

# Zdenek Dohnalek

## List of Publications by Citations

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98  
papers

4,319  
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37  
h-index

63  
g-index

103  
ext. papers

4,609  
ext. citations

7.1  
avg, IF

5.39  
L-index

#	Paper	IF	Citations
98	Thermally-driven processes on rutile TiO <sub>2</sub> (110)-(1 $\bar{1}$ ): A direct view at the atomic scale. <i>Progress in Surface Science</i> , <b>2010</b> , 85, 161-205	6.6	269
97	Imaging adsorbate O-H bond cleavage: methanol on TiO <sub>2</sub> (110). <i>Journal of the American Chemical Society</i> , <b>2006</b> , 128, 4198-9	16.4	189
96	Crystalline ice growth on Pt(111): observation of a hydrophobic water monolayer. <i>Physical Review Letters</i> , <b>2005</b> , 95, 166102	7.4	180
95	No confinement needed: observation of a metastable hydrophobic wetting two-layer ice on graphene. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 12838-44	16.4	161
94	n-alkanes on Pt(111) and on C(0001)Pt(111): chain length dependence of kinetic desorption parameters. <i>Journal of Chemical Physics</i> , <b>2006</b> , 125, 234308	3.9	153
93	Physisorption of N <sub>2</sub> , O <sub>2</sub> , and CO on fully oxidized TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 6229-35	3.4	143
92	n-alkanes on MgO(100). II. Chain length dependence of kinetic desorption parameters for small n-alkanes. <i>Journal of Chemical Physics</i> , <b>2005</b> , 122, 164708	3.9	143
91	Structural motifs of water on metal oxide surfaces. <i>Chemical Society Reviews</i> , <b>2017</b> , 46, 1785-1806	58.5	127
90	Chemical Reactivity of Reduced TiO <sub>2</sub> (110): The Dominant Role of Surface Defects in Oxygen Chemisorption. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 12407-12411	3.8	123
89	Intrinsic diffusion of hydrogen on rutile TiO <sub>2</sub> (110). <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 9080-8	16.4	114
88	Transient Mobility of Oxygen Adatoms upon O <sub>2</sub> Dissociation on Reduced TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2008</b> , 112, 2649-2653	3.8	111
87	n-alkanes on MgO(100). I. Coverage-dependent desorption kinetics of n-butane. <i>Journal of Chemical Physics</i> , <b>2005</b> , 122, 164707	3.9	105
86	Formation of O adatom pairs and charge transfer upon O(2) dissociation on reduced TiO(2)(110). <i>Physical Chemistry Chemical Physics</i> , <b>2010</b> , 12, 6337-44	3.6	91
85	Formation of monodisperse (WO <sub>3</sub> ) <sub>3</sub> clusters on TiO <sub>2</sub> (110). <i>Angewandte Chemie - International Edition</i> , <b>2006</b> , 45, 4786-9	16.4	88
84	Dehydration, dehydrogenation, and condensation of alcohols on supported oxide catalysts based on cyclic (WO <sub>3</sub> ) <sub>3</sub> and (MoO <sub>3</sub> ) <sub>3</sub> clusters. <i>Chemical Society Reviews</i> , <b>2014</b> , 43, 7664-80	58.5	86
83	Water as a Catalyst: Imaging Reactions of O <sub>2</sub> with Partially and Fully Hydroxylated TiO <sub>2</sub> (110) Surfaces. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 1908-1916	3.8	84
82	Imaging intrinsic diffusion of bridge-bonded oxygen vacancies on TiO <sub>2</sub> (110). <i>Physical Review Letters</i> , <b>2007</b> , 99, 126105	7.4	83

