Sarp Kaya

List of Publications by Year
in descending order

77 papers	6,261 citations	147801 31 h-index	66911 78 g-index
82 all docs	82 docs citations	82 times ranked	9128 citing authors

#	Article	IF	Citations
1	Lattice-strain control of the activity in dealloyed coreâ€“shell fuel cell catalysts. Nature Chemistry, 2010, 2, 454-460.	13.6	2,489
2	Inâ€...Situ Observation of Surface Species on Iridium Oxide Nanoparticles during the Oxygen Evolution Reaction. Angewandte Chemie - International Edition, 2014, 53, 7169-7172.	13.8	386
3	Direct observation of the oxygenated species during oxygen reduction on a platinum fuel cell cathode. Nature Communications, 2013, 4, .	12.8	325
4	Atomic Structure of a Thin Silica Film on a Mo(112) Substrate: A Two-Dimensional Network ofSiO4Tetrahedra. Physical Review Letters, 2005, 95, 076103.	7.8	201
5	Probing the transition state region in catalytic CO oxidation on Ru. Science, 2015, 347, 978-982.	12.6	193
6	Real-Time Observation of Surface Bond Breaking with an X-ray Laser. Science, 2013, 339, 1302-1305.	12.6	179
7	X-ray absorption spectroscopy and X-ray Raman scattering of water and ice; an experimental view. Journal of Electron Spectroscopy and Related Phenomena, 2010, 177, 99-129.	1.7	158
8	Oxidation of Pt(111) under Near-Ambient Conditions. Physical Review Letters, 2011, 107, 195502.	7.8	151
9	Formation of hydroxyl and water layers on MgO films studied with ambient pressure XPS. Surface Science, 2011, 605, 89-94.	1.9	130
10	Interlayer Carbon Bond Formation Induced by Hydrogen Adsorption in Few-Layer Supported Graphene. Physical Review Letters, 2013, 111, 085503.	7.8	110
11	Ambient-pressure photoelectron spectroscopy for heterogeneous catalysis and electrochemistry. Catalysis Today, 2013, 205, 101-105.	4.4	103
12	X-ray Photoemission and Density Functional Theory Study of the Interaction of Water Vapor with the Fe₃O₄(001) Surface at Near-Ambient Conditions. Journal of Physical Chemistry C, 2013, 117, 2719-2733.	3.1	92
13	Operando Characterization of an Amorphous Molybdenum Sulfide Nanoparticle Catalyst during the Hydrogen Evolution Reaction. Journal of Physical Chemistry C, 2014, 118, 29252-29259.	3.1	87
14	Vanadium oxide surfaces and supported vanadium oxide nanoparticles. Topics in Catalysis, 2006, 38, 117-125.	2.8	80
15	Autocatalytic Surface Hydroxylation of MgO(100) Terrace Sites Observed under Ambient Conditions. Journal of Physical Chemistry C, 2011, 115, 12864-12872.	3.1	71
16	Different Reactivity of the Various Platinum Oxides and Chemisorbed Oxygen in CO Oxidation on Pt(111). Journal of the American Chemical Society, 2014, 136, 6340-6347.	13.7	71
17	Atomic structure of a thin silica film on aMo(112)substrate: A combined experimental and theoretical study. Physical Review B, 2006, 73, .	3.2	61
18	Comparison of x-ray absorption spectra between water and ice: New ice data with low pre-edge absorption cross-section. Journal of Chemical Physics, 2014, 141, 034507.	3.0	60

