Karl-Heinz Ernst

List of Publications by Year
in descending order

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141 papers	6,325 citations	70961 41 h-index	76769 74 g-index
159 all docs	159 docs citations	159 times ranked	5610 citing authors

#	Article	IF	Citations
1	Transition from Homochiral Clusters to Racemate Monolayers during 2D Crystallization of Trioxa[11]helicene on Ag(100). ChemPhysChem, 2021, 22, 293-297.	1.0	8
2	Transition from Homochiral Clusters to Racemate Monolayers during 2D Crystallization of Trioxa[11]helicene on Ag(100). ChemPhysChem, 2021, 22, 230-230.	1.0	0
3	Unbalanced 2D Chiral Crystallization of Pentahelicene Propellers and Their Planarization into Nanographenes. Chemistry - A European Journal, 2021, 27, 10251-10254.	1.7	8
4	Autocatalytic Surface Explosion Chemistry of 2D Metalâ€“Organic Frameworks. Journal of Physical Chemistry C, 2021, 125, 13343-13349.	1.5	3
5	Stereospecific onâ€Surface Cyclodehydrogenation of Bishelicenes: Preservation of Handedness from Helical to Planar Chirality. Chemistry - A European Journal, 2021, 27, 13523-13526.	1.7	5
6	Growth Dynamics and Electron Reflectivity in Ultrathin Films of Chiral Heptahelicene on Metal (100) Surfaces Studied by Spinâ€Polarized Low Energy Electron Microscopy. Physica Status Solidi (B): Basic Research, 2021, 258, 2100263.	0.7	3
7	On-Surface Hydrogenation of Buckybowls: From Curved Aromatic Molecules to Planar Non-KekulÃ© Aromatic Hydrocarbons. ACS Nano, 2020, 14, 16735-16742.	7.3	15
8	Double layer crystallization of heptahelicene on noble metal surfaces. Chirality, 2020, 32, 975-980.	1.3	2
9	XXII. Symposium on Atomic, Cluster and Surface Physics (SASP). Chimia, 2020, 74, 509-511.	0.3	0
10	Stereoselective Onâ€Surface Cyclodehydrofluorization of a Tetraphenylporphyrin and Homochiral Selfâ€Assembly. Angewandte Chemie - International Edition, 2020, 59, 17413-17416.	7.2	19
11	Stereoselective Onâ€Surface Cyclodehydrofluorization of a Tetraphenylporphyrin and Homochiral Selfâ€Assembly. Angewandte Chemie, 2020, 132, 17566-17569.	1.6	8
12	Heterochiral recognition among functionalized heptahelicenes on noble metal surfaces. Chemical Communications, 2019, 55, 10595-10598.	2.2	18
13	Fivefold Symmetry and 2D Crystallization: Selfâ€Assembly of the Buckybowl Pentaindenocorannulene on a Cu(100) Surface. Chemistry - A European Journal, 2019, 25, 11555-11559.	1.7	5
14	The fate of bromine after temperature-induced dehydrogenation of on-surface synthesized bisheptahelicene. Chemical Science, 2019, 10, 2998-3004.	3.7	25
15	Graphene Grown from Flat and Bowl Shaped Polycyclic Aromatic Hydrocarbons on Cu(111). ChemPhysChem, 2019, 20, 2354-2359.	1.0	2
16	Chiral Surface from Achiral Ingredients: Modification of Cu(110) with Phthalic Acid. Journal of Physical Chemistry C, 2019, 123, 9121-9127.	1.5	2
17	Interaction of Chiral and Achiral Dimethylsuccinic Acid Diastereomers with a Cu(110) Surface. Journal of Physical Chemistry C, 2019, 123, 2329-2335.	1.5	3
18	Chirality@The Nanoscale Symposium: Congresso Stefano Franscini (CSF), Monte Verita, Ascona, 13â€“17 October, 2019. Chimia, 2019, 73, 1042.	0.3	0

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19	Chiral Autocatalysis and Mirror Symmetry Breaking. Catalysis Letters, 2018, 148, 1610-1621.	1.4	31
