

**A) Peer reviewed journals & book chapters (146)**

- 146 J. Voigt, K. Martin, M. Baljzović, C. Wäckerlin, N. Avarvari,\* K.-H. Ernst\*  
An aperiodic chiral tiling by topological molecular self-assembly  
*Nature Communications* (accepted; <https://doi.org/10.1038/s41467-024-55405-5>)
- 145 M. Baljzović,\* J. Pijeat, S. Campidelli,\* K.-H. Ernst\*  
Planar and Curved  $\pi$ -Extended Porphyrins by On-Surface Cyclodehydrogenation  
*J. Am. Chem. Soc.* (in press) <https://doi.org/10.1021/jacs.4c12460>
- 144 K.-H. Ernst,\* The stereochemistry of 1,4-dicarboxylic acids on Cu(110): sergeants & soldiers, surface explosions and chiral reconstructions  
*Surface Science* 749 (2024) 122569
143. K.-H. Ernst,\* Helicenes on Surfaces: Stereospecific On-Surface Chemistry, Single Enantiomorphism and Electron Spin-Selectivity  
*Chirality* 36 (2024) e23706/1–11
142. E. Isufi Neziri, C. Hensky, H. Q. Le, D. Radillo Ochoa, A. Cebrat, M. Parschau, K.-H. Ernst\*, C. Wäckerlin\*, Two-dimensional metalorganic ferromagnets  
*Advanced Science* (submitted); <https://arxiv.org/abs/2408.16369>
141. F. Frezza, A. Sánchez-Grande,\* S. Canola, A. Lamancová, P. Mutombo, Q. Chen, C. Wäckerlin, K.-H. Ernst, M. Muntwiler, N. Zema, M. Di Giovannantonio,\* D. Nachtigallová, P. Jelínek\*  
Controlling On-Surface Photoactivity: The Impact of  $\pi$ -Conjugation in Anhydride-Functionalized Molecules on a Semiconductor Surface  
*Angew. Chem. Int. Ed.* 63 (2024), e202405983; *Angew. Chem.* 2024, 136, e202405983 (1 of 8)
140. M. R. Safari,\* F. Matthes, V. Caciuc, N. Atodiresei, C. M. Schneider, K.-H. Ernst,\* D. Bürgler,\*  
Enantioselective adsorption on magnetic surfaces  
*Adv. Mater.* 36 (2024) 202308666/1–8
139. J. Voigt, M. Hasan, C. Wäckerlin, A. V. Karnik\*, K.-H. Ernst\*  
Switching the on-surface orientation of oxygen-functionalized helicene  
*Chirality* 36 (2024) e236427/1-8
138. A. Pinar Solé, J. Klívar, M. Šámal, I. G. Stará, I. Starý, J. Mendieta, K.-H. Ernst, P. Jelínek, O. Stetsovych,\* On-surface synthesis of helicene polymers.  
*Chem. Eur. J.* 30 (2024) e202304127/1–7
137. M. R. Safari,\* F. Matthes, C. M. Schneider, K.-H. Ernst,\* D. Bürgler,\*  
Spin-Selective Electron Transport Through Single Chiral Molecules  
*Small* 20 (2024) 2308233/1–7
136. M. Baljzović, B. Arnoldi, S. Grass, J. Lacour, M. Aeschlimann, B. Stadtmüller, K.-H. Ernst\*  
Spin- and angle-resolved photoemission spectroscopy study of heptahelicene layers on Cu(111) surfaces. *J. Chem. Phys.* 159 (2023) 044701/1–8
135. J. Voigt, K. Martin, E. Neziri, M. Baljzović, C. Wäckerlin, N. Avarvari, K.-H. Ernst\*  
Highly Stereospecific On-Surface Dimerization into Bishelicenes: Topochemical Ullmann Coupling of Bromohelicene on Au(111)  
*Chem. Eur. J.* 29 (2023) e202300134
134. F. Frezza, A. Sánchez-Grande,\* M. Ondráček, M. Vondráček, Q. Chen, O. Stetsovych, V. Villalobos, C. Sánchez-Sánchez, K.-H. Ernst, J. A. Martín-Gago,\* J. Honolka,\* P. Jelínek\*  
Epitaxial growth and characterization of SnSe phases on Au(111)  
*J. Phys.: Condens. Matter* 35 (2023) 335001
133. G. Srivastava, P. Štacko, J. I. Mendieta-Moreno, S. Edalatmanesh, J. C. M. Kistemaker, G. H. Heideman, J. I. Mendieta-Moreno, L. Zoppi, M. Parschau, B. L. Feringa,\* K.-H. Ernst\*  
Driving a 3<sup>rd</sup> Generation Molecular Motor with Electrons Across a Surface  
*ACS Nano* 17 (2023) 3931–3938

