1998, 75, 161-169.	1.9	53
36	Incorporation Dynamics of Molecular Guests into Two-Dimensional Supramolecular Host Networks at the Liquid–Solid Interface. Langmuir, 2011, 27, 13563-13571.	3.5	53

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37	Control of Intermolecular Bonds by Deposition Rates at Room Temperature: Hydrogen Bonds versus Metal Coordination in Trinitrile Monolayers. Journal of the American Chemical Society, 2013, 135, 691-695.	13.7	52
38	On-surface radical addition of triply iodinated monomers on Au(111)—the influence of monomer size and thermal post-processing. Surface Science, 2012, 606, 999-1004.	1.9	51
39	Determination of shear stiffness based on thermal noise analysis in atomic force microscopy: Passive overtone microscopy. Physical Review B, 2001, 64, .	3.2	50
40	Focussed ion beam preparation and in situ nanoscopic study of Precambrian acritarchs. Precambrian Research, 2005, 140, 36-54.	2.7	50
41	Solution Preparation of Two-Dimensional Covalently Linked Networks by Polymerization of 1,3,5-Tri(4-iodophenyl)benzene on Au(111). ACS Nano, 2013, 7, 3014-3021.	14.6	50
42	Combined nanomanipulation by atomic force microscopy and UV-laser ablation for chromosomal dissection. European Biophysics Journal, 2003, 32, 33-39.	2.2	49
43	Atomic force microscopy of Precambrian microscopic fossils. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9117-9120.	7.1	47
44	From Au–Thiolate Chains to Thioether Sierpiński Triangles: The Versatile Surface Chemistry of 1,3,5-Tris(4-mercaptophenyl)benzene on Au(111). ACS Nano, 2016, 10, 10901-10911.	14.6	47
45	Solvent-Dependent Stabilization of Metastable Monolayer Polymorphs at the Liquid–Solid Interface. ACS Nano, 2013, 7, 6711-6718.	14.6	46
46	Nanostructure and mechanics of mummified type I collagen from the 5300-year-old Tyrolean Iceman. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 2301-2309.	2.6	45
47	1,3-Diiodobenzene on Cu(111) – an exceptional case of on-surface Ullmann coupling. Chemical Communications, 2015, 51, 13301-13304.	4.1	44
48	Generation of Chromosome Painting Probes from Single Chromosomes by Laser Microdissection and Linker-Adaptor PCR. Chromosome Research, 2004, 12, 337-343.	2.2	43
49	Quantum technology: from research to application. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	42
50	Isotopological Supramolecular Networks from Melamine and Fatty Acids. Journal of Physical Chemistry C, 2009, 113, 1014-1019.	3.1	40
51	Postâ€5ynthetic Decoupling of Onâ€5urfaceâ€5ynthesized Covalent Nanostructures from Ag(111). Angewandte Chemie - International Edition, 2016, 55, 7650-7654.	13.8	39
52	Noncontact scanning force microscopy based on a modified tuning fork sensor. Review of Scientific Instruments, 2000, 71, 3104-3107.	1.3	38
53	Scanning Tunneling Microscopy Image Contrast as a Function of Scan Angle in Hydrogen-Bonded Self-Assembled Monolayers. Langmuir, 1998, 14, 5195-5202.	3.5	36
54	Solvent-free on-surface synthesis of boroxine COF monolayers. Chemical Communications, 2017, 53, 5147-5150.	4.1	36