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19	HIPPIE: a new platform for ambient-pressure X-ray photoelectron spectroscopy at the MAX IV Laboratory. Journal of Synchrotron Radiation, 2021, 28, 624-636.	2.4	60
20	Mesoporous Thin-Film NiS₂ as an Idealized Pre-Electrocatalyst for a Hydrogen Evolution Reaction. ACS Catalysis, 2020, 10, 15114-15122.	11.2	58
21	Direct observation of the dealloying process of a platinumâ€“yttrium nanoparticle fuel cell cathode and its oxygenated species during the oxygen reduction reaction. Physical Chemistry Chemical Physics, 2015, 17, 28121-28128.	2.8	54
22	Selectivity in Methanol Oxidation as Studied on Model Systems Involving Vanadium Oxides. Topics in Catalysis, 2008, 50, 106-115.	2.8	53
23	Selective Ultrafast Probing of Transient Hot Chemisorbed and Precursor States of CO on Ru(0001). Physical Review Letters, 2013, 110, 186101.	7.8	51
24	On the geometrical and electronic structure of an ultra-thin crystalline silica film grown on Mo(112). Surface Science, 2007, 601, 4849-4861.	1.9	48
25	When an Encapsulating Oxide Layer Promotes Reaction on Noble Metals: Dewetting and InÂsitu Formation of an â€œInvertedâ€•FeO x /Pt Catalyst. Catalysis Letters, 2008, 126, 31-35.	2.6	46
26	Synthesis and Structure of Ultrathin Aluminosilicate Films. Angewandte Chemie - International Edition, 2006, 45, 7636-7639.	13.8	45
27	Formation of an Ordered Ice Layer on a Thin Silica Film. Journal of Physical Chemistry C, 2007, 111, 759-764.	3.1	41
28	Electrocatalytic reduction of CO₂to produce higher alcohols. Sustainable Energy and Fuels, 2018, 2, 2532-2541.	4.9	41
29	Oxygen adsorption on Mo(112) surface studied by ab initio genetic algorithm and experiment. Journal of Chemical Physics, 2007, 126, 234710.	3.0	37
30	Strong Lightâ€“Matter Interactions in Au Plasmonic Nanoantennas Coupled with Prussian Blue Catalyst on BiVO₄ for Photoelectrochemical Water Splitting. ChemSusChem, 2020, 13, 2577-2588.	6.8	34
31	Highly Compressed Two-Dimensional Form of Water at Ambient Conditions. Scientific Reports, 2013, 3, 1074.	3.3	31
32	Reversible graphene-metal contact through hydrogenation. Physical Review B, 2012, 86, .	3.2	28
33	Interplay between theory and experiment in the quest for silica with reduced dimensionality grown on a Mo(112) surface. Chemical Physics Letters, 2006, 424, 115-119.	2.6	27
34	Probing substrate effects in the carbon-projected band structure of graphene on Pt(111) through resonant inelastic x-ray scattering. Physical Review B, 2012, 85, .	3.2	27
35	Ultrafast soft X-ray emission spectroscopy of surface adsorbates using an X-ray free electron laser. Journal of Electron Spectroscopy and Related Phenomena, 2013, 187, 9-14.	1.7	27
36	Vacuum space charge effects in sub-picosecond soft X-ray photoemission on a molecular adsorbate layer. Structural Dynamics, 2015, 2, 025101.	2.3	27

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37	Ice-Assisted Preparation of Silica-Supported Vanadium Oxide Particles. Journal of Physical Chemistry C, 2007, 111, 5337-5344.	3.1	25
38	Strong Influence of Coadsorbate Interaction on CO Desorption Dynamics on Ru(0001) Probed by Ultrafast X-Ray Spectroscopy andAbÂInitioSimulations. Physical Review Letters, 2015, 114, 156101.	7.8	25
39	Formation of one-dimensional molybdenum oxide on Mo(112). Surface Science, 2008, 602, 3338-3342.	1.9	23
40	Growth of stoichiometric subnanometer silica films. Applied Physics Letters, 2008, 92, .	3.3	23
41	Operando X-Ray Photoelectron Spectroscopy Studies of Aqueous Electrocatalytic Systems. Topics in Catalysis, 2016, 59, 439-447.	2.8	23
42	One-pot synthesis of monodisperse copperâ€“silver alloy nanoparticles and their composition-dependent electrocatalytic activity for oxygen reduction reaction. Journal of Alloys and Compounds, 2020, 831, 154787.	5.5	23
43	Chemical Bond Activation Observed with an X-ray Laser. Journal of Physical Chemistry Letters, 2016, 7, 3647-3651.	4.6	21
44	Determination of the surface electronic structure of Fe3O4(1 1 1) by soft X-ray spectroscopy. Catalysis Today, 2015, 240, 184-189.	4.4	20
45	Formation of one-dimensional crystalline silica on a metal substrate. Surface Science, 2006, 600, L164-L168.	1.9	19
46	Enhanced electron transport induced by a ferroelectric field in efficient halide perovskite solar cells. Solar Energy Materials and Solar Cells, 2020, 206, 110318.	6.2	19
47	Low temperature CO induced growth of Pd supported on a monolayer silica film. Surface Science, 2006, 600, L153-L157.	1.9	18
48	Modifying the Electron-Trapping Process at the BiVO₄ Surface States via the TiO₂ Overlayer for Enhanced Water Oxidation. ACS Applied Materials & Interfaces, 2021, 13, 60602-60611.	8.0	18
49	Highly sensitive optical sensor for hydrogen gas based on a polymer microcylinder ring resonator. Sensors and Actuators B: Chemical, 2020, 310, 127806.	7.8	16
50	Tuning the Metalâ€“Adsorbate Chemical Bond through the Ligand Effect on Platinum Subsurface Alloys. Angewandte Chemie - International Edition, 2012, 51, 7724-7728.	13.8	15
51	Efficient carrier utilization induced by conductive polypyrrole additives in organic-inorganic halide perovskite solar cells. Solar Energy, 2020, 207, 1300-1307.	6.1	15
52	Electronic structure effects in catalysis probed by X-ray and electron spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 113-124.	1.7	13
53	Optical laser-induced CO desorption from Ru(0001) monitored with a free-electron X-ray laser: DFT prediction and X-ray confirmation of a precursor state. Surface Science, 2015, 640, 80-88.	1.9	13
54	Interaction of Atomic Hydrogen with the Cu₂O(100) and (111) Surfaces. Journal of Physical Chemistry C, 2019, 123, 22172-22180.	3.1	13

