R Scott Smith

List of Publications by Year in Descending Order

98 papers	5,247 citations	32 h-index	71 g-index
98 ext. papers	5,507 ext. citations	5.4 avg, IF	5.31 L-index

#	Paper	IF	Citations
98	Formation of Gas-Phase Allyl Radicals from Glycerol on Rutile TiO2(110). *Journal of Physical Chemistry C*, **2021**, 125, 7227-7239	3.8	
97	Crystallization kinetics of amorphous acetonitrile nanoscale films. *Journal of Chemical Physics*, **2021**, 154, 144703	3.9	2
96	Adsorption of ethane, ethene, and ethyne on reconstructed Fe3O4(001). *Surface Science*, **2021**, 714, 121932	1.8	0
95	Adsorption and reaction of methanol on FeO(001). *Journal of Chemical Physics*, **2020**, 152, 064703	3.9	7
94	Structure and Desorption Kinetics of Acetonitrile Thin Films on Pt(111) and on Graphene on Pt(111). *Journal of Physical Chemistry C*, **2020**, 124, 2521-2530	3.8	7
93	Morphology of Vapor-Deposited Acetonitrile Films. *Journal of Physical Chemistry A*, **2020**, 124, 6237-6245	2.8	1
92	Understanding the Binding of Aromatic Hydrocarbons on Rutile TiO2(110). *Journal of Physical Chemistry C*, **2019**, 123, 16766-16777	3.8	9
91	Crystallization growth rates and front propagation in amorphous solid water films. *Journal of Chemical Physics*, **2019**, 150, 214703	3.9	4
90	Homogeneous ice nucleation rates and crystallization kinetics in transiently-heated, supercooled water films from 188 K to 230 K. *Journal of Chemical Physics*, **2019**, 150, 204509	3.9	7
89	Desorption Kinetics of Carbon Dioxide from a Graphene-Covered Pt(111) Surface. *Journal of Physical Chemistry A*, **2019**, 123, 3248-3254	2.8	1
88	Low-Temperature Oxidation of Methanol to Formaldehyde on a Model Single-Atom Catalyst: Pd Atoms on Fe3O4(001). *ACS Catalysis*, **2019**, 9, 10977-10982	13.1	31
87	Desorption of Benzene, 1,3,5-Trifluorobenzene, and Hexafluorobenzene from a Graphene Surface: The Effect of Lateral Interactions on the Desorption Kinetics. *Journal of Physical Chemistry Letters*, **2018**, 9, 2632-2638	6.4	3
86	Desorption Kinetics of Benzene and Cyclohexane from a Graphene Surface. *Journal of Physical Chemistry B*, **2018**, 122, 587-594	3.4	14
85	Communication: Proton exchange in low temperature co-mixed amorphous HO and DO films: The effect of the underlying Pt(111) and graphene substrates. *Journal of Chemical Physics*, **2018**, 149, 081104	3.9	1
84	Communication: Distinguishing between bulk and interface-enhanced crystallization in nanoscale films of amorphous solid water. *Journal of Chemical Physics*, **2017**, 146, 031102	3.9	15
83	Direct Deoxygenation of Phenylmethanol to Methylbenzene and Benzyl Radicals on Rutile TiO2(110). *ACS Catalysis*, **2017**, 7, 2002-2006	13.1	4
82	Homogeneous Nucleation of Ice in Transiently-Heated, Supercooled Liquid Water Films. *Journal of Physical Chemistry Letters*, **2017**, 8, 5736-5743	6.4	12

