Hendrik Bluhm

List of Publications by Year
in descending order

76 papers	7,518 citations	71102 41 h-index	71685 76 g-index
77 all docs	77 docs citations	77 times ranked	9392 citing authors

#	Article	IF	Citations
1	Electron Spectroscopy of Aqueous Solution Interfaces Reveals Surface Enhancement of Halides. Science, 2005, 307, 563-566.	12.6	611
2	Water at Interfaces. Chemical Reviews, 2016, 116, 7698-7726.	47.7	536
3	Break-Up of Stepped Platinum Catalyst Surfaces by High CO Coverage. Science, 2010, 327, 850-853.	12.6	456
4	A differentially pumped electrostatic lens system for photoemission studies in the millibar range. Review of Scientific Instruments, 2002, 73, 3872-3877.	1.3	453
5	The Nature of Water Nucleation Sites on TiO2(110) Surfaces Revealed by Ambient Pressure X-ray Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2007, 111, 8278-8282.	3.1	374
6	Redox activity of surface oxygen anions in oxygen-deficient perovskite oxides during electrochemical reactions. Nature Communications, 2015, 6, 6097.	12.8	297
7	Activation of Cu(111) surface by decomposition into nanoclusters driven by CO adsorption. Science, 2016, 351, 475-478.	12.6	245
8	Water Adsorption on Î±-Fe₂O₃(0001) at near Ambient Conditions. Journal of Physical Chemistry C, 2010, 114, 2256-2266.	3.1	238
9	Methanol Oxidation on a Copper Catalyst Investigated Using in Situ X-ray Photoelectron Spectroscopyâ€. Journal of Physical Chemistry B, 2004, 108, 14340-14347.	2.6	221
10	Photoelectron spectroscopy under ambient pressure and temperature conditions. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 601, 151-160.	1.6	221
11	Experimental and theoretical investigation of the electronic structure of Cu2O and CuO thin films on Cu(110) using x-ray photoelectron and absorption spectroscopy. Journal of Chemical Physics, 2013, 138, 024704.	3.0	219
12	In Situ Spectroscopic Study of the Oxidation and Reduction of Pd(111). Journal of the American Chemical Society, 2005, 127, 18269-18273.	13.7	218
13	Surface Chemistry of Cu in the Presence of CO₂ and H₂O. Langmuir, 2008, 24, 9474-9478.	3.5	178
14	Highly Enhanced Concentration and Stability of Reactive Ce³⁺ on Doped CeO₂ Surface Revealed In Operando. Chemistry of Materials, 2012, 24, 1876-1882.	6.7	169
15	Photoelectron spectroscopy of surfaces under humid conditions. Journal of Electron Spectroscopy and Related Phenomena, 2010, 177, 71-84.	1.7	166
16	Growth and Structure of Water on SiO₂ Films on Si Investigated by Kelvin Probe Microscopy and in Situ X-ray Spectroscopies. Langmuir, 2007, 23, 9699-9703.	3.5	157
17	Hydroxyl-Induced Wetting of Metals by Water at Near-Ambient Conditions. Journal of Physical Chemistry C, 2007, 111, 7848-7850.	3.1	138
18	Formation of hydroxyl and water layers on MgO films studied with ambient pressure XPS. Surface Science, 2011, 605, 89-94.	1.9	130

