Friedrich Esch

List of Publications by Year
in descending order

64 papers	3,367 citations	236925 25 h-index	138484 58 g-index
67 all docs	67 docs citations	67 times ranked	5053 citing authors

#	Article	IF	Citations
1	Towards Sizeâ€Controlled Deposition of Palladium Nanoparticles from Polyoxometalate Precursors: An Electrochemical Scanning Tunneling Microscopy Study. ChemElectroChem, 2021, 8, 1280-1288.	3.4	9
2	Cluster Catalysis with Lattice Oxygen: Tracing Oxygen Transport from a Magnetite (001) Support onto Small Pt Clusters. ACS Catalysis, 2021, 11, 9519-9529.	11.2	14
3	The molecular wagon that stays on track. Science, 2020, 370, 912-912.	12.6	0
4	Orderâ€“disorder phase transition of the subsurface cation vacancy reconstruction on Fe3O4(001). Physical Chemistry Chemical Physics, 2020, 22, 8336-8343.	2.8	8
5	Nanoscale patterning at the Si/SiO2/graphene interface by focused He+ beam. Nanotechnology, 2020, 31, 505302.	2.6	2
6	Influence of Local Defects on the Dynamics of Oâ€“H Bond Breaking and Formation on a Magnetite Surface. Journal of Physical Chemistry C, 2019, 123, 19742-19747.	3.1	11
7	The new FAST module: A portable and transparent add-on module for time-resolved investigations with commercial scanning probe microscopes. Ultramicroscopy, 2019, 205, 49-56.	1.9	16
8	A Microscopy Approach to Investigating the Energetics of Small Supported Metal Clusters. Journal of Physical Chemistry C, 2018, 122, 22569-22576.	3.1	8
9	Au(111)-supported Platinum Nanoparticles: Ripening and Activity. MRS Advances, 2017, 2, 439-444.	0.9	1
10	Ethene to Graphene: Surface Catalyzed Chemical Pathways, Intermediates, and Assembly. Journal of Physical Chemistry C, 2017, 121, 9413-9423.	3.1	29
11	Plasmonic support-mediated activation of 1 nm platinum clusters for catalysis. Physical Chemistry Chemical Physics, 2017, 19, 30570-30577.	2.8	14
12	Photoresponse of supramolecular self-assembled networks on grapheneâ€“diamond interfaces. Nature Communications, 2016, 7, 10700.	12.8	40
13	Three-Dimensional Bicomponent Supramolecular Nanoporous Self-Assembly on a Hybrid All-Carbon Atomically Flat and Transparent Platform. Nano Letters, 2014, 14, 4486-4492.	9.1	20
14	Fundamental Insight into the Substrateâ€Dependent Ripening of Monodisperse Clusters. ChemCatChem, 2013, 5, 3330-3341.	3.7	52
15	NH₃â€“NO Coadsorption System on Pt(111). II. Intermolecular Interaction. Journal of Physical Chemistry C, 2013, 117, 21196-21202.	3.1	10
16	NH₃â€“NO Coadsorption System on Pt(111). I. Structure of the Mixed Layer. Journal of Physical Chemistry C, 2013, 117, 21186-21195.	3.1	14
17	Controlling on-surface polymerization by hierarchical and substrate-directed growth. Nature Chemistry, 2012, 4, 215-220.	13.6	483
18	Size-Selected Monodisperse Nanoclusters on Supported Graphene: Bonding, Isomerism, and Mobility. Nano Letters, 2012, 12, 5907-5912.	9.1	76

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19	How to select fast scanning frequencies for high-resolution fast STM measurements with a conventional microscope. Measurement Science and Technology, 2012, 23, 055402.	2.6	5
20	The <i>FAST</i> module: An add-on unit for driving commercial scanning probe microscopes at video rate and beyond. Review of Scientific Instruments, 2011, 82, 053702.	1.3	26
21	Ultrathin magnesia films as support for molecules and metal clusters: Tuning reactivity by thickness and composition. Physica Status Solidi (B): Basic Research, 2010, 247, 1001-1015.	1.5	3
22	AFM tip characterization by Kelvin probe force microscopy. New Journal of Physics, 2010, 12, 093024.	2.9	45
23	Topography and work function measurements of thin MgO(001) films on Ag(001) by nc-AFM and KPFM. Physical Chemistry Chemical Physics, 2010, 12, 3203.	2.8	75
24	Chemical functionalization of atomically flat cantilever surfaces. Microelectronic Engineering, 2009, 86, 1200-1203.	2.4	1
25	Effects of Lattice Expansion on the Reactivity of a One-Dimensional Oxide. Journal of the American Chemical Society, 2009, 131, 3253-3259.	13.7	12
26	Pentacene Nanorails on Au(110). Langmuir, 2008, 24, 767-772.	3.5	48
27	A Surface Core Level Shift Study of Hydrogen-Induced Ordered Structures on Rh(110). Journal of Physical Chemistry C, 2008, 112, 14475-14480.	3.1	9
28	Metalâ^'Organic Coordination Interactions in Feâ^'Terephthalic Acid Networks on Cu(100). Journal of the American Chemical Society, 2008, 130, 2108-2113.	13.7	147
29	Intrinsically aligned chemo-mechanical functionalization of twin cantilever structures. Nanotechnology, 2008, 19, 445502.	2.6	3
30	Initial oxidation of the Rh(110) surface: Ordered adsorption and surface oxide structures. Journal of Chemical Physics, 2006, 125, 094701.	3.0	57
31	K and mixed K+O adlayers on Rh(110). Journal of Chemical Physics, 2006, 124, 014706.	3.0	15
32	Electron Localization Determines Defect Formation on Ceria Substrates. Science, 2005, 309, 752-755.	12.6	1,211
33	Initial Oxidation of a Rh(110) Surface Using Atomic or Molecular Oxygen and Reduction of the Surface Oxide by Hydrogen. Journal of Physical Chemistry B, 2005, 109, 13649-13655.	2.6	48
34	K-Stabilized High-Oxygen-Coverage States on Rh(110):â€‰ A Low-Pressure Pathway to Formation of Surface Oxide. Journal of Physical Chemistry B, 2005, 109, 11980-11985.	2.6	6
35	Water Production Reaction on Rh(110). Journal of the American Chemical Society, 2005, 127, 11454-11459.	13.7	10
36	Two-Step Reaction on a Strained, Nanoscale Segmented Surface. Physical Review Letters, 2004, 93, 126104.	7.8	28