81	Catalytic dehydration of 2-propanol on (WO <sub>3</sub> ) <sub>3</sub> clusters on TiO <sub>2</sub> (110). <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 5059-61	16.4	72
80	Probing equilibrium of molecular and deprotonated water on TiO(110). <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 1801-1805	11.5	71
79	Determination of Absolute Coverages for Small Aliphatic Alcohols on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 22534-22539	3.8	69
78	Surface Chemistry of 2-Propanol on TiO <sub>2</sub> (110): Low- and High-Temperature Dehydration, Isotope Effects, and Influence of Local Surface Structure. <i>Journal of Physical Chemistry C</i> , <b>2007</b> , 111, 11059-11067	3.8	67
77	Imaging Consecutive Steps of O <sub>2</sub> Reaction with Hydroxylated TiO <sub>2</sub> (110): Identification of HO <sub>2</sub> and Terminal OH Intermediates. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 666-671	3.8	65
76	Crystalline ice growth on Pt(111) and Pd(111): nonwetting growth on a hydrophobic water monolayer. <i>Journal of Chemical Physics</i> , <b>2007</b> , 126, 114702	3.9	64
75	Direct Observation of Site-Specific Molecular Chemisorption of O <sub>2</sub> on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry Letters</i> , <b>2010</b> , 1, 3524-3529	6.4	63
74	Importance of Diffusion in Methanol Photochemistry on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 25465-25469	3.8	62
73	Direct Visualization of 2-Butanol Adsorption and Dissociation on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2007</b> , 111, 3021-3027	3.8	58
72	Reactive Ballistic Deposition of Porous TiO <sub>2</sub> Films: Growth and Characterization. <i>Journal of Physical Chemistry C</i> , <b>2007</b> , 111, 4765-4773	3.8	56
71	Structure and Dynamics of CO <sub>2</sub> on Rutile TiO <sub>2</sub> (110)-1 $\times$ 1. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 26322-26334	3.8	55
70	Ethanol Conversion on Cyclic (MO <sub>3</sub> ) <sub>3</sub> (M = Mo, W) Clusters. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 4869-4877	3.8	52
69	Layer-by-layer growth of thin amorphous solid water films on Pt(111) and Pd(111). <i>Journal of Chemical Physics</i> , <b>2006</b> , 125, 44713	3.9	47
68	Methane adsorption and dissociation and oxygen adsorption and reaction with CO on Pd nanoparticles on MgO(1 0 0) and on Pd(1 1 1). <i>Surface Science</i> , <b>2005</b> , 591, 90-107	1.8	44
67	Inductive Effect of Alkyl Chains on Alcohol Dehydration at Bridge-bonded Oxygen Vacancies of TiO <sub>2</sub> (110). <i>Catalysis Letters</i> , <b>2007</b> , 119, 1-4	2.8	43
66	Dimerization Induced Deprotonation of Water on RuO <sub>2</sub> (110). <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 3445-50	6.4	40
65	Interaction of Formaldehyde with the Rutile TiO <sub>2</sub> (110) Surface: A Combined Experimental and Theoretical Study. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 12626-12636	3.8	40
64	Understanding Heterolytic H <sub>2</sub> Cleavage and Water-Assisted Hydrogen Spillover on Fe <sub>3</sub> O <sub>4</sub> (001)-Supported Single Palladium Atoms. <i>ACS Catalysis</i> , <b>2019</b> , 9, 7876-7887	13.1	39

63	Adsorption, desorption, and displacement kinetics of H <sub>2</sub> O and CO <sub>2</sub> on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry B</i> , <b>2014</b> , 118, 8054-61	3.4	39
62	Growth of Ordered Ultrathin Tungsten Oxide Films on Pt(111). <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 5773-5783	3.8	38
61	Anticorrelation between surface and subsurface point defects and the impact on the redox chemistry of TiO <sub>2</sub> (110). <i>ChemPhysChem</i> , <b>2015</b> , 16, 313-21	3.2	37
60	Imaging hindered rotations of alkoxy species on TiO(2)(110). <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 17926-32	16.4	37
59	Reactive ballistic deposition of nanostructured model materials for electrochemical energy conversion and storage. <i>Accounts of Chemical Research</i> , <b>2012</b> , 45, 434-43	24.3	36
58	Formaldehyde Polymerization on (WO <sub>3</sub> ) <sub>3</sub> /TiO <sub>2</sub> (110) Model Catalyst. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 17017-17022	3.8	36
57	Oxidation, Reduction, and Condensation of Alcohols over (MO <sub>3</sub> ) <sub>3</sub> (M = Mo, W) Nanoclusters. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 22620-22634	3.8	35
56	Low-Temperature Oxidation of Methanol to Formaldehyde on a Model Single-Atom Catalyst: Pd Atoms on Fe <sub>3</sub> O <sub>4</sub> (001). <i>ACS Catalysis</i> , <b>2019</b> , 9, 10977-10982	13.1	31
55	Water Interactions with Terminal Hydroxyls on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 17080-17084	3.8	31
54	Adsorption of small hydrocarbons on rutile TiO <sub>2</sub> (110). <i>Surface Science</i> , <b>2016</b> , 650, 83-92	1.8	30
53	Vacancy-assisted diffusion of alkoxy species on rutile TiO <sub>2</sub> (110). <i>Physical Review Letters</i> , <b>2008</b> , 101, 156103	1.0	30
52	Cryogenic CO <sub>2</sub> formation on oxidized gold clusters synthesized via reactive layer assisted deposition. <i>Journal of the American Chemical Society</i> , <b>2005</b> , 127, 14592-3	16.4	30
51	Deprotonated Water Dimers: The Building Blocks of Segmented Water Chains on Rutile RuO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 23552-23558	3.8	28
50	Polymerization of Formaldehyde and Acetaldehyde on Ordered (WO <sub>3</sub> ) <sub>3</sub> Films on Pt(111). <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 9692-9700	3.8	27
49	Infrared spectroscopy and optical constants of porous amorphous solid water. <i>Journal of Physical Chemistry B</i> , <b>2009</b> , 113, 4131-40	3.4	27
48	The effect of the incident collision energy on the porosity of vapor-deposited amorphous solid water films. <i>Journal of Physical Chemistry B</i> , <b>2009</b> , 113, 4000-7	3.4	26
47	Imaging of Formaldehyde Adsorption and Diffusion on TiO <sub>2</sub> (110). <i>Topics in Catalysis</i> , <b>2015</b> , 58, 103-113	2.3	25
46	Preparation, Characterization, and Catalytic Properties of Tungsten Trioxide Cyclic Trimers on FeO(111)/Pt(111). <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 908-916	3.8	25