132. M. R. Safari,\* F. Matthes, K.-H. Ernst, D. E. Bürgler,\* C. M. Schneider  
Deposition of Chiral Heptahelicene Molecules on Ferromagnetic Co and Fe Thin-Film Substrates  
*Nanomaterials* 12 (2022) 3281/1–18
131. B. Irzıqat, J. Berger, A. Cebrat, J. I. Mendieta-Moreno, M. Shyam Sundar, A. V. Bedekar,  
K.-H. Ernst\*  
Conglomerate Aggregation of 7,12,17-Trioxa[11]helicene into Homochiral Two-Dimensional  
Crystals on the Cu(100) Surface  
*Helv. Chimica Acta* 105 (2022) e202200114
130. M. Baljovıć, A. F. Cauduro, J. Seibel, A. Mairena, S. Grass, J. Lacour, A. Schmid, K.-H. Ernst\*  
Growth dynamics and electron reflectivity in ultrathin films of chiral heptahelicene on metal (100)  
surfaces studied by spin-polarized low energy electron microscopy  
*Phys. Status Solidi B* 258 (2021) 2100263/1–8
129. B. Irzıqat, A. Cebrat, M. Baljovıć, K. Martin, M. Parschau, N. Avarvari, K.-H. Ernst\*  
Stereospecific On-Surface Cyclodehydrogenation of Bishelicenes: Preservation of Handedness  
from Helical to Planar Chirality  
*Chem. Eur. J.* 27 (2021) 13523–13526
128. J. Voigt, M. Roy, M. Baljovıć, C. Wäckerlin, Y. Coquerel, M. Gingras, K.-H. Ernst  
Unbalanced 2D Chiral Crystallization of Pentahelicene Propellers and Their Planarization into  
Nanographenes  
*Chem. Eur. J.* 27 (2021) 10251–10254
127. C. Wäckerlin,\* K.-H. Ernst\*  
Autocatalytic Surface Explosion Chemistry of 2D Metal-Organic Frameworks  
*J. Phys. Chem. C* 125 (2021) 13343–13349
126. B. Irzıqat, J. Berger, J. I. Mendieta-Moreno, M. Shyam Sundar, A. V. Bedekar, K.-H. Ernst\*  
Transition from Homochiral Clusters to Racemate Monolayers During 2D Crystallization of  
Trioxa[11]helicene on Ag(100)  
*ChemPhysChem* 22 (2021) 293–296
125. C. Wäckerlin, A. Gallardo, A. Mairena, M. Baljovıć, A. Cahlík, A. Antalík, J. Brabec, L. Veis,  
D. Nachtigallová, P. Jelínek, K.-H. Ernst\*  
On-Surface Hydrogenation of Buckybowls: From Curved Aromatic Molecules to Planar Non-  
Kekulé Aromatic Hydrocarbons  
*ACS Nano* 14 (2020) 16735–16742
124. H. Chen, L. Tao, D. Wang, Z.-Y. Wu, J.-L. Zhang, S. Gao, W. Xiao, S. Du,\* K.-H. Ernst,\* H.-J. Gao\*  
Stereoselective on-surface cyclodehydrofluorization of a tetraphenylporphyrin and homochiral  
self-assembly  
*Angew. Chem. Int. Ed.* 59 (2020) 17413–17416; *Angew. Chem.* 132 (2020) 17566–17569
123. J. Seibel, M. Parschau, K.-H. Ernst\*  
Double layer crystallization of heptahelicene on noble metal surfaces  
*Chirality* 32 (2020) 975–980
122. A. Mairena, J. Mendieta, O. Stetsovych, A. Terfort, I. G. Stará, I. Starý, P. Jelínek, K.-H. Ernst\*  
Heterochiral recognition among functionalized heptahelicenes on noble metal surfaces  
*Chem. Comm.* 55 (2019) 10595–10598
121. A. Mairena, L. Zoppi, S. Lampart, K. K. Baldrige, J. S. Siegel, K.-H. Ernst\*  
Fivefold Symmetry and 2D Crystallization: Self-Assembly of the Buckybowl  
Pentaindenocorannulene on a Cu(100) Surface  
*Chem. Eur. J.* 25 (2019) 11555–11559
120. J. Li, S. Lampart, J. Siegel, K.-H. Ernst, C. Wäckerlin\*  
Graphene grown from flat and bowl shaped polycyclic aromatic hydrocarbons on Cu(111)  
*ChemPhysChem* 20 (2019) 2354–2359

119. C. Karageorgaki, P. Mutombo, P. Jelinek, K.-H. Ernst\*  
A Chiral Surface From Achiral Ingredients: Modification of Cu(110) With Phthalic Acid  
*J. Phys. Chem. C* 123 (2019) 9121–9127
118. C. Karageorgaki, P. Mutombo, K.-H. Ernst\*  
On the Interaction of Chiral and Achiral Dimethylsuccinic Acid Diastereomers With a Cu(110) Surface, *J. Phys. Chem. C* 123 (2019) 2329–2335
117. A. Mairena, M. Baljovic, M. Kawecki, K. Grenader, M. Wienke, K. Martin, L. Bernard, N. Avarvari, A. Terfort, K.-H. Ernst,\* C. Wäckerlin\*  
The fate of bromine after temperature induced dehydrogenation of on-surface synthesized bisheptahelicene  
*Chem. Sci.* 10 (2019) 2998–3004
116. A. Mairena, C. Wäckerlin, M. Wienke, K. Grenader, A. Terfort, K.-H. Ernst\*  
Diastereoselective Ullmann Coupling to Bishelicenes by Surface Topochemistry  
*J. Am. Chem. Soc.* 140 (2018) 15186–15189
115. A. Mairena, M. Parschau, J. Seibel, M. Wienke, D. Rentsch, A. Terfort, K.-H. Ernst\*  
Diastereoselective self-assembly of bisheptahelicene on Cu(111)  
*Chem. Comm.* 54 (2018) 8757–8760
114. J. Li, K. Martin, N. Avarvari, C. Wäckerlin,\* K.-H. Ernst  
Spontaneous resolution of on-surface synthesized trishelicenes  
*Chem. Comm.* 54 (2018) 7948–7945
113. K.-H. Ernst  
On the density of racemic and homochiral crystals: Wallach, Liebisch and Sommerfeld in Göttingen  
*CHIMIA* 72 (2018) 399–403
112. A. Mairena, M. Wienke, K. Martin, N. Avarvari, A. Terfort, K.-H. Ernst,\* C. Wäckerlin,\*  
Stereoselective autocatalytic surface explosion chemistry of polycyclic aromatic hydrocarbons  
*J. Am. Chem. Soc.* 140 (2018) 7705–7709
111. A. J. Gellman\*, K.-H. Ernst\*  
Chiral autocatalysis and mirror symmetry breaking  
*Catal. Lett.* 148 (2018) 1610–1621
110. H.-L. Lu, Y. Cao, J. Qi, A. Bakker, C. A. Strassert, X. Lin, K.-H. Ernst, S.-X. Du,\* H. Fuchs, H.-J. Gao\*,  
Modification of the potential landscape of molecular rotors on Au(111) by the presence of an STM tip. *Nano Letters* 18 (2018) 4704–4709
109. H. Ueba, M. Parschau, D. Passerone, K.-H. Ernst\*  
Action spectroscopy associated with inelastic two-electron tunneling of a single molecule: Propene on Cu(211)  
*Surf. Science* 678 (2018) 206–214
108. A. Rieger, C. Sax, T. Bauert, C. Wäckerlin, K.-H. Ernst\*  
Chiral molecules adsorbed on a solid surface: tartaric acid diastereomers and their surface explosion on Cu(111).  
*Chirality* 30 (2018) 369–377
107. B. Kahr,\* A. T. Martin, K.-H. Ernst  
On the chiroptical properties of racemic crystals  
*Chirality* 30 (2018) 378–382
106. M. Kettner, V. V. Maslyuk, D. Nürenberg, J. Seibel, R. Gutierrez, G. Cuniberti, K.-H. Ernst,\* H. Zacharias\*  
Helicity dependent electron spin filtering by helicene molecular monolayers  
*J. Phys. Chem. Lett.* 9 (2018) 2025–2030