81	Surface and bulk crystallization of amorphous solid water films: Confirmation of "top-down" crystallization. *Surface Science*, **2016**, 652, 350-354	1.8	14
80	Adsorption of small hydrocarbons on rutile TiO2(110). *Surface Science*, **2016**, 650, 83-92	1.8	30
79	Complete Wetting of Pt(111) by Nanoscale Liquid Water Films. *Journal of Physical Chemistry Letters*, **2016**, 7, 541-7	6.4	10
78	Growth rate of crystalline ice and the diffusivity of supercooled water from 126 to 262 K. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 14921-14925	11.5	87
77	A nanosecond pulsed laser heating system for studying liquid and supercooled liquid films in ultrahigh vacuum. *Journal of Chemical Physics*, **2016**, 144, 164201	3.9	8
76	Desorption Kinetics of Ar, Kr, Xe, N2, O2, CO, Methane, Ethane, and Propane from Graphene and Amorphous Solid Water Surfaces. *Journal of Physical Chemistry B*, **2016**, 120, 1979-87	3.4	60
75	Probing Toluene and Ethylbenzene Stable Glass Formation Using Inert Gas Permeation. *Journal of Physical Chemistry Letters*, **2015**, 6, 3639-44	6.4	8
74	Weak interactions between water and clathrate-forming gases at low pressures. *Surface Science*, **2015**, 641, 216-223	1.8	2
73	Desorption kinetics of methanol, ethanol, and water from graphene. *Journal of Physical Chemistry A* , **2014**, 118, 8242-50	2.8	41
72	Adsorption, desorption, and displacement kinetics of H2O and CO2 on TiO2(110). *Journal of Physical Chemistry B*, **2014**, 118, 8054-61	3.4	39
71	Molecular hydrogen formation from proximal glycol pairs on TiO2(110). *Journal of the American Chemical Society*, **2014**, 136, 5559-62	16.4	15
70	Conversion of 1,2-Propylene Glycol on Rutile TiO2(110). *Journal of Physical Chemistry C*, **2014**, 118, 15339-15347	3.8	15
69	Conversion of 1,3-Propylene Glycol on Rutile TiO2(110). *Journal of Physical Chemistry C*, **2014**, 118, 23181-23188	3.8	12
68	Adsorption, Desorption, and Displacement Kinetics of H2O and CO2 on Forsterite, Mg2SiO4(011). *Journal of Physical Chemistry C*, **2014**, 118, 29091-29100	3.8	23
67	Turning things downside up: adsorbate induced water flipping on Pt(111). *Journal of Chemical Physics*, **2014**, 141, 18C515	3.9	10
66	The release of trapped gases from amorphous solid water films. I. "Top-down" crystallization-induced crack propagation probed using the molecular volcano. *Journal of Chemical Physics*, **2013**, 138, 104501	3.9	29
65	The release of trapped gases from amorphous solid water films. II. "Bottom-up" induced desorption pathways. *Journal of Chemical Physics*, **2013**, 138, 104502	3.9	15
64	Mobility of supercooled liquid toluene, ethylbenzene, and benzene near their glass transition temperatures investigated using inert gas permeation. *Journal of Physical Chemistry A*, **2013**, 117, 11881-9	2.8	11

63	Thermal and nonthermal physiochemical processes in nanoscale films of amorphous solid water. *Accounts of Chemical Research*, **2012**, 45, 33-42	24.3	60
62	Breaking Through the Glass Ceiling: Recent Experimental Approaches to Probe the Properties of Supercooled Liquids near the Glass Transition. *Journal of Physical Chemistry Letters*, **2012**, 3, 725-30	6.4	14
61	Characterization of Nanoporous WO3 Films Grown via Ballistic Deposition. *Journal of Physical Chemistry C*, **2012**, 116, 10649-10655	3.8	15
60	The Molecular Volcano Revisited: Determination of Crack Propagation and Distribution During the Crystallization of Nanoscale Amorphous Solid Water Films. *Journal of Physical Chemistry Letters*, **2012**, 3, 327-31	6.4	21
59	Probing the mobility of supercooled liquid 3-methylpentane at temperatures near the glass transition using rare gas permeation. *Journal of Chemical Physics*, **2012**, 137, 064509	3.9	7
58	Growth of Ordered Ultrathin Tungsten Oxide Films on Pt(111). *Journal of Physical Chemistry C*, **2011** , 115, 5773-5783	3.8	38
57	Probing the interaction of amorphous solid water on a hydrophobic surface: dewetting and crystallization kinetics of ASW on carbon tetrachloride. *Physical Chemistry Chemical Physics*, **2011**, 13, 19848-55	3.6	14
56	HCl adsorption and ionization on amorphous and crystalline H2O films below 50 K. *Journal of Physical Chemistry A*, **2011**, 115, 6002-14	2.8	28
55	Crystallization kinetics and excess free energy of H2O and D2O nanoscale films of amorphous solid water. *Journal of Physical Chemistry A*, **2011**, 115, 5908-17	2.8	64
54	Determination of Absolute Coverages for Small Aliphatic Alcohols on TiO2(110). *Journal of Physical Chemistry C*, **2011**, 115, 22534-22539	3.8	69
53	Mixing It Up: Measuring Diffusion in Supercooled Liquid Solutions of Methanol and Ethanol at Temperatures near the Glass Transition. *Journal of Physical Chemistry Letters*, **2011**, 2, 557-561	6.4	23
52	A unique vibrational signature of rotated water monolayers on Pt(111): predicted and observed. *Journal of Chemical Physics*, **2011**, 134, 204702	3.9	27
51	Measuring diffusivity in supercooled liquid nanoscale films using inert gas permeation. I. Kinetic model and scaling methods. *Journal of Chemical Physics*, **2010**, 133, 174504	3.9	13
50	Measuring diffusivity in supercooled liquid nanoscale films using inert gas permeation. II. Diffusion of Ar, Kr, Xe, and CH4 through methanol. *Journal of Chemical Physics*, **2010**, 133, 174505	3.9	16
49	Thermal Stability of Ammonia Borane: A Case Study for Exothermic Hydrogen Storage Materials. *Energy & Fuels*, **2010**, 24, 2596-2606	4.1	50
48	Reactivity of Fe0 Atoms with Mixed CCl4 and D2O Films over FeO(111)*Journal of Physical Chemistry C*, **2010**, 114, 17136-17141	3.8	2
47	Breaking through the glass ceiling: the correlation between the self-diffusivity in and krypton permeation through deeply supercooled liquid nanoscale methanol films. *Journal of Chemical Physics*, **2010**, 132, 124502	3.9	18
46	Reactivity of C2Cl6 and C2Cl4 Multilayers with Fe0 Atoms over FeO(111). *Journal of Physical Chemistry C*, **2009**, 113, 10233-10241	3.8	4