45	Adsorption, Desorption, and Displacement Kinetics of H <sub>2</sub> O and CO <sub>2</sub> on Forsterite, Mg <sub>2</sub> SiO <sub>4</sub> (011). <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 29091-29100	3.8	23
44	Dehydration and dehydrogenation of ethylene glycol on rutile TiO <sub>2</sub> (110). <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 12180-6	3.6	21
43	Formation of Metastable Water Chains on Anatase TiO <sub>2</sub> (101). <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 20413-20418	3.8	21
42	Tracking Site-Specific C-C Coupling of Formaldehyde Molecules on Rutile TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 14267-14272	3.8	21
41	Low-Temperature Reductive Coupling of Formaldehyde on Rutile TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 18452-18457	3.8	19
40	Iso-oriented monolayer FeMoO <sub>3</sub> (010) films epitaxially grown on SrTiO <sub>3</sub> (001). <i>Nanoscale</i> , <b>2016</b> , 8, 3119-24	7.7	19
39	Site-specific imaging of elemental steps in dehydration of diols on TiO <sub>2</sub> (110). <i>ACS Nano</i> , <b>2013</b> , 7, 10414-10423	4.7	19
38	Alcohol Dehydration on Monooxo W <sup>2+</sup> O and Dioxo O <sup>2+</sup> W <sup>2+</sup> O Species. <i>Journal of Physical Chemistry Letters</i> , <b>2012</b> , 3, 2168-72	6.4	18
37	Reactivity of Fe <sup>0</sup> Atoms, Clusters, and Nanoparticles with CCl <sub>4</sub> Multilayers on FeO(111). <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 1818-1829	3.8	18
36	Reactivity of FeO(111)/Pt(111) with Alcohols. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 20020-20028	3.8	18
35	Molecular Beam Studies of Nanoscale Films of Amorphous Solid Water. <i>Springer Series in Cluster Physics</i> , <b>2003</b> , 337-357		17
34	Molecular hydrogen formation from proximal glycol pairs on TiO <sub>2</sub> (110). <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 5559-62	16.4	15
33	Conversion of 1,2-Propylene Glycol on Rutile TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 15339-15347	3.8	15
32	OH Group Dynamics of 1,3-Propanediol on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry Letters</i> , <b>2012</b> , 3, 32576-3263	3.2	15
31	Characterization of Nanoporous WO <sub>3</sub> Films Grown via Ballistic Deposition. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 10649-10655	3.8	15
30	Adsorption and Photodesorption of CO from Charged Point Defects on TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry Letters</i> , <b>2017</b> , 8, 4565-4572	6.4	14
29	The effect of oxygen vacancies on the binding interactions of NH <sub>3</sub> with rutile TiO <sub>2</sub> (110)-1 $\times$ 1. <i>Physical Chemistry Chemical Physics</i> , <b>2012</b> , 14, 15060-5	3.6	14
28	Unexpected Nondissociative Binding of N <sub>2</sub> O on Oxygen Vacancies on a Rutile TiO <sub>2</sub> (110)-1 $\times$ 1. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 1145-1150	3.8	14