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19	Adsorption of Water on Cu₂O and Al₂O₃ Thin Films. Journal of Physical Chemistry C, 2008, 112, 9668-9672.	3.1	120
20	In Situ Oxidation Study of Pt(110) and Its Interaction with CO. Journal of the American Chemical Society, 2011, 133, 20319-20325.	13.7	120
21	The Effect of an Organic Surfactant on the Liquidâˆ’Vapor Interface of an Electrolyte Solution. Journal of Physical Chemistry C, 2007, 111, 13497-13509.	3.1	115
22	Ion spatial distributions at the liquidâ€“vapor interface of aqueous potassium fluoride solutions. Physical Chemistry Chemical Physics, 2008, 10, 4778.	2.8	103
23	Concentration and chemical-state profiles at heterogeneous interfaces with sub-nm accuracy from standing-wave ambient-pressure photoemission. Nature Communications, 2014, 5, 5441.	12.8	100
24	In Situ Ambient Pressure X-ray Photoelectron Spectroscopy of Cobalt Perovskite Surfaces under Cathodic Polarization at High Temperatures. Journal of Physical Chemistry C, 2013, 117, 16087-16094.	3.1	89
25	Reactivity of Perovskites with Water: Role of Hydroxylation in Wetting and Implications for Oxygen Electrocatalysis. Journal of Physical Chemistry C, 2015, 119, 18504-18512.	3.1	88
26	Graphene Membranes for Atmospheric Pressure Photoelectron Spectroscopy. Journal of Physical Chemistry Letters, 2016, 7, 1622-1627.	4.6	88
27	Water Reactivity on the LaCoO₃ (001) Surface: An Ambient Pressure X-ray Photoelectron Spectroscopy Study. Journal of Physical Chemistry C, 2014, 118, 19733-19741.	3.1	84
28	Ion Partitioning at the Liquid/Vapor Interface of a Multicomponent Alkali Halide Solution: A Model for Aqueous Sea Salt Aerosols. Journal of Physical Chemistry A, 2008, 112, 12378-12384.	2.5	79
29	Chemistry of NO_{<i>x</i>} on TiO₂ Surfaces Studied by Ambient Pressure XPS: Products, Effect of UV Irradiation, Water, and Coadsorbed K⁺. Journal of Physical Chemistry Letters, 2013, 4, 536-541.	4.6	79
30	Dealloying of Cobalt from CuCo Nanoparticles under Syngas Exposure. Journal of Physical Chemistry C, 2013, 117, 6259-6266.	3.1	74
31	Autocatalytic Surface Hydroxylation of MgO(100) Terrace Sites Observed under Ambient Conditions. Journal of Physical Chemistry C, 2011, 115, 12864-12872.	3.1	71
32	Adsorption of Dimethyl Methylphosphonate on MoO₃: The Role of Oxygen Vacancies. Journal of Physical Chemistry C, 2016, 120, 29077-29088.	3.1	66
33	Ambient pressure photoelectron spectroscopy: Practical considerations and experimental frontiers. Journal of Physics Condensed Matter, 2017, 29, 053002.	1.8	63
34	Water Adsorption and Dissociation on Polycrystalline Copper Oxides: Effects of Environmental Contamination and Experimental Protocol. Journal of Physical Chemistry B, 2018, 122, 1000-1008.	2.6	61
35	Characterization of the Acetonitrile Aqueous Solution/Vapor Interface by Liquid-Jet X-ray Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2014, 118, 29378-29388.	3.1	59
36	Ambient Pressure X-ray Photoelectron Spectroscopy and Molecular Dynamics Simulation Studies of Liquid/Vapor Interfaces of Aqueous NaCl, RbCl, and RbBr Solutions. Journal of Physical Chemistry C, 2012, 116, 4545-4555.	3.1	58

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37	A combined droplet train and ambient pressure photoemission spectrometer for the investigation of liquid/vapor interfaces. Physical Chemistry Chemical Physics, 2008, 10, 3093.	2.8	54
38	Direct Mapping of Band Positions in Doped and Undoped Hematite during Photoelectrochemical Water Splitting. Journal of Physical Chemistry Letters, 2017, 8, 5579-5586.	4.6	53
39	Surface Chemistry of CO on Ru(0001) under the Confinement of Graphene Cover. Journal of Physical Chemistry C, 2014, 118, 12391-12398.	3.1	51
40	Spectroscopic and Computational Investigation of Room-Temperature Decomposition of a Chemical Warfare Agent Simulant on Polycrystalline Cupric Oxide. Chemistry of Materials, 2017, 29, 7483-7496.	6.7	48
41	Surface Orientation Dependent Water Dissociation on Rutile Ruthenium Dioxide. Journal of Physical Chemistry C, 2018, 122, 17802-17811.	3.1	44
42	Reaction of CO with Preadsorbed Oxygen on Low-Index Copper Surfaces: An Ambient Pressure X-ray Photoelectron Spectroscopy and Scanning Tunneling Microscopy Study. Journal of Physical Chemistry C, 2015, 119, 14669-14674.	3.1	43
43	Combined soft and hard X-ray ambient pressure photoelectron spectroscopy studies of semiconductor/electrolyte interfaces. Journal of Electron Spectroscopy and Related Phenomena, 2017, 221, 106-115.	1.7	40
44	Note: Fixture for characterizing electrochemical devices in-operando in traditional vacuum systems. Review of Scientific Instruments, 2010, 81, 086104.	1.3	39
45	Surface Chemical Properties of Eutectic and Frozen NaCl Solutions Probed by XPS and NEXAFS. ChemPhysChem, 2010, 11, 3859-3866.	2.1	38
46	Interfacial Behavior of Perchlorate versus Chloride Ions in Aqueous Solutions. Journal of Physical Chemistry B, 2009, 113, 15843-15850.	2.6	36
47	Core level photoelectron spectroscopy of heterogeneous reactions at liquidâ€“vapor interfaces: Current status, challenges, and prospects. Journal of Chemical Physics, 2021, 154, 060901.	3.0	36
48	Water (Non-)Interaction with MoO₃. Journal of Physical Chemistry C, 2019, 123, 16836-16842.	3.1	35
49	NO₂ Adsorption on Ag(100) Supported MgO(100) Thin Films: Controlling the Adsorption State with Film Thickness. Journal of Physical Chemistry C, 2009, 113, 7355-7363.	3.1	32
50	Visualization of Water-Induced Surface Segregation of Polarons on Rutile TiO₂(110). Journal of Physical Chemistry Letters, 2018, 9, 4865-4871.	4.6	28
51	Chemical, Structural, and Electronic Characterization of the (010) Surface of Single Crystalline Bismuth Vanadate. Journal of Physical Chemistry C, 2019, 123, 8347-8359.	3.1	28
52	Water adsorption on vanadium oxide thin films in ambient relative humidity. Journal of Chemical Physics, 2020, 152, 044715.	3.0	27
53	CO adsorption on Pd(100) studied by multimodal ambient pressure X-ray photoelectron and infrared reflection absorption spectroscopies. Surface Science, 2017, 665, 51-55.	1.9	25
54	Exciting H₂ Molecules for Graphene Functionalization. ACS Nano, 2018, 12, 513-520.	14.6	24