105. L. Zoppi, Q. Stöckl, A. Mairena, O. Allemann, J. S. Siegel, K. K. Baldrige, K.-H. Ernst\*  
Pauli repulsion versus van der Waals: interaction of indenocorannulene with a Cu(111) surface  
*J. Phys. Chem. B* 122 (2018) 871–877
104. K.-H. Ernst  
Physical Aspects of Ultrathin Chiral Films. In: Wandelt, K., (Ed.) Encyclopedia of Interfacial Chemistry: Surface Science and Electrochemistry, vol. 3, (2018) pp 277–283.
103. A. Rieger, S. Schnidrig, B. Probst, K.-H. Ernst, C. Wäckerlin\*  
Identification of on-surface reaction mechanism by targeted metalation  
*J. Phys. Chem. C* 121 (2017) 27521–27527
102. A. Rieger, S. Schnidrig, B. Probst, K.-H. Ernst, C. Wäckerlin\*  
Ranking the stability of transition-metal complexes by on-surface atom exchange  
*J. Phys. Chem. Lett.* 8 (2017) 6193–6198
101. Q. Stöckl, T.-C. Wu, A. Mairena, Y. T. Wu,\* K.-H. Ernst\*  
Erecting buckybowls onto their edge: self-assembly of terphenylcorannulene on the Cu(111) surface  
*Faraday Discussions* 204 (2017) 429–437
100. J. Li, C. Wäckerlin,\* S. Schnidrig, E. Joliat, R. Alberto, K.-H. Ernst\*  
On-surface metalation and 2D self-assembly of pyrphyrin molecules on Cu(111)  
*Helv. Chimica Acta* 100 (2017) e1600278
99. A. Mairena, L. Zoppi, J. Seibel, A. F. Tröster, K. Grenader, M. Parschau, A. Terfort, K.-H. Ernst\*  
Heterochiral to homochiral transition in pentahelicene 2D crystallization induced by second-layer nucleation  
*ACS Nano* 11 (2017) 865–871
98. K.-H. Ernst  
On the validity of calling Wallach's rule Wallach's rule  
*Isr. J. Chem.* 57 (2017) 24–30
97. C. Wäckerlin, J. Li, A. Mairena, K. Martin, N. Avarvari, K.-H. Ernst\*  
Surface-assisted diastereoselective Ullmann coupling to bishelicenes  
*Chem. Comm.* 52 (2016) 12694–12697
96. K.-H. Ernst  
Stereochemical recognition of helicenes on metal surfaces  
*Acc. Chem. Res.* 49 (2016) 1182–1190
95. K.-H. Ernst  
Chirality at surfaces, in Surface and Interface Science, K. Wandelt (Ed.)  
Vol. 6: Solid-Gas Interfaces II, Wiley & Sons, Weinheim, 2016 Chapter 42, pg. 695–748
94. Q. S. Stöckl, Y.-C. Hsieh, A. Mairena, Y.-T. Wu,\* K.-H. Ernst\*  
Aggregation of C<sub>70</sub>-fragment buckybowls on surfaces:  $\pi$ -H and  $\pi$ - $\pi$  bonding in bowl up-side-down ensembles  
*J. Am. Chem. Soc.* 138 (2016) 6111–6114
93. D. Kong, J. Zhu, K.-H. Ernst\*  
Low-temperature dissociation of CO<sub>2</sub> on a Ni/CeO<sub>2</sub>(111)/Ru(0001) model catalyst  
*J. Phys. Chem. C* 120 (2016) 5980–5987
92. W. Xiao, K.-H. Ernst, K. Palotas, Y. Zhang, E. Bruyer, L. Peng, T. Greber, W. A. Hofer, L. T. Scott, R. Fasel\*  
Microscopic origin of chiral shape induction in achiral crystals  
*Nature Chemistry* 8 (2016) 326–330
90. M. Parschau, K.-H. Ernst\*  
Disappearing enantiomorphs: single handedness in racemate crystals  
*Angew. Chem. Int. Ed.* 54 (2015) 14422–14426; *Angew. Chem.* 127 (2015) 14630–14634