27	Binding of Formic Acid on Anatase TiO <sub>2</sub> (101). <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 20228-20239	3.8	14
26	Cerium Oxide Nanoclusters on Graphene/Ru(0001): Intercalation of Oxygen via Spillover. <i>ACS Nano</i> , <b>2015</b> , 9, 8617-26	16.7	13
25	Conversion of 1,3-Propylene Glycol on Rutile TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 23181-23188	3.8	12
24	Interaction of CO <sub>2</sub> with oxygen adatoms on rutile TiO <sub>2</sub> (110). <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 6190-5	3.6	12
23	Reactivity of Fe <sup>0</sup> Atoms and Clusters with D <sub>2</sub> O over FeO(111). <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 4960-4969	3.8	11
22	Adsorption and Reaction of Methanol on Anatase TiO <sub>2</sub> (101) Single Crystals and Faceted Nanoparticles. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 24133-24145	3.8	10
21	Understanding the Binding of Aromatic Hydrocarbons on Rutile TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 16766-16777	3.8	9
20	Dynamics, Stability, and Adsorption States of Water on Oxidized RuO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 18505-18515	3.8	9
19	Formation of Supported Graphene Oxide: Evidence for Enolate Species. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 5102-5109	16.4	8
18	Strong Temperature Dependence in the Reactivity of H <sub>2</sub> on RuO <sub>2</sub> (110). <i>Journal of Physical Chemistry Letters</i> , <b>2016</b> , 7, 2967-70	6.4	8
17	Hydrogen adsorption and reaction on RuO <sub>2</sub> (110). <i>Surface Science</i> , <b>2018</b> , 677, 264-270	1.8	8
16	Understanding How Surface Morphology and Hydrogen Dissolution Influence Ethylene Hydrogenation on Palladium. <i>Journal of Physical Chemistry C</i> , <b>2008</b> , 112, 15796-15801	3.8	8
15	Light Makes a Surface Banana-Bond Split: Photodesorption of Molecular Hydrogen from RuO <sub>2</sub> (110). <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 8714-7	16.4	8
14	Adsorption and reaction of methanol on FeO(001). <i>Journal of Chemical Physics</i> , <b>2020</b> , 152, 064703	3.9	7
13	Low-Temperature Desorption of N <sub>2</sub> O from NO on Rutile TiO <sub>2</sub> (110)-1 × 1. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 9544-9550	3.8	7
12	Ammonia Formation from NO Reaction with Surface Hydroxyls on Rutile TiO <sub>2</sub> (110)-1 × 1. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 1130-1135	3.8	5
11	Conversion of Formic Acid on Single- and Nano-Crystalline Anatase TiO <sub>2</sub> (101). <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 7686-7700	3.8	5
10	Creating self-assembled arrays of mono-oxo (MoO) species on TiO(101) via deposition and decomposition of (MoO) oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	5

9	Direct Deoxygenation of Phenylmethanol to Methylbenzene and Benzyl Radicals on Rutile TiO <sub>2</sub> (110). <i>ACS Catalysis</i> , <b>2017</b> , 7, 2002-2006	13.1	4
8	Growth and Stability of Titanium Dioxide Nanoclusters on Graphene/Ru(0001). <i>Journal of Physical Chemistry B</i> , <b>2018</b> , 122, 640-648	3.4	4
7	Temperature-programmed desorption study of NO reactions on rutile TiO <sub>2</sub> (110)-1. <i>Surface Science</i> , <b>2016</b> , 652, 148-155	1.8	4
6	Reactivity of C <sub>2</sub> Cl <sub>6</sub> and C <sub>2</sub> Cl <sub>4</sub> Multilayers with Fe <sup>0</sup> Atoms over FeO(111). <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 10233-10241	3.8	4
5	Reactivity of Fe <sup>0</sup> Atoms with Mixed CCl <sub>4</sub> and D <sub>2</sub> O Films over FeO(111). <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 17136-17141	3.8	2
4	Binding and stability of MgO monomers on anatase TiO(101). <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 204703	3.9	0
3	Adsorption of ethane, ethene, and ethyne on reconstructed Fe <sub>3</sub> O <sub>4</sub> (001). <i>Surface Science</i> , <b>2021</b> , 714, 121932	1.8	0
2	Formation of Gas-Phase Allyl Radicals from Glycerol on Rutile TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 7227-7239	3.8	
1	Catalytic Chemistry on Oxide Nanostructures. <i>Springer Series in Materials Science</i> , <b>2016</b> , 251-280	0.9	