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55	Structure of Copperâ€“Cobalt Surface Alloys in Equilibrium with Carbon Monoxide Gas. Journal of the American Chemical Society, 2018, 140, 6575-6581.	13.7	23
56	Reversed interfacial fractionation of carbonate and bicarbonate evidenced by X-ray photoemission spectroscopy. Journal of Chemical Physics, 2017, 146, .	3.0	21
57	Room temperature decomposition of dimethyl methylphosphonate on cuprous oxide yields atomic phosphorus. Surface Science, 2019, 680, 75-87.	1.9	20
58	Thermal desorption of dimethyl methylphosphonate from MoO₃. Journal of Lithic Studies, 2017, 3, 112-118.	0.5	19
59	Dimethyl methylphosphonate adsorption and decomposition on MoO₂ as studied by ambient pressure x-ray photoelectron spectroscopy and DFT calculations. Journal of Physics Condensed Matter, 2018, 30, 134005.	1.8	19
60	Enhancing Graphene Protective Coatings by Hydrogen-Induced Chemical Bond Formation. ACS Applied Nano Materials, 2018, 1, 4509-4515.	5.0	19
61	Identifying the Role of Dynamic Surface Hydroxides in the Dehydrogenation of Ti-Doped NaAlH₄. ACS Applied Materials & Interfaces, 2019, 11, 4930-4941.	8.0	19
62	A soft X-ray spectroscopic perspective of electron localization and transport in tungsten doped bismuth vanadate single crystals. Physical Chemistry Chemical Physics, 2016, 18, 31958-31965.	2.8	16
63	Direct observation of enhanced water and carbon dioxide reactivity on multivalent metal oxides and their composites. Energy and Environmental Science, 2017, 10, 919-923.	30.8	16
64	Simultaneous ambient pressure x-ray photoelectron spectroscopy and grazing incidence x-ray scattering in gas environments. Review of Scientific Instruments, 2021, 92, 044102.	1.3	16
65	Electrochemical intermediate species and reaction pathway in H2 oxidation on solid electrolytes. Chemical Communications, 2012, 48, 8338.	4.1	15
66	Ambient pressure X-ray photoelectron spectroscopy study of room-temperature oxygen adsorption on Cu(1 0 0) and Cu(1 1 1). Applied Surface Science, 2022, 583, 152438.	6.1	15
67	Quantitative Characterization of a Desalination Membrane Model System by X-ray Photoelectron Spectroscopy. Langmuir, 2019, 35, 11315-11321.	3.5	12
68	Hydroxylation and Cation Segregation in (La_{0.5}Sr_{0.5})FeO_{3âˆ’Î´} Electrodes. Chemistry of Materials, 2020, 32, 2926-2934.	6.7	12
69	Charge Transfer Across Oxide Interfaces Probed by in Situ X-ray Photoelectron and Absorption Spectroscopy Techniques. Journal of Physical Chemistry C, 2018, 122, 4841-4848.	3.1	11
70	Photoelectron angular distributions as sensitive probes of surfactant layer structure at the liquidâ€“vapor interface. Physical Chemistry Chemical Physics, 2022, 24, 4796-4808.	2.8	11
71	Impact of Ti Incorporation on Hydroxylation and Wetting of Fe₃O₄. Journal of Physical Chemistry C, 2017, 121, 19288-19295.	3.1	10
72	Coupling Ambient Pressure X-ray Photoelectron Spectroscopy with Density Functional Theory to Study Complex Surface Chemistry and Catalysis. Topics in Catalysis, 2018, 61, 2175-2184.	2.8	8

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73	NO2 Interactions with MoO3 and CuO at Atmospherically Relevant Pressures. Journal of Physical Chemistry C, 2021, 125, 16489-16497.	3.1	5
74	Water-polyamide chemical interplay in desalination membranes explored by ambient pressure X-ray photoelectron spectroscopy. Physical Chemistry Chemical Physics, 2020, 22, 15658-15663.	2.8	3
75	Prospects for the expansion of standing wave ambient pressure photoemission spectroscopy to reactions at elevated temperatures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, 013207.	2.1	2
76	Methanol Adsorption on Vanadium Oxide Surfaces Observed by Ambient Pressure X-ray Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2021, 125, 23192-23204.	3.1	1