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55	The Fast-Track Water Oxidation Channel on BiVO₄ Opened by Nitrogen Treatment. Journal of Physical Chemistry Letters, 2020, 11, 8758-8764.	4.6	13
56	Modifying hydrogen binding strength of graphene. Surface Science, 2019, 679, 24-30.	1.9	12
57	Increasing Charge Separation Property and Water Oxidation Activity of BiVO₄ Photoanodes via a Postsynthetic Treatment. Journal of Physical Chemistry C, 2020, 124, 1337-1345.	3.1	12
58	A comprehensive study on the characteristic spectroscopic features of nitrogen doped graphene. Applied Surface Science, 2019, 495, 143518.	6.1	11
59	Scaling-up photocatalytic activity of CdS from nanorods to nanowires for the MB degradation. Inorganic Chemistry Communication, 2021, 130, 108744.	3.9	9
60	Low Barrier Carbon Induced CO Dissociation on Stepped Cu. Physical Review Letters, 2015, 114, 246101.	7.8	8
61	Roles of Charge Carriers in the Excited State Dynamics of BiVO₄ Photoanodes. Journal of Physical Chemistry C, 2019, 123, 28576-28583.	3.1	8
62	High-Density Isolated Fe₁O₃ Sites on a Single-Crystal Cu₂O(100) Surface. Journal of Physical Chemistry Letters, 2019, 10, 7318-7323.	4.6	8
63	The significance of the local structure of cobalt-based catalysts on the photoelectrochemical water oxidation activity of BiVO4. Electrochimica Acta, 2021, 366, 137467.	5.2	8
64	STRUCTURE, THERMAL STABILITY, AND CO ADSORPTION PROPERTIES OF PD NANOPARTICLES SUPPORTED ON AN ULTRA-THIN SiO₂ FILM. Surface Review and Letters, 2007, 14, 927-934.	1.1	7
65	Surfactant-free synthesis of CdS nanorods for efficient reduction of carcinogenic Cr(VI). Journal of Coordination Chemistry, 2021, 74, 1628-1640.	2.2	6
66	CO Adsorption study of V/SiO2: the low vanadium coverage regime. Chemical Physics Letters, 2004, 392, 127-131.	2.6	5
67	Stability of Pt-Modified Cu(111) in the Presence of Oxygen and Its Implication on the Overall Electronic Structure. Journal of Physical Chemistry C, 2013, 117, 16371-16380.	3.1	5
68	Stabilization of Cu₂O through Site-Selective Formation of a Co₁Cu Hybrid Single-Atom Catalyst. Chemistry of Materials, 2022, 34, 2313-2320.	6.7	5
69	Weakening the strength of CO binding on subsurface alloyed Pt(111). Surface Science, 2019, 682, 1-7.	1.9	4
70	Charge transfer controlled hydrogenation of graphene on an electronically modified Pt(111) surface. Carbon, 2020, 170, 636-645.	10.3	4
71	Strong Lightâ€"Matter Interactions in Au Plasmonic Nanoantennas Coupled with Prussian Blue Catalyst on BiVO 4 for Photoelectrochemical Water Splitting. ChemSusChem, 2020, 13, 2483-2483.	6.8	4
72	Green synthesis of mesoporous MoS₂ nanoflowers for efficient photocatalytic degradation of Congo red dye. Journal of Coordination Chemistry, 2021, 74, 2302-2314.	2.2	4

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73	Mesoporous Molybdenum Sulfide-Oxide Composite Thin-Film Electrodes Prepared by a Soft Templating Method for the Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2022, 5, 7006-7015.	5.1	4
74	Easy hydrogenation and dehydrogenation of a hybrid graphene and hexagonal boron nitride monolayer on platinum. 2D Materials, 2021, 8, 025023.	4.4	3
75	Acetic acid conversion to ketene on Cu2O(1 0 0): Reaction mechanism deduced from experimental observations and theoretical computations. Journal of Catalysis, 2021, 402, 154-165.	6.2	3
76	Identification of the electronic structure differences between polar isostructural FeO and CoO films by core-level soft x-ray spectroscopy. Physical Review B, 2013, 87, .	3.2	2
77	Ag/AgCl clusters derived from AgCu alloy nanoparticles as electrocatalysts for the oxygen reduction reaction. Sustainable Energy and Fuels, 2022, 6, 2593-2601.	4.9	2