

# 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	Electrically driven directional motion of a four-wheeled molecule on a metal surface. <i>Nature</i> , 2011, 479, 208-211.	13.7	669
2	Amplification of chirality in two-dimensional enantiomorphous lattices. <i>Nature</i> , 2006, 439, 449-452.	13.7	376
3	Molecular chirality at surfaces. <i>Physica Status Solidi (B): Basic Research</i> , 2012, 249, 2057-2088.	0.7	210
4	Supramolecular Surface Chirality. , 0, , 209-252.		205
5	Chirality Transfer from Single Molecules into Self-Assembled Monolayers. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 5178-5181.	7.2	192
6	Sum-Frequency Vibrational Spectroscopy on Chiral Liquids: A Novel Technique to Probe Molecular Chirality. <i>Physical Review Letters</i> , 2000, 85, 4474-4477.	2.9	190
7	Growth model for metal films on oxide surfaces: Cu on ZnO(0001)-O. <i>Physical Review B</i> , 1993, 47, 13782-13796.	1.1	187
8	Molecular Self-Assembly of "Nanowires" and "Nanospools" Using Active Transport. <i>Nano Letters</i> , 2005, 5, 629-633.	4.5	165
9	Induction of Homochirality in Achiral Enantiomorphous Monolayers. <i>Journal of the American Chemical Society</i> , 2004, 126, 15398-15399.	6.6	160
10	Chirality-Dependent Electron Spin Filtering by Molecular Monolayers of Helicenes. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2025-2030.	2.1	154
11	Addition of sulfur to organic matter during early diagenesis of lake sediments. <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 837-853.	1.6	139
12	Selective Loading of Kinesin-Powered Molecular Shuttles with Protein Cargo and its Application to Biosensing. <i>Small</i> , 2006, 2, 330-334.	5.2	129
13	Surface analysis of chemically-etched and plasma-treated polyetheretherketone (PEEK) for biomedical applications. <i>Surface and Coatings Technology</i> , 1997, 96, 293-299.	2.2	122
14	Kinetics of the reverse water-gas shift reaction over Cu(110). <i>Journal of Catalysis</i> , 1992, 134, 66-74.	3.1	99
15	Switching the Chirality of Single Adsorbate Complexes. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 4065-4068.	7.2	96
16	Stereochemical Recognition of Helicenes on Metal Surfaces. <i>Accounts of Chemical Research</i> , 2016, 49, 1182-1190.	7.6	87
17	Buckybowls on Metal Surfaces: Symmetry Mismatch and Enantiomorphism of Corannulene on Cu(110). <i>Angewandte Chemie - International Edition</i> , 2007, 46, 8258-8261.	7.2	81
18	Orientation of chiral heptahelicene C <sub>30</sub> H <sub>18</sub> on copper surfaces: An x-ray photoelectron diffraction study. <i>Journal of Chemical Physics</i> , 2001, 115, 1020-1027.	1.2	78

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19	Building 2D Crystals from 5-Fold-Symmetric Molecules. Journal of the American Chemical Society, 2009, 131, 3460-3461.	6.6	77
20	Lifetime of biomolecules in polymer-based hybrid nanodevices. Nanotechnology, 2004, 15, S540-S548.	1.3	72
21	Homochiral Conglomerates and Racemic Crystals in Two Dimensions: Tartaric Acid on Cu(110). Chemistry - A European Journal, 2005, 11, 4149-4154.	1.7	71
22	Two-dimensional separation of [7]helicene enantiomers on Cu(111). Chirality, 2001, 13, 675-678.	1.3	70
23	Coverage and Enantiomeric Excess Dependent Enantiomorphism in Two-Dimensional Molecular Crystals. Crystal Growth and Design, 2008, 8, 1890-1896.	1.4	70
24	The absolute configuration of heptahelicene: aVCD spectroscopy study. New Journal of Chemistry, 2004, 28, 332-334.	1.4	69
25	Microscopic origin of chiral shape induction in achiral crystals. Nature Chemistry, 2016, 8, 326-330.	6.6	68
26	Homochirality in monolayers of achiral meso tartaric acid. Chemical Physics Letters, 2005, 407, 433-437.	1.2	65
27	Reversible Phase Transitions in a Buckybowl Monolayer. Angewandte Chemie - International Edition, 2009, 48, 1966-1969.	7.2	65
28	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