20	Chirality-Dependent Electron Spin Filtering by Molecular Monolayers of Helicenes. Journal of Physical Chemistry Letters, 2018, 9, 2025-2030.	2.1	154
21	Chiral molecules adsorbed on a solid surface: Tartaric acid diastereomers and their surface explosion on Cu(111). Chirality, 2018, 30, 369-377.	1.3	14
22	On the chiroptical properties of racemic crystals. Chirality, 2018, 30, 378-382.	1.3	10
23	Pauli Repulsion Versus van der Waals: Interaction of Indenocorannulene with a Cu(111) Surface. Journal of Physical Chemistry B, 2018, 122, 871-877.	1.2	7
24	On the Density of Racemic and Homochiral Crystals: Wallach, Liebisch and Sommerfeld in GÃ¶ttingen. Chimia, 2018, 72, 399.	0.3	4
25	Diastereoselective Ullmann Coupling to Bishelicenes by Surface Topochemistry. Journal of the American Chemical Society, 2018, 140, 15186-15189.	6.6	24
26	Stereospecific Autocatalytic Surface Explosion Chemistry of Polycyclic Aromatic Hydrocarbons. Journal of the American Chemical Society, 2018, 140, 7705-7709.	6.6	11
27	Spontaneous separation of on-surface synthesized tris-helicenes into two-dimensional homochiral domains. Chemical Communications, 2018, 54, 7948-7951.	2.2	30
28	Action spectra associated with inelastic two-electron tunneling through a single molecule: Propene on Cu(211). Surface Science, 2018, 678, 206-214.	0.8	3
29	Modification of the Potential Landscape of Molecular Rotors on Au(111) by the Presence of an STM Tip. Nano Letters, 2018, 18, 4704-4709.	4.5	21
30	Diastereoselective self-assembly of bisheptahelicene on Cu(111). Chemical Communications, 2018, 54, 8757-8760.	2.2	13
31	Physical Aspects of Ultrathin Chiral Films. , 2018, , 277-283.		0
32	Heterochiral to Homochiral Transition in Pentahelicene 2D Crystallization Induced by Second-Layer Nucleation. ACS Nano, 2017, 11, 865-871.	7.3	37
33	Single handedness in flatland. Nature Chemistry, 2017, 9, 195-196.	6.6	5
34	Onâ€Surface Metalation and 2D Selfâ€Assembly of Pyrphyrin Molecules Into Metalâ€Coordinated Networks on Cu(111). Helvetica Chimica Acta, 2017, 100, e1600278.	1.0	6
35	Erecting buckybowls onto their edge: 2D self-assembly of terphenylcorannulene on the Cu(111) surface. Faraday Discussions, 2017, 204, 429-437.	1.6	7
36	Probing properties of molecule-based interface systems: general discussion and Discussion of the Concluding Remarks. Faraday Discussions, 2017, 204, 503-530.	1.6	0

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37	Supramolecular effects in self-assembled monolayers: general discussion. Faraday Discussions, 2017, 204, 123-158.	1.6	2
38	Preparing macromolecular systems on surfaces: general discussion. Faraday Discussions, 2017, 204, 395-418.	1.6	0
39	Supramolecular systems at liquidâ€“solid interfaces: general discussion. Faraday Discussions, 2017, 204, 271-295.	1.6	2
40	Identification of On-Surface Reaction Mechanism by Targeted Metalation. Journal of Physical Chemistry C, 2017, 121, 27521-27527.	1.5	20
41	Ranking the Stability of Transition-Metal Complexes by On-Surface Atom Exchange. Journal of Physical Chemistry Letters, 2017, 8, 6193-6198.	2.1	15
42	On the Validity of Calling Wallach's Rule Wallach's Rule. Israel Journal of Chemistry, 2017, 57, 24-30.	1.0	17