45	Reactivity of Fe0 Atoms and Clusters with D2O over FeO(111). *Journal of Physical Chemistry C*, **2009**, 113, 4960-4969	3.8	11
44	Using rare gas permeation to probe methanol diffusion near the glass transition temperature. *Physical Review Letters*, **2009**, 103, 245902	7.4	16
43	The effect of the incident collision energy on the porosity of vapor-deposited amorphous solid water films. *Journal of Physical Chemistry B*, **2009**, 113, 4000-7	3.4	26
42	Reactivity of Fe0 Atoms, Clusters, and Nanoparticles with CCl4 Multilayers on FeO(111). *Journal of Physical Chemistry C*, **2009**, 113, 1818-1829	3.8	18
41	No confinement needed: observation of a metastable hydrophobic wetting two-layer ice on graphene. *Journal of the American Chemical Society*, **2009**, 131, 12838-44	16.4	161
40	Infrared spectroscopy and optical constants of porous amorphous solid water. *Journal of Physical Chemistry B*, **2009**, 113, 4131-40	3.4	27
39	Adsorption, desorption, and diffusion of nitrogen in a model nanoporous material. I. Surface limited desorption kinetics in amorphous solid water. *Journal of Chemical Physics*, **2007**, 127, 184707	3.9	61
38	Adsorption, desorption, and diffusion of nitrogen in a model nanoporous material. II. Diffusion limited kinetics in amorphous solid water. *Journal of Chemical Physics*, **2007**, 127, 184708	3.9	22
37	Formation of supercooled liquid solutions from nanoscale amorphous solid films of methanol and ethanol. *Journal of Chemical Physics*, **2007**, 127, 244705	3.9	9
36	The effect of the incident collision energy on the phase and crystallization kinetics of vapor deposited water films. *Journal of Chemical Physics*, **2006**, 124, 114710	3.9	35
35	Water adsorption, desorption, and clustering on FeO(111). *Journal of Physical Chemistry B*, **2005**, 109, 10362-70	3.4	30
34	Adsorption and desorption of HCl on Pt(111). *Journal of Physical Chemistry B*, **2005**, 109, 15506-14	3.4	8
33	Nanoscaffold mediates hydrogen release and the reactivity of ammonia borane. *Angewandte Chemie - International Edition*, **2005**, 44, 3578-82	16.4	711
32	Helium diffusion through H2O and D2O amorphous ice: observation of a lattice inverse isotope effect. *Physical Review Letters*, **2004**, 92, 198306	7.4	11
31	Adsorption, desorption, and clustering of H2O on Pt111. *Journal of Chemical Physics*, **2004**, 120, 1516-23	3.9	87
30	Interaction of CH4, CH3Cl, CH2Cl2, CHCl3, and CCl4with O-Terminated FeO(111). *Journal of Physical Chemistry B*, **2004**, 108, 3644-3650	3.4	16
29	The deposition angle-dependent density of amorphous solid water films. *Journal of Chemical Physics*, **2003**, 118, 364-372	3.9	138
28	Molecular Beam Studies of Nanoscale Films of Amorphous Solid Water. *Springer Series in Cluster Physics*, **2003**, 337-357		17