89. J. Seibel, M. Parschau, K.-H. Ernst\*  
From homochiral clusters to racemate crystals: Viable nuclei in 2D chiral crystallization  
*J. Am. Chem. Soc.* 137 (2015) 7970–7973
88. K.-H. Ernst,\* S. Baumann, C. P. Lutz, J. Seibel, L. Zoppi, A. J. Heinrich  
Pasteur's experiment performed at the nanoscale: manual separation of chiral molecules – one by one  
*Nano Letters* 15 (2015) 5388–5392
87. J. Seibel, L. Zoppi, K.-H. Ernst\*  
2D conglomerate crystallization of heptahelicene  
*Chem. Comm.* 50 (2014) 8751–8753
86. J. Seibel, M. Parschau, K.-H. Ernst\*  
Two-dimensional crystallization of enantiopure and racemic heptahelicene  
*J. Phys. Chem. C* 118 (2014) 29135–29141
85. K. Yang, L. Liu, L. Zhang, W. Xiao, X. Fei, H. Chen, S. Du, K.-H. Ernst,\* H.-J. Gao\*  
Reversible achiral-to-chiral switching of single Mn-phthalocyanine molecules by thermal hydrogenation and inelastic electron tunneling dehydrogenation  
*ACS Nano* 8 (2014) 2246–2251
84. C. Karageorgaki, D. Passerone, K.-H. Ernst\*  
Chiral reconstruction of Cu(110) after adsorption of fumaric acid  
*Surf. Science* 629 (2014) 75–80
83. K.-H. Ernst,  
Stereochemistry of 2D molecular crystallization  
*CHIMIA* 68 (2014) 49–53
82. Q. Stöckl, D. Bandera, C. S. Kaplan, K.-H. Ernst\*, J. S. Siegel\*  
Gear-meshed tiling of surfaces with molecular pentagonal stars  
*J. Am. Chem. Soc.* 136 (2014) 606–609
81. C. Karageorgaki, K.-H. Ernst\*  
A metal surface with chiral memory  
*Chem. Comm.* 50 (2014) 1814–1816
80. T. Bauert, L. Zoppi, G. Koller, J. S. Siegel, K. Baldrige,\* K.-H. Ernst\*  
Quadruple anionic buckybowls by solid-state chemistry of corannulene and cesium  
*J. Am. Chem. Soc.* 135 (2013) 12857–12860 (highlighted in *Nature Chemistry*, Oct. 2013)
79. J. Seibel, O. Allemann, J. S. Siegel, K.-H. Ernst  
Chiral conflict among different helicenes suppresses formation of one enantiomorph in 2D crystallization  
*J. Am. Chem. Soc.* 135 (2013) 7434–7437  
see also the correction of Acknowledgements: *J. Am. Chem. Soc.* 141 (2019) 6108–6108
78. K.-H. Ernst  
Molecular chirality in surface science  
*Surf. Science* 613 (2013) 1–5
77. L. Zoppi, T. Bauert, J. S. Siegel, K. K. Baldrige, K.-H. Ernst\*  
Pentagonal tiling with buckybowls: Pentamethylcorannulene on Cu(111)  
*Phys. Chem. Chem. Phys.* 14 (2012) 13365–13369
76. K.-H. Ernst,  
Molecular chirality at surfaces,  
*Phys. Stat. Sol. B* 249 (2012) 2057–2088
75. T. Kudernac, N. Ruangsupapichat, M. Parschau, B. Maciá, N. Katsonis, S. R. Harutyunyan,\*  
K.-H. Ernst,\* B. L. Feringa\*  
Electrically driven directional motion of a four-wheeled molecule on a metal surface  
*Nature* 479 (2011) 208–211; *News & Views by Paul Weiss: Nature* 479 (2011) 187

74. K.-H. Ernst,\* F. R. W. P. Wild, O. Blacque, H. Berke\*  
Alfred Werner's coordination chemistry: New insights from old samples  
*Angew. Chem. Int. Ed.* 50 (2011) 10780–10787; Alfred Werners Koordinations Chemie: neue Erkenntnisse aus alten Proben, *Angew. Chem.* 123 (2011) 10970–10977
73. T. Bauert, L. Zoppi, G. Koller, A. Garcia, K. K. Baldrige, K.-H. Ernst\*  
Large interface dipole moments without charge transfer: buckybowl on metal surfaces  
*J. Phys. Chem. Lett.* 2 (2011) 2805–2809
72. T. Bauert, K. K. Baldrige,\* J. S. Siegel,\* K.-H. Ernst\*  
Surface-assisted bowl-in-bowl stacking of nonplanar aromatic hydrocarbons  
*Chem. Comm.* 47 (2011) 7995–7997
71. M. Parschau, K.-H. Rieder, H. J. Hug, K.-H. Ernst\*  
Single-molecule chemistry and analysis: mode-specific dehydrogenation of adsorbed propene by inelastic electron tunneling  
*J. Am. Chem. Soc.* 133 (2011) 5689–5691
70. C. Roth, K.-H. Ernst\*  
Surface explosion decomposition chemistry of malic acid on Cu(110)  
*Top. Catal.* 54 (2011) 1378–1383
69. K.-H. Ernst,\* H. Berke\*  
Optical activity and Alfred Werner's coordination theory  
*Chirality* 23 (2011) 187–189
68. C. Roth, M. Parschau, K.-H. Ernst\*  
Chiral reconstruction of a metal surface by adsorption of racemic malic acid  
*ChemPhysChem* 12 (2011) 1572–1577
67. C. Roth, D. Passerone, L. Merz, M. Parschau, K.-H. Ernst\*  
Adsorption and two-dimensional self-assembly of malic acid on Cu(110)  
*J. Phys. Chem. C* 115 (2011) 1240–1247
66. C. Roth, D. Passerone, K.-H. Ernst\*  
Pasteur's quasiracemates in 2D: chiral conflict between structurally different enantiomers induces single-handed enantiomorphism  
*Chem. Comm.* 46 (2010) 8645–8647
65. K.-H. Ernst  
Intermediate structures in 2D molecular self-assembly  
*Front. Phys. China* 5 (2010) 340–346
64. M. Parschau, H. J. Hug, K.-H. Rieder, K.-H. Ernst\*  
Hopping, turning and flipping of single molecules during lateral manipulation with a scanning tunneling microscope  
*Surf. Interface Anal.* 42 (2010) 1629–1633
63. L. Merz, K.-H. Ernst\*  
Unification of the matrix notation in molecular surface science  
*Surface Sci.* 604 (2010) 1049–1054
62. N. Jiang, Y. Wang, Q. Liu, Y. Zhang, K.-H. Ernst,\* H.-J. Gao\*  
Polymorphism and chiral expression in 2D subphthalocyanine crystals  
*Phys. Chem. Chem. Phys.* 12 (2010) 1318–1322
61. H. Cun, Y. Wang, B. Yang, S. Du, Y. Wang, K.-H. Ernst,\* H.-J. Gao\*  
Homochiral recognition among organic molecules on copper(110)  
*Langmuir* 26 (2010) 3402–3406
60. K.-H. Ernst  
Amplification of chirality at solid surfaces  
*Orig. Life Evol. Biosphere* 40 (2010) 41–50