43	Aggregation of C₇₀-Fragment Buckybowls on Surfaces: Ï€â€“H and Ï€â€“Ï€ Bonding in Bowl Up-Side-Down Ensembles. Journal of the American Chemical Society, 2016, 138, 6111-6114.	6.6	18
44	Surface-assisted diastereoselective Ullmann coupling of bishelicenes. Chemical Communications, 2016, 52, 12694-12697.	2.2	28
45	Stereochemical Recognition of Helicenes on Metal Surfaces. Accounts of Chemical Research, 2016, 49, 1182-1190.	7.6	87
46	Microscopic origin of chiral shape induction in achiral crystals. Nature Chemistry, 2016, 8, 326-330.	6.6	68
47	Low-Temperature Dissociation of CO₂ on a Ni/CeO₂(111)/Ru(0001) Model Catalyst. Journal of Physical Chemistry C, 2016, 120, 5980-5987.	1.5	20
48	Disappearing Enantiomorphs: Single Handedness in Racemate Crystals. Angewandte Chemie - International Edition, 2015, 54, 14422-14426.	7.2	27
49	Pasteurâ€™s Experiment Performed at the Nanoscale: Manual Separation of Chiral Molecules, One by One. Nano Letters, 2015, 15, 5388-5392.	4.5	34
50	From Homochiral Clusters to Racemate Crystals: Viable Nuclei in 2D Chiral Crystallization. Journal of the American Chemical Society, 2015, 137, 7970-7973.	6.6	54
51	Preface: Special Topic on Supramolecular Self-Assembly at Surfaces. Journal of Chemical Physics, 2015, 142, 101501.	1.2	0
52	Chiral reconstruction of Cu(110) after adsorption of fumaric acid. Surface Science, 2014, 629, 75-80.	0.8	8
53	A metal surface with chiral memory. Chemical Communications, 2014, 50, 1814-1816.	2.2	21
54	2D conglomerate crystallization of heptahelicene. Chemical Communications, 2014, 50, 8751-8753.	2.2	34

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55	Gear-Meshed Tiling of Surfaces with Molecular Pentagonal Stars. Journal of the American Chemical Society, 2014, 136, 606-609.	6.6	22
56	Reversible Achiral-to-Chiral Switching of Single Mnâ€“Phthalocyanine Molecules by Thermal Hydrogenation and Inelastic Electron Tunneling Dehydrogenation. ACS Nano, 2014, 8, 2246-2251.	7.3	32
57	Charged-Molecule Physics. ACS Nano, 2014, 8, 5375-5379.	7.3	1
58	Two-Dimensional Crystallization of Enantiopure and Racemic Heptahelicene on Ag(111) and Au(111). Journal of Physical Chemistry C, 2014, 118, 29135-29141.	1.5	40
59	Stereochemistry of 2D Molecular Crystallization. Chimia, 2014, 68, 49.	0.3	4
60	Quadruple Anionic Buckybowls by Solid-State Chemistry of Corannulene and Cesium. Journal of the American Chemical Society, 2013, 135, 12857-12860.	6.6	28
61	A turn in the right direction. Nature Nanotechnology, 2013, 8, 7-8.	15.6	15
62	Chiral Conflict among Different Helicenes Suppresses Formation of One Enantiomorph in 2D Crystallization. Journal of the American Chemical Society, 2013, 135, 7434-7437.	6.6	48
63	Molecular chirality in surface science. Surface Science, 2013, 613, 1-5.	0.8	60
64	Molecular chirality at surfaces. Physica Status Solidi (B): Basic Research, 2012, 249, 2057-2088.	0.7	210
65	From reciprocal space to real space in surface science. Journal of Physics Condensed Matter, 2012, 24, 350201.	0.7	0
66	Pentagonal tiling with buckybowls: pentamethylcorannulene on Cu(111). Physical Chemistry Chemical Physics, 2012, 14, 13365.	1.3	16
67	Surface-assisted bowl-in-bowl stacking of nonplanar aromatic hydrocarbons. Chemical Communications, 2011, 47, 7995.	2.2	28
68	Two-Dimensional Self-Assembly of Chiral Malic Acid on Cu(110). Journal of Physical Chemistry C, 2011, 115, 1240-1247.	1.5	24