27	A beaker without walls: formation of deeply supercooled binary liquid solutions of alcohols from nanoscale amorphous solid films. *Physical Review Letters*, **2002**, 88, 245505	7.4	26
26	Adsorption Dynamics and Desorption Kinetics of Argon and Methane on MgO(100)□*Journal of Physical Chemistry B*, **2002**, 106, 8360-8366	3.4	28
25	The Relationship between the Self-Diffusivity of Supercooled and Amorphous Solid Water. *ACS Symposium Series*, **2002**, 198-211	0.4	6
24	Structural and Chemical Characterization of Aligned Crystalline Nanoporous MgO Films Grown via Reactive Ballistic Deposition. *Journal of Physical Chemistry B*, **2002**, 106, 3526-3529	3.4	90
23	Control of amorphous solid water morphology using molecular beams. I. Experimental results. *Journal of Chemical Physics*, **2001**, 114, 5284-5294	3.9	231
22	Control of amorphous solid water morphology using molecular beams. II. Ballistic deposition simulations. *Journal of Chemical Physics*, **2001**, 114, 5295-5303	3.9	112
21	Effect of porosity on the adsorption, desorption, trapping, and release of volatile gases by amorphous solid water. *Journal of Geophysical Research*, **2001**, 106, 33387-33392		99
20	Physisorption of CO on the MgO(100) Surface. *Journal of Physical Chemistry B*, **2001**, 105, 3747-3751	3.4	108
19	The self-diffusivity of amorphous solid water near 150 K. *Chemical Physics*, **2000**, 258, 291-305	2.3	84
18	The effect of the underlying substrate on the crystallization kinetics of dense amorphous solid water films. *Journal of Chemical Physics*, **2000**, 112, 5932-5941	3.9	87
17	Substrate induced crystallization of amorphous solid water at low temperatures. *Journal of Chemical Physics*, **1999**, 110, 5489-5492	3.9	83
16	The existence of supercooled liquid water at 150?K. *Nature*, **1999**, 398, 788-791	50.4	248
15	Controlling the morphology of amorphous solid water. *Science*, **1999**, 283, 1505-7	33.3	358
14	The Molecular Volcano: Abrupt CCl4 Desorption Driven by the Crystallization of Amorphous Solid Water. *Physical Review Letters*, **1997**, 79, 909-912	7.4	196
13	MOLECULAR BEAM STUDIES OF KINETIC PROCESSES IN NANOSCALE WATER FILMS. *Surface Review and Letters*, **1997**, 04, 781-797	1.1	50
12	Evidence for Molecular Translational Diffusion during the Crystallization of Amorphous Solid Water. *Journal of Physical Chemistry B*, **1997**, 101, 6123-6126	3.4	98
11	Electron-stimulated desorption of D□(H)□from condensed D2O (H2O) films. *Surface Science*, **1997**, 390, 86-91	1.8	31
10	Desorption and crystallization kinetics in nanoscale thin films of amorphous water ice. *Surface Science*, **1996**, 367, L13-L18	1.8	186

9	H2O Condensation Coefficient and Refractive Index for Vapor-Deposited Ice from Molecular Beam and Optical Interference Measurements. *The Journal of Physical Chemistry*, **1996**, 100, 4988-4995		219
8	The evaporation rate, free energy, and entropy of amorphous water at 150 K. *Journal of Chemical Physics*, **1996**, 105, 240-244	3.9	234
7	The adsorption and desorption of water on single crystal MgO(100): The role of surface defects. *Journal of Chemical Physics*, **1996**, 105, 1295-1298	3.9	141
6	Thermal decomposition of 1,1,1-trichloroethane and 1,1-dichloroethene over high surface area alumina. *Langmuir*, **1992**, 8, 2473-2478	4	15
5	A free jet flow reactor for ion/molecule reaction studies at very low energies. *International Journal of Mass Spectrometry and Ion Processes*, **1990**, 97, 55-86		29
4	Temperature dependence of termolecular association reactions N2+ + 2N2 .fwdarw. N4+ + N2 and O2+ + 2O2 .fwdarw. O4+ + O2 occurring in free jet expansions below 20 K. *The Journal of Physical Chemistry*, **1989**, 93, 8031-8037		15
3	Identification of intramolecular energy transfer pathways in a reactive triatomic system. *Journal of Chemical Physics*, **1988**, 89, 2948-2957	3.9	12
2	Intramolecular energy transfer in the HNC/HCN isomerization reaction: Quasiclassical state specific isomerization rates controlled by localized potential features. *Journal of Chemical Physics*, **1987**, 86, 4452-4460	3.9	19
1	Rotational adiabatic switching of asymmetric top molecules. *Journal of Chemical Physics*, **1986**, 85, 7241-7244	3.9	8