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55	Scanning tunneling microscopy and atomic force microscopy on organic and biomolecules. Thin Solid Films, 1992, 210-211, 640-647.	1.8	35
56	LRRML: a conformational database and an XML description of leucine-rich repeats (LRRs). BMC Structural Biology, 2008, 8, 47.	2.3	31
57	A leucine-rich repeat assembly approach for homology modeling of the human TLR5-10 and mouse TLR11-13 ectodomains. Journal of Molecular Modeling, 2011, 17, 27-36.	1.8	31
58	Characterization of a covalently bound phospholipid on a graphite substrate by x-ray photoelectron spectroscopy and scanning tunneling microscopy. Langmuir, 1989, 5, 1433-1435.	3.5	30
59	Reversible intercalation of iodine monolayers between on-surface synthesised covalent polyphenylene networks and Au(111). Nanoscale, 2017, 9, 4995-5001.	5.6	30
60	On-Surface Polymerization of 1,6-Dibromo-3,8-diiodpyrene—A Comparative Study on Au(111) Versus Ag(111) by STM, XPS, and NEXAFS. Journal of Physical Chemistry C, 2018, 122, 5967-5977.	3.1	29
61	Origin of Solvent-Induced Polymorphism in Self-Assembly of Trimesic Acid Monolayers at Solid–Liquid Interfaces. Chemistry of Materials, 2020, 32, 5057-5065.	6.7	29
62	STM and STS of coronene on HOPG(0001) in UHV - adsorption of the smallest possible graphite flakes on graphite. Analytical and Bioanalytical Chemistry, 2002, 374, 685-687.	3.7	27
63	Combination of a Knudsen effusion cell with a quartz crystal microbalance: <i>In situ</i> measurement of molecular evaporation rates with a fully functional deposition source. Review of Scientific Instruments, 2010, 81, 015108.	1.3	27
64	Distinct Differences in Self-Assembly of Aromatic Linear Dicarboxylic Acids. Langmuir, 2009, 25, 968-972.	3.5	23
65	Competitive Metal Coordination of Hexaaminotriphenylene on Cu(111) by Intrinsic Copper Versus Extrinsic Nickel Adatoms. Chemistry - A European Journal, 2019, 25, 1975-1983.	3.3	18
66	TollML: a database of toll-like receptor structural motifs. Journal of Molecular Modeling, 2010, 16, 1283-1289.	1.8	17
67	Self-assembly of melem on Ag(111)—emergence of porous structures based on amino-heptazine hydrogen bonds. CrystEngComm, 2011, 13, 5559.	2.6	17
68	Laserâ€Raman and atomic force microscopy assessment of the chlorococcalean affinity of problematic microfossils. Journal of Raman Spectroscopy, 2012, 43, 32-39.	2.5	15
69	Evolution of adsorption heights in the on-surface synthesis and decoupling of covalent organic networks on Ag(111) by normal-incidence X-ray standing wave. Nanoscale Horizons, 2021, 7, 51-62.	8.0	15
70	The influence of <i>ortho</i> -methyl substitution in organometallic self-assembly – a comparative study on Cu(111) <i>vs.</i> Ag(111). Chemical Communications, 2018, 54, 9745-9748.	4.1	14
71	Adsorption structure determination of a large polyaromatic trithiolate on Cu(111): combination of LEED-I(V) and DFT-vdW. Physical Chemistry Chemical Physics, 2013, 15, 11054.	2.8	13
72	Simultaneous measurement of tunneling current and force as a function of position through a lipid film on a solid substrate. Surface Science, 1991, 257, L653-L658.	1.9	12

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73	Electropolymerization of glutaraldehyde observed by scanning tunneling microscopy and its implications for scanning tunneling microscopy imaging of organic material. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 1159.	1.6	10
74	Scanning probe microscopy studies of the surface of decagonal quasicrystals in ambient conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 294-296, 878-881.	5.6	9
75	Postsynthetische Entkopplung oberflÄ ¤ hensynthetisierter kovalenter Nanostrukturen von Ag(111). Angewandte Chemie, 2016, 128, 7780-7784.	2.0	8
76	What can be inferred from moiré patterns? A case study of trimesic acid monolayers on graphite. Faraday Discussions, 2017, 204, 331-348.	3.2	8
77	Molecular Self-Assembly and the Origin of Life. , 2002, , 361-372.		6
78	Steering Selfâ€Assembly of Threeâ€Dimensional Iptycenes on Au(111) by Tuning Moleculeâ€6urface Interactions. Angewandte Chemie - International Edition, 2022, , .	13.8	6
79	Controlled Self-Assembly of Collagen Fibrils by an Automated Dialysis System. Journal of Biomechanical Engineering, 2006, 128, 792-796.	1.3	5
80	Immersion-scanning-tunneling-microscope for long-term variable-temperature experiments at liquid-solid interfaces. Review of Scientific Instruments, 2018, 89, 053707.	1.3	5
81	From Benzenetrithiolate Self-Assembly to Copper Sulfide Adlayers on Cu(111): Temperature-Induced Irreversible and Reversible Phase Transitions. Journal of Physical Chemistry C, 2014, 118, 3590-3598.	3.1	4
82	Quantifying the Ultraslow Desorption Kinetics of 2,6-Naphthalenedicarboxylic Acid Monolayers at Liquid–Solid Interfaces. Journal of Physical Chemistry Letters, 2020, 11, 7320-7326.	4.6	4
83	Manipulating genetic material. Materials Today, 2005, 8, 40-49.	14.2	3
84	TORSIONAL RESONANCE MODE ATOMIC FORCE MICROSCOPY OF A PROTEIN–DNA COMPLEX. Nano, 2008, 03, 443-448.	1.0	2
85	Simultaneous measurement of tunneling current and force as a function of position through a lipid film on a solid substrate. Surface Science Letters, 1991, 257, L653-L658.	0.1	0
86	Frontispiece: Post-Synthetic Decoupling of On-Surface-Synthesized Covalent Nanostructures from Ag(111). Angewandte Chemie - International Edition, 2016, 55, .	13.8	0
87	Molecular Self-Assembly. , 2002, , 505-517.		0
88	Nanobiotechnologien: Konzepte, Kontroversen, Kommunikation. Acatech-Diskussion, 2012, , 155-189.	0.2	0
89	Steering Selfâ€Assembly of Threeâ€Dimensional Iptycenes on Au(111) by Tuning Moleculeâ€&urface Interactions. Angewandte Chemie, 0, ,	2.0	0
90	Initial Coupling and Reaction Progression of Directly Deposited Biradical Graphene Nanoribbon Monomers on Iodine-Passivated Versus Pristine Ag(111). Chemistry, 2022, 4, 259-269.	2.2	0