69	Large Induced Interface Dipole Moments without Charge Transfer: Buckybowls on Metal Surfaces. Journal of Physical Chemistry Letters, 2011, 2, 2805-2809.	2.1	43
70	Single-Molecule Chemistry and Analysis: Mode-Specific Dehydrogenation of Adsorbed Propene by Inelastic Electron Tunneling. Journal of the American Chemical Society, 2011, 133, 5689-5691.	6.6	27
71	Electrically driven directional motion of a four-wheeled molecule on a metal surface. Nature, 2011, 479, 208-211.	13.7	669
72	Surface Explosion Chemistry of Malic Acid on Cu(110). Topics in Catalysis, 2011, 54, 1378-1383.	1.3	12

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73	Chiral Reconstruction of a Metal Surface by Adsorption of Racemic Malic Acid. ChemPhysChem, 2011, 12, 1572-1577.	1.0	25
74	Alfred Wernerâ€™s Coordination Chemistry: New Insights from Old Samples. Angewandte Chemie - International Edition, 2011, 50, 10780-10787.	7.2	46
75	Optical activity and Alfred Werner's coordination chemistry. Chirality, 2011, 23, 187-189.	1.3	10
76	Intermediate structures in two-dimensional molecular self-assembly. Frontiers of Physics in China, 2010, 5, 340-346.	1.0	0
77	Amplification of Chirality at Solid Surfaces. Origins of Life and Evolution of Biospheres, 2010, 40, 41-50.	0.8	38
78	Unification of the matrix notation in molecular surface science. Surface Science, 2010, 604, 1049-1054.	0.8	57
79	Chirality transfer by epitaxial mismatch in multi-layered homochiral molecular films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 354, 240-245.	2.3	20
80	Hopping, turning and flipping of single molecules during lateral manipulation with a scanning tunneling microscope. Surface and Interface Analysis, 2010, 42, 1629-1633.	0.8	9
81	Direct Observation of Enantiospecific Substitution in a Two-Dimensional Chiral Phase Transition. Journal of the American Chemical Society, 2010, 132, 10440-10444.	6.6	40
82	Homochiral Recognition among Organic Molecules on Copper(110). Langmuir, 2010, 26, 3402-3406.	1.6	21
83	Polymorphism and chiral expression in two-dimensional subphthalocyanine crystals on Au(111). Physical Chemistry Chemical Physics, 2010, 12, 1318-1322.	1.3	40
84	Pasteur's quasiracemates in 2D: chiral conflict between structurally different enantiomers induces single-handed enantiomorphism. Chemical Communications, 2010, 46, 8645.	2.2	27
85	Reversible Phase Transitions in a Buckybowl Monolayer. Angewandte Chemie - International Edition, 2009, 48, 1966-1969.	7.2	65
86	Switching the Chirality of Single Adsorbate Complexes. Angewandte Chemie - International Edition, 2009, 48, 4065-4068.	7.2	96
87	Building 2D Crystals from 5-Fold-Symmetric Molecules. Journal of the American Chemical Society, 2009, 131, 3460-3461.	6.6	77
88	Aspects of Molecular Chirality at Metal Surfaces. Zeitschrift Fur Physikalische Chemie, 2009, 223, 37-51.	1.4	6
89	Polymorph selection in 2D crystals by phase transition blocking. Chemical Communications, 2009, , 5871.	2.2	15
90	Condensation of Fivefold-Symmetric Molecules in Two Dimensions. Chimia, 2009, 63, 214.	0.3	10

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91	Amplification of chirality in two-dimensional molecular lattices. Current Opinion in Colloid and Interface Science, 2008, 13, 54-59.	3.4	48