59. B. Yang, Y. Wang, H. Cun, S. Du, M. Xu, Y. Wang, K.-H. Ernst,\* H.-J. Gao\*  
Direct observation of enantiospecific substitution in chiral molecular monolayers  
*J. Am. Chem. Soc.* 132 (2010) 10440–10444
58. M. Parschau, U. Ellerbeck, K.-H. Ernst\*  
Chirality transfer by epitaxial mismatch in multilayered homochiral molecular films  
*Colloids and Surfaces A: Physicochem. Eng. Aspects* 354 (2010) 240–245
57. L. Merz, T. Bauert, M. Parschau, G. Koller, J. S. Siegel, K.-H. Ernst\*  
Polymorph selection in 2D crystals by phase transition blocking  
*Chem. Comm.* (2009) 5871–5873
56. L. Merz, M. Parschau, J. S. Siegel,\* K.-H. Ernst\*  
Condensation of fivefold-symmetric molecules in two dimensions  
*CHIMIA* 63 (2009) 214–216
55. T. Bauert, L. Merz, D. Bandera, M. Parschau, J. S. Siegel,\* K.-H. Ernst\*  
Building 2D crystals from fivefold-symmetric molecules  
*J. Am. Chem. Soc.* 131 (2009) 3460–3461
54. M. Parschau, D. Passerone, K.-H. Rieder, H. J. Hug, K.-H. Ernst\*  
Switching the chirality of single adsorbates, *Angew. Chem. Int. Ed.* 48 (2009) 4065–4069;  
*Umwandlung der absoluten Konfiguration einzelner Adsorbatkomplexe,*  
*Angew. Chem.* 121 (2009) 4125–4129
53. L. Merz, M. Parschau, L. Zoppi, K. K. Baldrige, J. S. Siegel, K.-H. Ernst\*  
Reversible phase transitions in a buckybowl monolayer  
*Angew. Chem. Int. Ed.* 48 (2009) 1966–1969; *Reversible Phasenübergänge in Buckybowl*  
*Monoschichten,* *Angew. Chem.* 121 (2009) 2000–2003
52. K.-H. Ernst  
Aspects of molecular chirality at metal surfaces  
*Zeitschrift für Physikalische Chemie* 223 (2009) 37–51
51. K.-H. Ernst  
Expression and amplification of chirality in two-dimensional molecular crystals  
*CHIMIA* 62 (2008) 471–475
50. M. Parschau, R. Fasel, K.-H. Ernst\*  
Coverage and enantiomeric excess dependent enantiomorphism in two-dimensional molecular  
crystals  
*Cryst. Growth Des.* 8 (2008) 1890–1896
49. K.-H. Ernst  
Amplification in two-dimensional molecular lattices  
*Curr. Opin. Coll. Interf. Sci.* 13 (2008) 54–59
48. M. Parschau, R. Fasel\*, K.-H. Ernst\*, O. Gröning, L. Brandenberger, R. Schillinger, T. Greber, A.  
Seitsonen, Y.-T. Wu, J. S. Siegel  
Buckybowls on metal surfaces: Symmetry mismatch and enantiomorphism of corannulene on  
Cu(110), *Angew. Chem. Int. Ed.* 46 (2007) 8258–8261;  
*Korbformige Kohlenwasserstoffe auf Metalloberflächen: Symmetrieunverträglichkeit und*  
*Enantiomorphie von Corannulen auf Cu(110),* *Angew. Chem.* 119 (2007) 8406–8409
47. B. Behzadi, D. Ferri, A. Baiker, K.-H. Ernst\*  
Adsorption mode of cinchonidine on Au(111)  
*Appl. Surf. Sci.* 253 (2007) 3480–3484
46. D. Ferri, B. Behzadi, P. Kappenberger, R. Hauert, K.-H. Ernst, A. Baiker\*  
Probing the interface in vapor-deposited bimetallic Pt–Au and Pd–Au films by CO adsorption from  
the liquid phase  
*Langmuir* 23 (2007) 1203–1208

45. B. Behzadi, A. Vargas, D. Ferri, K.-H. Ernst, A. Baiker\*  
Cinchonidine adsorption on gold and gold-containing bimetallic platinum metal surfaces: An attenuated total reflection infrared and density functional theory study  
*J. Phys. Chem. B* 110 (2006) 17082–17089
44. M. Parschau, B. Behzadi, S. Romer, K.-H. Ernst\*  
Stereoisomeric influence on two-dimensional lattice structure: Achiral meso-tartaric acid versus chiral tartaric acid  
*Surf. Interface Anal.* 38 (2006) 1607–1610
43. K.-H. Ernst  
Supramolecular surface chirality  
*Top. Curr. Chem.* 265 (2006) 209–252; Vol.: “Supramolecular Chirality”,  
D. Reinhoudt, M. Crego Calama (Eds.), Springer, Heidelberg
42. R. Fasel, M. Parschau, K.-H. Ernst\*  
Amplification of chirality in two-dimensional enantiomorphous lattices  
*Nature* 439 (2006) 449–452
41. S. Ramachandran, K.-H. Ernst, G. Bachand, V. Vogel, H. Hess\*  
Selective loading of kinesin-powered molecular shuttles and its application to biosensing: streptavidin/biotin assembly and protein cargo  
*Small* 2 (2006) 330–334
40. M. Parschau, T. Kampen, K.-H. Ernst\*  
Homochirality in monolayers of achiral meso-tartaric acid  
*Chem. Phys. Lett.* 407 (2005) 433–437
39. S. Romer, B. Behzadi, R. Fasel, K.-H. Ernst\*  
Homochiral conglomerates and racemic crystals in two dimensions: tartaric acid on Cu(110)  
*Chem. Eur. J.* 11 (2005) 4149–4154
38. H. Hess,\* J. Clemmens, R. Doot, C. Brunner, S. Luna, K.-H. Ernst, V. Vogel  
Molecular self-assembly of “nanowires” and “nanospools” using active transport  
*Nano Letters* 5 (2005) 629–633
37. M. Parschau, S. Romer, K.-H. Ernst\*  
Induction of homochirality in achiral enantiomorphous monolayers  
*J. Am. Chem. Soc.* 126 (2004) 15398–15399
36. C. Brunner, K.-H. Ernst, H. Hess,\* V. Vogel  
Lifetime of biomolecules in polymer-based hybrid nanodevices  
*Nanotechnology* 15 (2004) S540–S548
35. B. Behzadi, S. Romer, R. Fasel, K.-H. Ernst\*  
Chiral recognition in surface explosion  
*J. Am. Chem. Soc.* 126 (2004) 9176–9177
34. R. Fasel, J. Wider, C. Quitmann, K.-H. Ernst,\* T. Greber  
Determination of the absolute chirality of adsorbed molecules  
*Angew. Chem. Int. Ed.* 43 (2004) 2853–2856;  
*Bestimmung der absoluten Konfiguration adsorbierter Moleküle*  
*Angew. Chem.* 116 (2004) 2913.
33. K.-H. Ernst,\* M. Parschau, R. Fasel  
Differences in two-dimensional crystal structures: racemic and enantiopure heptahelicene on Cu(111)  
*e-J. Surf. Sci. & Nanotech.* 2 (2004) 136–140
32. K.-H. Ernst,\* B. Oral  
On the chemistry at the Si,Ti-doped a-C:H/TiC interface  
*Thin Solid Films* 446 (2004) 72–77