29	Determination of the Absolute Chirality of Adsorbed Molecules. Angewandte Chemie - International Edition, 2004, 43, 2853-2856.	7.2	61
30	Molecular chirality in surface science. Surface Science, 2013, 613, 1-5.	0.8	60
31	Unification of the matrix notation in molecular surface science. Surface Science, 2010, 604, 1049-1054.	0.8	57
32	The interaction of hydrogen with a cobalt(101̄1,0) surface. Journal of Chemical Physics, 1994, 101, 5388-5401.	1.2	55
33	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
34	Chiral Recognition in Surface Explosion. Journal of the American Chemical Society, 2004, 126, 9176-9177.	6.6	52
35	The interaction of glycine with a platinum (111) surface. Surface Science, 1989, 224, 277-310.	0.8	51
36	The Chemisorption of CO on Cu Films on ZnO(0001)-O. Journal of Catalysis, 1993, 141, 380-388.	3.1	48

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37	Amplification of chirality in two-dimensional molecular lattices. <i>Current Opinion in Colloid and Interface Science</i> , 2008, 13, 54-59.	3.4	48
38	Chiral Conflict among Different Helicenes Suppresses Formation of One Enantiomorph in 2D Crystallization. <i>Journal of the American Chemical Society</i> , 2013, 135, 7434-7437.	6.6	48
39	Alfred Werner's Coordination Chemistry: New Insights from Old Samples. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 10780-10787.	7.2	46
40	Fluorine-Induced corrosion of aluminium microchip bond pads: An XPS and AES analysis. <i>Surface and Interface Analysis</i> , 1994, 21, 691-696.	0.8	45
41	NEXAFS Study on the Orientation of Chiral P-Heptahelicene on Ni(100). <i>Journal of the American Chemical Society</i> , 2001, 123, 493-495.	6.6	45
42	Large Induced Interface Dipole Moments without Charge Transfer: Buckybowls on Metal Surfaces. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 2805-2809.	2.1	43
43	A LEED structural analysis of the Co(100) surface. <i>Surface Science</i> , 1991, 254, L469-L474.	0.8	41
44	Direct Observation of Enantiospecific Substitution in a Two-Dimensional Chiral Phase Transition. <i>Journal of the American Chemical Society</i> , 2010, 132, 10440-10444.	6.6	40
45	Polymorphism and chiral expression in two-dimensional subphthalocyanine crystals on Au(111). <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 1318-1322.	1.3	40
46	Two-Dimensional Crystallization of Enantiopure and Racemic Heptahelicene on Ag(111) and Au(111). <i>Journal of Physical Chemistry C</i> , 2014, 118, 29135-29141.	1.5	40
47	Amplification of Chirality at Solid Surfaces. <i>Origins of Life and Evolution of Biospheres</i> , 2010, 40, 41-50.	0.8	38
48	Structural changes in doped a-C:H films during annealing. <i>Diamond and Related Materials</i> , 1995, 4, 482-487.	1.8	37
49	Heterochiral to Homochiral Transition in Pentahelicene 2D Crystallization Induced by Second-Layer Nucleation. <i>ACS Nano</i> , 2017, 11, 865-871.	7.3	37
50	2D conglomerate crystallization of heptahelicene. <i>Chemical Communications</i> , 2014, 50, 8751-8753.	2.2	34
51	Pasteur's Experiment Performed at the Nanoscale: Manual Separation of Chiral Molecules, One by One. <i>Nano Letters</i> , 2015, 15, 5388-5392.	4.5	34
52	Nanostructured chiral surfaces. <i>Nanotechnology</i> , 1999, 10, 355-361.	1.3	32
53	Reversible Achiral-to-Chiral Switching of Single Mn-Phthalocyanine Molecules by Thermal Hydrogenation and Inelastic Electron Tunneling Dehydrogenation. <i>ACS Nano</i> , 2014, 8, 2246-2251.	7.3	32
54	Adhesion and structural changes of multi-layered and multi-doped a-C:H films during annealing. <i>Diamond and Related Materials</i> , 1996, 5, 932-937.	1.8	31

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55	Adsorption of helical aromatic molecules: heptahelicene on Ni(). <i>Surface Science</i> , 2003, 530, 195-202.	0.8	31
56	Chiral Autocatalysis and Mirror Symmetry Breaking. <i>Catalysis Letters</i> , 2018, 148, 1610-1621.	1.4	31