92	Coverage and Enantiomeric Excess Dependent Enantiomorphism in Two-Dimensional Molecular Crystals. Crystal Growth and Design, 2008, 8, 1890-1896.	1.4	70
93	Expression and Amplification of Chirality in Two-Dimensional Molecular Crystals. Chimia, 2008, 62, 471.	0.3	7
94	Probing the Interface in Vapor-Deposited Bimetallic Pdâ^'Au and Ptâ^'Au Films by CO Adsorption from the Liquid Phase. Langmuir, 2007, 23, 1203-1208.	1.6	11
95	Buckybowls on Metal Surfaces: Symmetry Mismatch and Enantiomorphism of Corannulene on Cu(110). Angewandte Chemie - International Edition, 2007, 46, 8258-8261.	7.2	81
96	Adsorption mode of the chiral modifier cinchonidine on Au(1 1 1). Applied Surface Science, 2007, 253, 3480-3484.	3.1	17
97	Cinchonidine Adsorption on Gold and Gold-Containing Bimetallic Platinum Metal Surfaces:â€‰ An Attenuated Total Reflection Infrared and Density Functional Theory Study. Journal of Physical Chemistry B, 2006, 110, 17082-17089.	1.2	14
98	ChiralitÃt in zwei Dimensionen. Nachrichten Aus Der Chemie, 2006, 54, 504-509.	0.0	0
99	Stereoisomeric influence on 2D lattice structure: achiralmeso-tartaric acidversus chiral tartaric acid. Surface and Interface Analysis, 2006, 38, 1607-1610.	0.8	27
100	Selective Loading of Kinesin-Powered Molecular Shuttles with Protein Cargo and its Application to Biosensing. Small, 2006, 2, 330-334.	5.2	129
101	Amplification of chirality in two-dimensional enantiomorphous lattices. Nature, 2006, 439, 449-452.	13.7	376
102	Homochirality in monolayers of achiral meso tartaric acid. Chemical Physics Letters, 2005, 407, 433-437.	1.2	65
103	Homochiral Conglomerates and Racemic Crystals in Two Dimensions: Tartaric Acid on Cu(110). Chemistry - A European Journal, 2005, 11, 4149-4154.	1.7	71
104	Molecular Self-Assembly of â€œNanowiresâ€•and â€œNanospoolsâ€•Using Active Transport. Nano Letters, 2005, 5, 629-633.	4.5	165
105	Lifetime of biomolecules in polymer-based hybrid nanodevices. Nanotechnology, 2004, 15, S540-S548.	1.3	72
106	On the chemistry at the Si,Ti-doped a-C:H/TiC interface. Thin Solid Films, 2004, 446, 72-77.	0.8	5
107	Determination of the Absolute Chirality of Adsorbed Molecules. Angewandte Chemie - International Edition, 2004, 43, 2853-2856.	7.2	61
108	The absolute configuration of heptahelicene: aVCD spectroscopy study. New Journal of Chemistry, 2004, 28, 332-334.	1.4	69

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109	Chiral Recognition in Surface Explosion. Journal of the American Chemical Society, 2004, 126, 9176-9177.	6.6	52
110	Induction of Homochirality in Achiral Enantiomorphous Monolayers. Journal of the American Chemical Society, 2004, 126, 15398-15399.	6.6	160
111	Differences in two-dimensional crystal structures: Racemic and enantiopure heptahelicene on Cu(111). E-Journal of Surface Science and Nanotechnology, 2004, 2, 136-140.	0.1	8
112	Chirality Transfer from Single Molecules into Self-Assembled Monolayers. Angewandte Chemie - International Edition, 2003, 42, 5178-5181.	7.2	192
113	Adsorption of helical aromatic molecules: heptahelicene on Ni(). Surface Science, 2003, 530, 195-202.	0.8	31
114	Resonant sum-frequency generation in chiral liquids. Optical Materials, 2003, 21, 1-5.	1.7	12
115	<title>Supramolecular chiral films</title>. , 2002, , .		0