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37	Gas-Phase Transport during the Spreading of MoO3on Al2O3Support Surfaces:Â Photoelectron Spectromicroscopic Studyâ€. Journal of Physical Chemistry B, 2004, 108, 14223-14231.	2.6	9
38	Reactivity and deconstruction of the (1Ã—2)-Rh(110) surface studied by scanning tunneling microscopy. Journal of Chemical Physics, 2002, 116, 7200-7206.	3.0	14
39	ANGLE-SCANNED PHOTOELECTRON DIFFRACTION: FROM CLEAN SURFACES TO COMPLEX ADSORPTION SYSTEMS. Surface Review and Letters, 2002, 09, 741-747.	1.1	3
40	(10Ã—2) strained reconstruction induced by oxygen adsorption on the Rh(110) surface. Journal of Chemical Physics, 2001, 114, 4221-4225.	3.0	32
41	Vibrational fine structure on C1s core-level photoemission: Ni(111)â€“ethyne and Ni(111)â€“2-butyne. Surface Science, 2001, 488, 43-51.	1.9	11
42	Dynamics of the O induced reconstruction of the Rh(110) surface: A scanning tunnelling microscopy study. Journal of Chemical Physics, 2001, 115, 477-481.	3.0	25
43	Spectromicroscopy of catalytic relevant processes with sub-micron resolution. AIP Conference Proceedings, 2000, , .	0.4	0
44	Morphology and magnetic properties of thin films of Rh on highly oriented pyrolitic graphite. Physical Review B, 2000, 63, .	3.2	13
45	Structural determination of molecules adsorbed in different sites by means of chemical shift photoelectron diffraction: c(4Ã—2)-CO on Pt(111). Surface Science, 2000, 459, L467-L474.	1.9	41
46	Elementally Resolved Imaging of Dynamic Surface Processes: Chemical Waves in the SystemRh(110)/NO+H2. Physical Review Letters, 1999, 83, 1882-1885.	7.8	27
47	Nuclear dynamics during the N1sautoionization of physisorbedN2. Physical Review B, 1999, 60, 16143-16150.	3.2	13
48	Atomic nitrogen on steps: A fast x-ray photoelectron spectroscopy study of the NO uptake on Rh(533), Rh(311), and Rh(111). Journal of Chemical Physics, 1999, 110, 4013-4019.	3.0	28
49	Title is missing!. Catalysis Letters, 1999, 63, 13-19.	2.6	16
50	Chemical waves and adsorbate-induced segregation on a Pt(100) surface microstructured with a thin Rh/Pt film. Surface Science, 1999, 443, 245-252.	1.9	16
51	Shedding light on catalytic ignition: coverage changes during CO oxidation on Pd(110). Catalysis Letters, 1998, 51, 187-190.	2.6	22
52	Chemically resolved dynamical imaging of catalytic reactions on composite surfaces. Catalysis Letters, 1998, 52, 85-90.	2.6	19
53	Resonant auger processes in adsorbates. Journal of Electron Spectroscopy and Related Phenomena, 1998, 93, 135-141.	1.7	21
54	A fast X-ray photoelectron spectroscopy study of the NOâ€“H2 reaction over Rh(533): understanding hysteresis and oscillations in the reaction rate. Surface Science, 1998, 416, 264-273.	1.9	19

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55	A fast x-ray photoelectron spectroscopy study of the NO-H2 reaction over Rh(533): Identifying surface species. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 1014-1016.	2.1	10
56	Femtosecond dynamics of adsorbate charge-transfer processes as probed by high-resolution core-level spectroscopy. Physical Review B, 1998, 57, 11951-11954.	3.2	66
57	Ultrafast Charge Transfer Times of Chemisorbed Species from Auger Resonant Raman Studies. Physical Review Letters, 1998, 80, 1774-1777.	7.8	92
58	Evidence for Incomplete Charge Transfer and La-Derived States in the Valence Bands of Endohedrally DopedLa@C82. Physical Review Letters, 1997, 79, 2289-2292.	7.8	109
59	Identification of different surface species of NO adsorbed on Ru(0001) with NEXAFS. Surface Science, 1996, 355, L253-L258.	1.9	13
60	The formation of a NO-NH3 coadsorption complex on a Pt(l11) surface: a NEXAFS study. Catalysis Letters, 1996, 38, 165-170.	2.6	40
61	Steady state kinetics of the decomposition and oxidation of methanol on Pd(110). Surface Science, 1993, 297, 175-185.	1.9	25
62	The NO + NH3 reaction on Pt(100): steady state and oscillatory kinetics. Surface Science, 1992, 271, L367-L372.	1.9	36
63	The NO + H2 and NO + NH3 reactions on Pt(100): steady state and oscillatory kinetics. Surface Science, 1992, 269-270, 481-487.	1.9	29
64	Regular and irregular spatial patterns in the catalytic reduction of NO with NH3 on Pt(100). Catalysis Letters, 1992, 13, 371-382.	2.6	61