57	Spontaneous separation of on-surface synthesized tris-helicenes into two-dimensional homochiral domains. <i>Chemical Communications</i> , 2018, 54, 7948-7951.	2.2	30
58	Surface-assisted bowl-in-bowl stacking of nonplanar aromatic hydrocarbons. <i>Chemical Communications</i> , 2011, 47, 7995.	2.2	28
59	Quadruple Anionic Buckybowls by Solid-State Chemistry of Corannulene and Cesium. <i>Journal of the American Chemical Society</i> , 2013, 135, 12857-12860.	6.6	28
60	Surface-assisted diastereoselective Ullmann coupling of bishelicenes. <i>Chemical Communications</i> , 2016, 52, 12694-12697.	2.2	28
61	Stereoisomeric influence on 2D lattice structure: achiral meso-tartaric acid versus chiral tartaric acid. <i>Surface and Interface Analysis</i> , 2006, 38, 1607-1610.	0.8	27
62	Pasteur's quasiracemates in 2D: chiral conflict between structurally different enantiomers induces single-handed enantiomorphism. <i>Chemical Communications</i> , 2010, 46, 8645.	2.2	27
63	Single-Molecule Chemistry and Analysis: Mode-Specific Dehydrogenation of Adsorbed Propene by Inelastic Electron Tunneling. <i>Journal of the American Chemical Society</i> , 2011, 133, 5689-5691.	6.6	27
64	Disappearing Enantiomorphs: Single Handedness in Racemate Crystals. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14422-14426.	7.2	27
65	Chiral Reconstruction of a Metal Surface by Adsorption of Racemic Malic Acid. <i>ChemPhysChem</i> , 2011, 12, 1572-1577.	1.0	25
66	The fate of bromine after temperature-induced dehydrogenation of on-surface synthesized bisheptahelicene. <i>Chemical Science</i> , 2019, 10, 2998-3004.	3.7	25
67	Ordered oxygen phases on a surface. <i>Vacuum</i> , 1990, 41, 180-184.	1.6	24
68	Two-Dimensional Self-Assembly of Chiral Malic Acid on Cu(110). <i>Journal of Physical Chemistry C</i> , 2011, 115, 1240-1247.	1.5	24
69	Diastereoselective Ullmann Coupling to Bishelicenes by Surface Topochemistry. <i>Journal of the American Chemical Society</i> , 2018, 140, 15186-15189.	6.6	24
70	Gear-Meshed Tiling of Surfaces with Molecular Pentagonal Stars. <i>Journal of the American Chemical Society</i> , 2014, 136, 606-609.	6.6	22
71	Homochiral Recognition among Organic Molecules on Copper(110). <i>Langmuir</i> , 2010, 26, 3402-3406.	1.6	21
72	A metal surface with chiral memory. <i>Chemical Communications</i> , 2014, 50, 1814-1816.	2.2	21

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73	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
74	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
75	Low-Temperature Dissociation of CO <sub>2</sub> on a Ni/CeO <sub>2</sub> (111)/Ru(0001) Model Catalyst. Journal of Physical Chemistry C, 2016, 120, 5980-5987.	1.5	20
76	Identification of On-Surface Reaction Mechanism by Targeted Metalation. Journal of Physical Chemistry C, 2017, 121, 27521-27527.	1.5	20
77	Stereoselective On-Surface Cyclodehydrofluorization of a Tetraphenylporphyrin and Homochiral Self-Assembly. Angewandte Chemie - International Edition, 2020, 59, 17413-17416.	7.2	19
78	Aggregation of C <sub>70</sub> -Fragment Buckybowls on Surfaces: C-H and C-C Bonding in Bowl Up-Side-Down Ensembles. Journal of the American Chemical Society, 2016, 138, 6111-6114.	6.6	18
79	Heterochiral recognition among functionalized heptahelicenes on noble metal surfaces. Chemical Communications, 2019, 55, 10595-10598.	2.2	18
80	Adsorption mode of the chiral modifier cinchonidine on Au(111). Applied Surface Science, 2007, 253, 3480-3484.	3.1	17
81	On the Validity of Calling Wallach's Rule Wallach's Rule. Israel Journal of Chemistry, 2017, 57, 24-30.	1.0	17
82	Pentagonal tiling with buckybowls: pentamethylcorannulene on Cu(111). Physical Chemistry Chemical Physics, 2012, 14, 13365.	1.3	16
83	XPS study of the a-C : H/Al <sub>2</sub> O <sub>3</sub> interface. Surface and Interface Analysis, 1994, 21, 32-37.	0.8	15
84	Polymorph selection in 2D crystals by phase transition blocking. Chemical Communications, 2009, , 5871.	2.2	15