116	NEXAFS Study on the Orientation of Chiral P-Heptahelicene on Ni(100). Journal of the American Chemical Society, 2001, 123, 493-495.	6.6	45
117	Two-dimensional separation of [7]helicene enantiomers on Cu(111). Chirality, 2001, 13, 675-678.	1.3	70
118	Orientation of chiral heptahelicene C30H18 on copper surfaces: An x-ray photoelectron diffraction study. Journal of Chemical Physics, 2001, 115, 1020-1027.	1.2	78
119	Sum-Frequency Vibrational Spectroscopy on Chiral Liquids: A Novel Technique to Probe Molecular Chirality. Physical Review Letters, 2000, 85, 4474-4477.	2.9	190
120	Nanostructured chiral surfaces. Nanotechnology, 1999, 10, 355-361.	1.3	32
121	Deposition of Amorphous Titanium Oxide Films Using Alkoxy(pyrazolylborate) Titanium (IV) Compounds. Chemical Vapor Deposition, 1999, 5, 79-85.	1.4	13
122	Adsorption of carbon dioxide on Cu(110) and on hydrogen and oxygen covered Cu(110) surfaces. Physical Chemistry Chemical Physics, 1999, 1, 4105-4112.	1.3	62
123	Addition of sulfur to organic matter during early diagenesis of lake sediments. Geochimica Et Cosmochimica Acta, 1999, 63, 837-853.	1.6	139
124	Surface analysis of chemically-etched and plasma-treated polyetheretherketone (PEEK) for biomedical applications. Surface and Coatings Technology, 1997, 96, 293-299.	2.2	122
125	Adhesion and structural changes of multi-layered and multi-doped a-C:H films during annealing. Diamond and Related Materials, 1996, 5, 932-937.	1.8	31
126	Structural changes in doped a-C:H films during annealing. Diamond and Related Materials, 1995, 4, 482-487.	1.8	37

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127	Effect of organic precursors on diamond nucleation on silicon. Diamond and Related Materials, 1995, 4, 720-724.	1.8	11
128	XPS study of the a-C : H/Al2O3 interface. Surface and Interface Analysis, 1994, 21, 32-37.	0.8	15
129	Fluorine-Induced corrosion of aluminium microchip bond pads: An XPS and AES analysis. Surface and Interface Analysis, 1994, 21, 691-696.	0.8	45
130	The interaction of hydrogen with a cobalt(101Ì„0) surface. Journal of Chemical Physics, 1994, 101, 5388-5401.	1.2	55
131	The Chemisorption of CO on Cu Films on ZnO(0001)-O. Journal of Catalysis, 1993, 141, 380-388.	3.1	48
132	Growth model for metal films on oxide surfaces: Cu on ZnO(0001)-O. Physical Review B, 1993, 47, 13782-13796.	1.1	187
133	Kinetics of the reverse water-gas shift reaction over Cu(110). Journal of Catalysis, 1992, 134, 66-74.	3.1	99
134	A reversal in dipole moment for adsorbed hydrocarbons on Pt(111) due to coadsorbed alkali. Surface Science, 1991, 259, L736-L738.	0.8	10
135	The titration of oxygen adatoms by H2 from the Cs-promoted Cu(110) surface. Surface Science, 1991, 259, 18-25.	0.8	10
136	A LEED structural analysis of the Co(100) surface. Surface Science, 1991, 254, L469-L474.	0.8	41
137	A LEED structural analysis of the Co(100) surface. Surface Science Letters, 1991, 254, L469-L474.	0.1	3
138	Ordered oxygen phases on a surface. Vacuum, 1990, 41, 180-184.	1.6	24
139	The interaction of glycine with a platinum (111) surface. Surface Science, 1989, 224, 277-310.	0.8	51
140	Sum-frequency vibrational spectroscopy on molecular chirality. , 0, , .		0
141	Supramolecular Surface Chirality. , 0, , 209-252.		205