Assocâ€prof Ludo B F Juurlink

List of Publications by Year
in descending order

55 papers	1,080 citations	394421 19 h-index	454955 30 g-index
56 all docs	56 docs citations	56 times ranked	1194 citing authors

#	Article	IF	Citations
1	Density functional theory study of adsorption of H2O, H, O, and OH on stepped platinum surfaces. Journal of Chemical Physics, 2014, 140, 134708.	3.0	83
2	Site-specific reactivity of molecules with surface defectsâ€"the case of H ₂ dissociation on Pt. Science, 2019, 363, 155-157.	12.6	72
3	Hydrogen adsorption and desorption at the Pt(110)-(1Ã—2) surface: experimental and theoretical study. Physical Chemistry Chemical Physics, 2013, 15, 6323.	2.8	67
4	The influence of step geometry on the desorption characteristics of O2, D2, and H2O from stepped Pt surfaces. Journal of Chemical Physics, 2010, 132, 174705.	3.0	59
5	Coâ€adsorption of O and H₂O on Nanostructured Platinum Surfaces: Does OH Form at Steps?. Angewandte Chemie - International Edition, 2010, 49, 6572-6575.	13.8	50
6	Double-Stranded Water on Stepped Platinum Surfaces. Physical Review Letters, 2016, 116, 136101.	7.8	45
7	Subsurface Oxygen on Pt(111) and Its Reactivity for CO Oxidation. Catalysis Letters, 2012, 142, 1-6.	2.6	38
8	The Energy Dependence of the Ratio of Step and Terrace Reactivity for H₂ Dissociation on Stepped Platinum. Angewandte Chemie - International Edition, 2011, 50, 5174-5177.	13.8	33
9	Initial stages of water solvation of stepped platinum surfaces. Physical Chemistry Chemical Physics, 2016, 18, 3416-3422.	2.8	32
10	Long-range influence of steps on water adsorption on clean and D-covered Pt surfaces. Physical Chemistry Chemical Physics, 2015, 17, 8530-8537.	2.8	27
11	Anomalous Dependence of the Reactivity on the Presence of Steps: Dissociation of D₂ on Cu(211). Journal of Physical Chemistry Letters, 2018, 9, 170-175.	4.6	27
12	Hydrophobic interactions between water and pre-adsorbed D on the stepped Pt(533) surface. Physical Chemistry Chemical Physics, 2008, 10, 7169.	2.8	26
13	Hydrogen adsorption and desorption from Cu(111) and Cu(211). Physical Chemistry Chemical Physics, 2018, 20, 22477-22488.	2.8	26
14	A detailed TPD study of H2O and pre-adsorbed O on the stepped Pt(553) surface. Physical Chemistry Chemical Physics, 2011, 13, 1629-1638.	2.8	25
15	Hydrophilic Interaction Between Low-Coordinated Au and Water: H₂O/Au(310) Studied with TPD and XPS. Journal of Physical Chemistry C, 2016, 120, 8693-8703.	3.1	23
16	CO Blocking of D₂ Dissociative Adsorption on Ru(0001). ChemPhysChem, 2008, 9, 2372-2378.	2.1	21
17	The molecular dynamics of adsorption and dissociation of O2 on Pt(553). Journal of Chemical Physics, 2015, 143, 014703.	3.0	21
18	Steps on Pt stereodynamically filter sticking of O ₂. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13862-13866.	7.1	21

#	Article	IF	Citations
19	The interaction of water with Ni(111) and H/Ni(111) studied by TPD and HREELS. Physical Chemistry Chemical Physics, 2008, 10, 2227.	2.8	20
20	Interaction between H2O and Preadsorbed D on the Stepped Pt(553) Surface. Journal of Physical Chemistry C, 2012, 116, 18706-18712.	3.1	20
21	Desorption of Water from Distinct Step Types on a Curved Silver Crystal. Molecules, 2014, 19, 10845-10862.	3.8	19
22	Transferability of the Specific Reaction Parameter Density Functional for H2 + Pt(111) to H2 + Pt(211). Journal of Physical Chemistry C, 2019, 123, 2973-2986.	3.1	18
23	The Interaction between H₂O and Preadsorbed O on the Stepped Pt(533) Surface. Journal of Physical Chemistry C, 2010, 114, 18953-18960.	3.1	17
24	Step-Type Selective Oxidation of Platinum Surfaces. Journal of Physical Chemistry C, 2016, 120, 22927-22935.	3.1	17
25	Step-type and step-density influences on CO adsorption probed by reflection absorption infrared spectroscopy using a curved Pt(1 1 1) surface. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	2.1	16
26	Employing a cylindrical single crystal in gas-surface dynamics. Journal of Chemical Physics, 2012, 136, 114201.	3.0	15
27	Macroscopic and Microscopic Wettability of Graphene. Langmuir, 2021, 37, 4049-4055.	3.5	15
28	Tuning Hydrophobicity of Platinum by Small Changes in Surface Morphology. Physical Review Letters, 2011, 107, 146103.	7.8	14
29	Co-adsorption of water and hydrogen on Ni(111). Physical Chemistry Chemical Physics, 2008, 10, 4994.	2.8	13
30	Identification of Hydroxyl on Ni(111). ChemPhysChem, 2009, 10, 270-275.	2.1	13
31	Surface Structure Dependence in Desorption and Crystallization of Thin Interfacial Water Films on Platinum. Journal of Physical Chemistry Letters, 2016, 7, 1682-1685.	4.6	13
32	Reaction dynamics of initial O2 sticking on Pd(100). Journal of Chemical Physics, 2015, 142, 214708.	3.0	12
33	Recent advances in the use of curved single crystal surfaces. Progress in Surface Science, 2021, 96, 100627.	8.3	12
34	CO and H2O adsorption and reaction on Au(310). Surface Science, 2011, 605, 1726-1731.	1.9	11
35	A molecular beam study of D2 dissociation on Pt(1â€¯1â€¯1): Testing SRP-DFT calculations. Chemical Physics Letters, 2018, 706, 680-683.	2.6	11
36	Scaling Platinumâ€Catalyzed Hydrogen Dissociation on Corrugated Surfaces. Angewandte Chemie - International Edition, 2020, 59, 20973-20979.	13.8	11