85	A turn in the right direction. Nature Nanotechnology, 2013, 8, 7-8.	15.6	15
86	Ranking the Stability of Transition-Metal Complexes by On-Surface Atom Exchange. Journal of Physical Chemistry Letters, 2017, 8, 6193-6198.	2.1	15
87	On-Surface Hydrogenation of Buckybowls: From Curved Aromatic Molecules to Planar Non-Kekulé Aromatic Hydrocarbons. ACS Nano, 2020, 14, 16735-16742.	7.3	15
88	Cinchonidine Adsorption on Gold and Gold-Containing Bimetallic Platinum Metal Surfaces: An Attenuated Total Reflection Infrared and Density Functional Theory Study. Journal of Physical Chemistry B, 2006, 110, 17082-17089.	1.2	14
89	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
90	Deposition of Amorphous Titanium Oxide Films Using Alkoxy(pyrazolylborate) Titanium (IV) Compounds. Chemical Vapor Deposition, 1999, 5, 79-85.	1.4	13

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91	Diastereoselective self-assembly of bisheptahelicene on Cu(111). <i>Chemical Communications</i> , 2018, 54, 8757-8760.	2.2	13
92	Resonant sum-frequency generation in chiral liquids. <i>Optical Materials</i> , 2003, 21, 1-5.	1.7	12
93	Surface Explosion Chemistry of Malic Acid on Cu(110). <i>Topics in Catalysis</i> , 2011, 54, 1378-1383.	1.3	12
94	Effect of organic precursors on diamond nucleation on silicon. <i>Diamond and Related Materials</i> , 1995, 4, 720-724.	1.8	11
95	Probing the Interface in Vapor-Deposited Bimetallic Pd <sup>+</sup> Au and Pt <sup>+</sup> Au Films by CO Adsorption from the Liquid Phase. <i>Langmuir</i> , 2007, 23, 1203-1208.	1.6	11
96	Stereospecific Autocatalytic Surface Explosion Chemistry of Polycyclic Aromatic Hydrocarbons. <i>Journal of the American Chemical Society</i> , 2018, 140, 7705-7709.	6.6	11
97	A reversal in dipole moment for adsorbed hydrocarbons on Pt(111) due to coadsorbed alkali. <i>Surface Science</i> , 1991, 259, L736-L738.	0.8	10
98	The titration of oxygen adatoms by H <sub>2</sub> from the Cs-promoted Cu(110) surface. <i>Surface Science</i> , 1991, 259, 18-25.	0.8	10
99	Condensation of Fivefold-Symmetric Molecules in Two Dimensions. <i>Chimia</i> , 2009, 63, 214.	0.3	10
100	Optical activity and Alfred Werner's coordination chemistry. <i>Chirality</i> , 2011, 23, 187-189.	1.3	10
101	On the chiroptical properties of racemic crystals. <i>Chirality</i> , 2018, 30, 378-382.	1.3	10
102	Hopping, turning and flipping of single molecules during lateral manipulation with a scanning tunneling microscope. <i>Surface and Interface Analysis</i> , 2010, 42, 1629-1633.	0.8	9
103	Chiral reconstruction of Cu(110) after adsorption of fumaric acid. <i>Surface Science</i> , 2014, 629, 75-80.	0.8	8
104	Stereoselective On-Surface Cyclodehydrofluorization of a Tetraphenylporphyrin and Homochiral Self-Assembly. <i>Angewandte Chemie</i> , 2020, 132, 17566-17569.	1.6	8
105	Transition from Homochiral Clusters to Racemate Monolayers during 2D Crystallization of Trioxa[11]helicene on Ag(100). <i>ChemPhysChem</i> , 2021, 22, 293-297.	1.0	8
106	Unbalanced 2D Chiral Crystallization of Pentahelicene Propellers and Their Planarization into Nanographenes. <i>Chemistry - A European Journal</i> , 2021, 27, 10251-10254.	1.7	8
107	Differences in two-dimensional crystal structures: Racemic and enantiopure heptahelicene on Cu(111). <i>E-Journal of Surface Science and Nanotechnology</i> , 2004, 2, 136-140.	0.1	8
108	Expression and Amplification of Chirality in Two-Dimensional Molecular Crystals. <i>Chimia</i> , 2008, 62, 471.	0.3	7

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109	Erecting buckybowl onto their edge: 2D self-assembly of terphenylcorannulene on the Cu(111) surface. <i>Faraday Discussions</i> , 2017, 204, 429-437.	1.6	7
110	Pauli Repulsion Versus van der Waals: Interaction of Indenocorannulene with a Cu(111) Surface. <i>Journal of Physical Chemistry B</i> , 2018, 122, 871-877.	1.2	7
111	Aspects of Molecular Chirality at Metal Surfaces. <i>Zeitschrift Fur Physikalische Chemie</i> , 2009, 223, 37-51.	1.4	6