31. T. Bürgi, A. Urakawa, B. Behzadi, K.-H. Ernst, A. Baiker  
The absolute configuration of heptahelicene: a VCD spectroscopy study  
*New Journal of Chemistry* 28 (2004) 332–334
30. R. Fasel, M. Parschau, K.-H. Ernst\*  
Chirality transfer from single molecules into self-assembled monolayers  
*Angew. Chem. Int. Ed.* 42 (2003) 5178–5181;  
Chirality transfer from single molecules into self-assembled monolayers  
*Angewandte Chemie* 115 (2003) 5336,  
reviewed as: Organic films with a twist, M. Ward, *Nature* 426 (2003) 615, News & Views
29. K.-H. Ernst  
Self-organization of chiral molecules at surfaces  
Book chapter in *Recent Research Developments in Chemistry* 1, S. G. Pandalai (Ed.)  
Research Signpost, Kerala, India, 2003, pp 1-13.
28. K.-H. Ernst,\* Y. Kuster, R. Fasel, C. F. McFadden, U. Ellerbeck  
Adsorption of helical aromatic molecules: heptahelicene on Ni(111)  
*Surf. Science* 530 (2003) 195–202
27. M. Belkin, T. Kulakov, K.-H. Ernst, S. H. Han, Y.-R. Shen  
Resonant sum-frequency generation in chiral liquids  
*Optical Materials* 21 (2002) 1–5
26. K.-H. Ernst,\* M. Neuber, M. Grunze, U. Ellerbeck  
A NEXAFS study of chiral P-heptahelicene adsorbed on Ni(100)  
*J. Am. Chem. Soc.* 123 (2001) 493–495
25. K.-H. Ernst,\* Y. Kuster, R. Fasel, M. Müller, U. Ellerbeck  
Two-dimensional separation of heptahelicene enantiomers on Cu(111)  
*Chirality* 13 (2001) 675–678
24. R. Fasel, A. Cossy, K.-H. Ernst, F. Baumberger, T. Greber, J. Osterwalder  
Orientation of chiral heptahelicene C<sub>30</sub>H<sub>18</sub> on copper surfaces: a photoelectron diffraction study  
*J. Chem. Phys.* 115 (2001) 1020–1027
23. M. Belkin, T. Kulakov, K.-H. Ernst, L. Yan, Y.-R. Shen\*  
Sum-frequency vibrational spectroscopy on chiral liquids: a novel technique to probe molecular  
chirality  
*Phys. Rev. Lett.* 85 (2000) 4474–4477
22. K.-H. Ernst,\* D. Schlatterbeck, K. Christmann  
Adsorption of carbon dioxide on Cu(110) and on hydrogen and oxygen covered Cu(110) surfaces  
*Phys. Chem. Chem. Phys.* 1 (1999) 4105–4112
21. N. R. Urban, K.-H. Ernst, S. Bernasconi  
Addition of sulphur to organic matter during early diagenesis of lake sediments  
*Geochimica et Cosmochimica Acta* 63 (1999) 837–853
20. K.-H. Ernst,\* M. Böhringer, C.F. McFadden, P. Hug, U. Müller, U. Ellerbeck  
Nanostructured chiral surfaces  
*Nanotechnology* 10 (1999) 355–361
19. E.-C. Plappert, K.-H. Dahmen, R. Hauert, K.-H. Ernst  
Deposition of amorphous titanium oxide films using alkoxy(pyrazolylborate)titanium(IV)  
compounds  
*Adv. Mater.* 11 (1999) 79–85, (*Chemical Vapor Deposition* 5 (1999) 79–85)
18. S.-W. Ha, R. Hauert, K.-H. Ernst, E. Wintermantel  
Surface analysis of chemically-etched and plasma treated polyetheretherketone (PEEK) for  
biomedical applications  
*Surface and Coatings Technology*, 96 (1997) 293–299