#	Article	IF	Citations
37	Heterogeneous Catalytic Oxidation of Simple Alcohols by Transition Metals. Journal of Chemical Education, 2017, 94, 1285-1287.	2.3	10
38	Elucidation of temperature-programmed desorption of high-coverage hydrogen on Pt(211), Pt(221), Pt(533) and Pt(553) based on density functional theory calculations. Physical Chemistry Chemical Physics, 2019, 21, 17142-17151.	2.8	10
39	Exposure of Pt(5â€‰5â€‰3) and Rh(1â€‰1â€‰1) to atomic and molecular oxygen: do defects enhance subsurface oxygen formation?. Journal of Physics Condensed Matter, 2017, 29, 164002.	1.8	9
40	An Inexpensive 3D Printed Periscope-Type Smartphone-Based Spectrophotometer for Emission, Absorption, and Fluorescence Spectrometry. Journal of Chemical Education, 2022, 99, 2168-2174.	2.3	9
41	A Comparison of CO Oxidation by Hydroxyl and Atomic Oxygen from Water on Low-Coordinated Au Atoms. ACS Catalysis, 2016, 6, 7051-7058.	11.2	8
42	Coverage-dependent adsorption and desorption of oxygen on Pd(100). Journal of Chemical Physics, 2016, 144, 244706.	3.0	8
43	IR spectroscopic characterization of the co-adsorption of CO₂ and H₂ onto cationic Cu_n⁺ clusters. Physical Chemistry Chemical Physics, 2021, 23, 26661-26673.	2.8	8
44	It's not just the defects â€“ a curved crystal study of H₂O desorption from Ag. Physical Chemistry Chemical Physics, 2019, 21, 15422-15430.	2.8	7
45	Oxygen-induced surface reconstructions on curved Ag(111). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	6
46	Hydrogen Dissociation on Stepped Pt Surfaces. Springer Series in Surface Sciences, 2013, , 101-129.	0.3	6
47	Heterogeneous Catalytic Oxidation of Ammonia by Various Transition Metals. Journal of Chemical Education, 2019, 96, 2266-2270.	2.3	5
48	Absolute dissociation cross sections for D2 dissociation on Pt steps. Chemical Physics Letters, 2021, 776, 138679.	2.6	5
49	Evidence of stable high-temperature Dx-CO intermediates on the Ru(0001) surface. Journal of Chemical Physics, 2012, 136, 114710.	3.0	4
50	Misconceptions in the Exploding Flask Demonstration Resolved through Studentsâ€™ Critical Thinking. Journal of Chemical Education, 2017, 94, 1209-1216.	2.3	4
51	Structural Inhibition of Silver Surface Oxidation. Journal of Physical Chemistry C, 2021, 125, 14702-14708.	3.1	4
52	Stepped surfaces. Journal of Physics Condensed Matter, 2018, 30, 090301.	1.8	3
53	Chiral Surface Characterisation and Reactivity Toward Hâ€“D Exchange of a Curved Platinum Crystal. Topics in Catalysis, 2020, 63, 1558-1568.	2.8	3
54	Two Design Principles for the Design of Demonstrations to Enhance Structureâ€“Property Reasoning. Education Sciences, 2021, 11, 504.	2.6	2

#	Article	IF	Citations
55	Scaling Platinumâ€Catalyzed Hydrogen Dissociation on Corrugated Surfaces. Angewandte Chemie, 2020, 132, 21159-21165.	2.0	1