112	On-Surface Metalation and 2D Self-Assembly of Pyrphyrin Molecules Into Metal-Coordinated Networks on Cu(111). <i>Helvetica Chimica Acta</i> , 2017, 100, e1600278.	1.0	6
113	On the chemistry at the Si,Ti-doped a-C:H/TiC interface. <i>Thin Solid Films</i> , 2004, 446, 72-77.	0.8	5
114	Single handedness in flatland. <i>Nature Chemistry</i> , 2017, 9, 195-196.	6.6	5
115	Fivefold Symmetry and 2D Crystallization: Self-Assembly of the Buckybowl Pentaindenocorannulene on a Cu(100) Surface. <i>Chemistry - A European Journal</i> , 2019, 25, 11555-11559.	1.7	5
116	Stereospecific on-Surface Cyclodehydrogenation of Bishelicenes: Preservation of Handedness from Helical to Planar Chirality. <i>Chemistry - A European Journal</i> , 2021, 27, 13523-13526.	1.7	5
117	Stereochemistry of 2D Molecular Crystallization. <i>Chimia</i> , 2014, 68, 49.	0.3	4
118	On the Density of Racemic and Homochiral Crystals: Wallach, Liebisch and Sommerfeld in Göttingen. <i>Chimia</i> , 2018, 72, 399.	0.3	4
119	A LEED structural analysis of the Co(100) surface. <i>Surface Science Letters</i> , 1991, 254, L469-L474.	0.1	3
120	Action spectra associated with inelastic two-electron tunneling through a single molecule: Propene on Cu(211). <i>Surface Science</i> , 2018, 678, 206-214.	0.8	3
121	Interaction of Chiral and Achiral Dimethylsuccinic Acid Diastereomers with a Cu(110) Surface. <i>Journal of Physical Chemistry C</i> , 2019, 123, 2329-2335.	1.5	3
122	Autocatalytic Surface Explosion Chemistry of 2D Metal-Organic Frameworks. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13343-13349.	1.5	3
123	Growth Dynamics and Electron Reflectivity in Ultrathin Films of Chiral Heptahelicene on Metal (100) Surfaces Studied by Spin-Polarized Low Energy Electron Microscopy. <i>Physica Status Solidi (B): Basic Research</i> , 2021, 258, 2100263.	0.7	3
124	Supramolecular effects in self-assembled monolayers: general discussion. <i>Faraday Discussions</i> , 2017, 204, 123-158.	1.6	2
125	Supramolecular systems at liquid-solid interfaces: general discussion. <i>Faraday Discussions</i> , 2017, 204, 271-295.	1.6	2
126	Graphene Grown from Flat and Bowl Shaped Polycyclic Aromatic Hydrocarbons on Cu(111). <i>ChemPhysChem</i> , 2019, 20, 2354-2359.	1.0	2



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127	Chiral Surface from Achiral Ingredients: Modification of Cu(110) with Phthalic Acid. Journal of Physical Chemistry C, 2019, 123, 9121-9127.	1.5	2
128	Double layer crystallization of heptahelicene on noble metal surfaces. Chirality, 2020, 32, 975-980.	1.3	2
129	Charged-Molecule Physics. ACS Nano, 2014, 8, 5375-5379.	7.3	1
130	Sum-frequency vibrational spectroscopy on molecular chirality. , 0, , .		0
131	<title>Supramolecular chiral films</title>. , 2002, , .		0
132	Chiralität in zwei Dimensionen. Nachrichten Aus Der Chemie, 2006, 54, 504-509.	0.0	0
133	Intermediate structures in two-dimensional molecular self-assembly. Frontiers of Physics in China, 2010, 5, 340-346.	1.0	0
134	From reciprocal space to real space in surface science. Journal of Physics Condensed Matter, 2012, 24, 350201.	0.7	0
135	Preface: Special Topic on Supramolecular Self-Assembly at Surfaces. Journal of Chemical Physics, 2015, 142, 101501.	1.2	0
136	Probing properties of molecule-based interface systems: general discussion and Concluding Remarks. Faraday Discussions, 2017, 204, 503-530.	1.6	0
137	Preparing macromolecular systems on surfaces: general discussion. Faraday Discussions, 2017, 204, 395-418.	1.6	0
138	XXII. Symposium on Atomic, Cluster and Surface Physics (SASP). Chimia, 2020, 74, 509-511.	0.3	0
139	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
140	Physical Aspects of Ultrathin Chiral Films. , 2018, , 277-283.		0
141	Chirality@The Nanoscale Symposium: Congresso Stefano Franscini (CSF), Monte Verità, Ascona, 13â€“17 October, 2019. Chimia, 2019, 73, 1042.	0.3	0