17. B. Oral, K.-H. Ernst, C. J. Schmutz  
Adhesion and structural changes of multi-layered and multi-doped a-C:H films during annealing  
*Diamond and Related Materials* 5 (1996) 932–937
16. B. Oral, R. Hauert, U. Müller, K.-H. Ernst  
Structural changes in doped a-C:H films during annealing  
*Diamond and Related Materials* 4 (1995) 482–487
15. M. Ece, B. Oral, J. Patscheider, K.-H. Ernst  
Effect of organic precursors on diamond nucleation on silicon  
*Diamond and Related Materials* 4 (1995) 720–724
14. K.-H. Ernst,\* E. Schwarz, K. Christmann  
The interaction of hydrogen with a cobalt( $10\bar{1}0$ ) surface  
*J. Chem. Phys.* 101 (1994) 5388–5401
13. K.-H. Ernst,\* J. Patscheider, R. Hauert, M. Tobler  
XPS study of the a-C:H/Al<sub>2</sub>O<sub>3</sub> interface  
*Surf. Interface Anal.* 21 (1994) 32–37
12. K.-H. Ernst,\* D. Grman, R. Hauert, E. Holländer  
Fluorine-induced corrosion of aluminium microchip bond pads: an XPS and AES analysis  
*Surf. Interface Anal.* 21 (1994) 691–696
11. D. Grman, K.-H. Ernst, R. Hauert, E. Holländer  
Investigating fluorine contamination of microchip bond pads caused by wafer storage  
*Microcontamination* 12 (1994) 57 & 109 (cont.)
10. K.-H. Ernst, A. Ludvikson, R. Zhang, J. Yoshira, C.T. Campbell  
Growth model for metal films on oxide surfaces: Cu on ZnO(0001)-O  
*Phys. Rev. B.* 47 (1993) 13782–13796
9. A. Ludvikson, K.-H. Ernst, R. Zhang, C.T. Campbell  
The chemisorption of CO on Cu films on ZnO(0001)-O  
*J. Catal.* 141 (1993) 380–388
8. K.-H. Ernst, C. T. Campbell, G. Moretti  
Kinetics of the reverse water-gas shift reaction over Cu(110)  
*J. Catal.* 134 (1992) 66–74
7. C. T. Campbell, K.-H. Ernst  
The forward and reverse water-gas shift reactions on model copper catalysts: kinetics and elementary steps, D. J. Dwyer, F. M. Hoffmann (ed.), *Surface Science of Catalysis: In Situ Probes and Reaction Kinetics*, ACS Symposium Series 482, Washington, DC 1992, p. 130
6. K.-H. Ernst, M. E. Domagala, C. T. Campbell, G. Moretti  
The titration of oxygen adatoms by hydrogen from the Cs-promoted Cu(110) surface  
*Surf. Science* 259 (1991) 18–25
5. K.-H. Ernst, C. T. Campbell  
A reversal in dipole moment for adsorbed hydrocarbons on Pt(111) due to coadsorbed alkali  
*Surf. Science Lett.* 259 (1991) L736–L738
4. H. Over, G. Kleinle, G. Ertl, W. Moritz, K.-H. Ernst, H. Wohlgemuth, K. Christmann, E. Schwarz  
A LEED structural analysis of the Co( $10\bar{1}0$ ) surface  
*Surf. Science Lett.* 254 (1991) L469–L474
3. E. Schwarz, K.-H. Ernst, C. Gonser-Buntrock, M. Neuber, K. Christmann  
Ordered oxygen phases on a Co( $10\bar{1}0$ ) surface  
*Vacuum* 41 (1990) 180–184
2. PhD-thesis: Die geometrischen und elektronischen Strukturen der Adsorbatphasen von Wasserstoff auf der Kobalt( $10\bar{1}0$ )-Oberfläche, Freie Universität Berlin, 1990  
Referees: 1) Prof. Dr. K. Christmann, 2) Prof. Dr. Gerhard Ertl (NL in Chemistry of 2007)

1. K.-H. Ernst, K. Christmann  
The interaction of glycine with a platinum(111) surface  
*Surf. Science* 224 (1989) 277–310

**B) Perspectives, News & Views (5)**

151. K.-H. Ernst  
Small machines with great potential: The Chemistry Nobel Prize 2016  
*SPG Mitteilungen* 51 (2017) 18–19
150. K.-H. Ernst  
Handedness in flatland  
*Nature Chemistry* 9 (2017) 195–196
149. K.-H. Ernst  
Charged-molecule physics  
*ACS Nano* 8 (2014) 5375–5379
148. K.-H. Ernst  
A turn in the right direction  
*Nature Nanotechnology* 8 (2013) 7–8
147. K.-H. Ernst  
Chiralität in zwei Dimensionen  
*Nachrichten aus der Chemie* 5 (2006) 504–509 (invited review article)

**C) Conference Proceedings (17)**

152. G. Srivastava, M. Parschau, L. Zoppi, K.-H. Ernst,\* P. Stacko, B. L. Feringa  
Driving molecular machines with electrons on surfaces: walkers and nanocars.  
21<sup>st</sup> Symposium on Atomic, Cluster and Surface Physics 2018, Innsbruck University Press 2018
153. K.-H. Ernst, J. Li, A. Mairena, C. Wäckerlin, K. Martin, N. Avarvari  
Helical molecules at surfaces: selective chemistry and self-assembly  
Atomic Level Characterization Conference (ALC '17), Kauai, Hawaii, USA,  
JSPS 141 Activity report (2017) pp. 514-516.
154. Q. Stöckl, J. Seibel, A. Mairena, M. Parschau, K.-H. Ernst, et al.  
Modifications of surfaces with non-planar hydrocarbons  
XX<sup>th</sup> Symposium on Atomic, Cluster and Surface Physics 2016, J. Stohner, C. Yerezian (Eds.),  
pg. 56-59, Innsbruck University Press 2016, ISBN 978-903122-04-8
155. K.-H. Ernst, Chiral molecular motors driven by electrons, Atomic Level Characterization (ALC '15)  
Conference, Matsue, JP, JSPS 141 Activity report (2015)
156. K.-H. Ernst, Analyzing chiral recognition at surfaces. Atomic Level Characterization (ALC '13)  
Conference, Hawaii, 2013, HI, JSPS 141 Activity report (2013) 2AA04/1-4.
157. M. Parschau, D. Passerone, H. J. Hug, K.-H. Rieder, K.-H. Ernst,  
Hopping, flipping, turning: inelastic electron tunneling action spectroscopy with single molecules,  
Atomic Level Characterization – ALC '09, Maui 2009, HI,  
JSPS 141 Activity report (2009) p 28-30
158. K.-H. Ernst,\* R. Fasel, Y. Kuster  
Supramolecular chiral films,  
in Complex Mediums III: Beyond Linear Isotropic Dielectrics,  
A. Lakhtakia, G. Dewar, M. W. McCall (eds.) *Proc. SPIE* 4806 (2002) 248
159. S.-W. Ha, R. Hauert, K.-H. Ernst, E. Wintermantel,  
XPS analysis of O<sub>2</sub>-plasma treated polyetheretherketone (PEEK), American Chemical Society  
Polymer Preprints, Division of Polymer Chemistry 38 (1), 1997, pp. 1085-1086
160. M. A. Belkin, T. A. Kulakov, L. Yan, K.-H. Ernst, Y.-R. Shen,  
Sum-frequency vibrational spectroscopy on molecular chirality  
*IEEE Nonlinear Optics: Materials, Fundamentals and Applications* 2000, pp. 21

161. M. Parschau, R. Fasel, K.-H. Ernst  
Amplification of chirality: sergeant and soldiers at surfaces  
in *Atomic and Surface Physics and Related Topics*, **2008**, p. 118;  
Eds.: R. Beck, M. Drabbels, T. Rizzo, Innsbruck University Press, ISBN 978-3-902571-31-1
162. K.-H. Ernst,\* C. F. McFadden, N. D. Spencer, M. Müller, U. Müller, U. Ellerbeck  
Nanostructured chiral surfaces; in *Bianisotropics '97, International Conference and Workshop on Electromagnetics of Complex Media Glasgow (UK), June 5-7, 1997*
163. K.-H. Ernst,\* M. Böhringer, C.F. McFadden, P. Hug, U. Müller, U. Ellerbeck  
*Nanostructured chiral surfaces*; Proceedings of the Sixth Foresight Conference on Molecular Nanotechnology, 11.11. - 15.11. **1998**, Santa Clara, Californien, USA,  
<http://www.foresight.org/Conferences/MNT6/Papers/Ernst/index.html>
164. K.-H. Ernst,\* A. Cossy-Gantner, J. Paul, M. Neuber, O. Schmidt, U. Ellerbeck, M. Müller, P. Mattrel, G. Schönhense, M. Grunze  
X-ray photoabsorption and photoemission electron microscopy studies on chiral molecules with circularly polarized light; Proceedings of the Swiss Light Source Workshop, PSI 1.8. - 5.8. **1998**, Ascona, Switzerland
165. K.-H. Ernst,\* R. Hauert  
*Problem solving for industry: examples from applied surface analysis*  
3rd Eurolab Symposium Proceedings: Testing and Analysis for Industrial Competitiveness and Sustainable Development 1 (**1996**) 552
166. R. Hauert,\* J. Patscheider, K.-H. Ernst, M. Tobler  
*Interface properties of a-C:H on Al and Al<sub>2</sub>O<sub>3</sub>*  
Proceedings of the Third International Symposium on Diamond Materials, The Electrochemical Soc., Vol. 93-17, **1993**, Pennington , NJ
167. E. Holländer, D. Grman, R. Hauert, K.-H. Ernst  
Flourine contamination of aluminium bond pads in microenvironment caused by wafer storage, *Proc. of the 12th ISCC, Yokohama, 1994*
168. M. A. Belkin, T. A. Kulakov, L. Yan, K.-H. Ernst, Y.-R. Shen  
Sum-frequency vibrational spectroscopy on molecular chirality  
*Nonlinear Optics: Materials, Fundamentals, and Applications, Technical Digest. Postconference Edition. TOPS Vol.46 (2000) 21*

**D) Book reviews, editorials, and other (10)**

169. R. Fasel, M. Parschau, K.-H. Ernst  
Exploring the mechanism of molecular chirality transfer via STM  
*PICO 8 2004 4-5 (Omicron Nanotechnology Newsletter)*
170. K.-H. Ernst  
Scanning probe microscopy beyond imaging  
*Angew. Chem. Int Ed. 46 (2007) 5469-5470*, book review
171. K.-H. Ernst  
Scanning probe microscopy beyond imaging  
*Angewandte Chemie 119 (2007) 5565*, book review, German version
172. K.-H. Ernst  
Expression and amplification of molecular chirality at metal surfaces,  
Habilitationsschrift 2007, Universität Zürich  
(*reviewed by seven international referees*)
173. K.-H. Ernst  
On chirality and the universal asymmetry-reflections on image and mirror image  
*Chirality 20 (2008) 812*, book review

174. K.-H. Ernst  
Chirality at the Nanoscale  
*Chirality* 22 (2010) 379, book review
175. K.-H. Ernst  
30 Years Scanning Tunnelling Microscopy  
*CHIMIA* 66 (2012) 6 (Editorial)
176. L. Bartels, K.-H. Ernst  
From reciprocal space to real space in surface science  
*J. Phys.: Condens. Matter* 24 (2012) 350201 (Editorial)
177. L. Bartels, K.-H. Ernst, H.-J. Gao, P. A. Thiel  
Preface: Special Topic on Supramolecular Self-Assembly at Surfaces,  
*J. Chem. Phys.* 142 (2015) 101501 (Editorial)
178. L. Bartels, S.-W. Hla, J. Manson, A. Baratoff, L. Grill, K.-H. Ernst  
Karl-Heinz Rieder  
*Physics Today* 70 (2017) 63–63
179. A. Baratoff, K.-H. Ernst, L. Grill, R. Koch  
Nachruf (Obituary) auf Karl-Heinz Rieder  
*Physik Journal* 16 (2017) Nachrufe 1
180. K.-H. Ernst  
Nachruf (Obituary) auf Karl-Heinz Rieder  
*Empa Quarterly* 3-2017
181. K.-H. Ernst  
Conference report Chirality@The Nanoscale  
*CHIMIA* 73 (2019) 1042–1043
182. K.-H. Ernst  
Conference report XXII. Symposium on Atomic, Cluster and Surface Physics (SASP)  
*CHIMIA* 74 (2020) 509–511
183. K.-H. Ernst  
Cover profile article (in connection w/ paper # 126)  
*ChemPhysChem* 22 (2021) 229–230
184. K.-H. Ernst  
Conference report 40 Years of Surface Science and Nanotechnology - 40Nano  
*CHIMIA* 78 (2024) 169–171