

Alexei Nefedov

List of Publications by Year in descending order

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41
papers

1,697
citations

361413

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276875

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42
all docs

42
docs citations

42
times ranked

2856
citing authors

#	ARTICLE	IF	CITATIONS
1	Structure of the catalytically active copper–ceria interfacial perimeter. <i>Nature Catalysis</i> , 2019, 2, 334-341.	34.4	368
2	Surface Faceting and Reconstruction of Ceria Nanoparticles. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 375-379.	13.8	185
3	Self-metalation of 2H-tetraphenylporphyrin on Cu(111): An x-ray spectroscopy study. <i>Journal of Chemical Physics</i> , 2012, 136, 014705.	3.0	154
4	Metal–Support Interactions of Platinum Nanoparticles Decorated N-Doped Carbon Nanofibers for the Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 82-90.	8.0	120
5	O ₂ Activation on Ceria Catalysts—The Importance of Substrate Crystallographic Orientation. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 16399-16404.	13.8	106
6	Laser-induced hierarchical carbon patterns on polyimide substrates for flexible urea sensors. <i>Npj Flexible Electronics</i> , 2019, 3, .	10.7	87
7	Interplay of Electronic and Steric Effects to Yield Low-Temperature CO Oxidation at Metal Single Sites in Defect-Engineered HKUST-1. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 10514-10518.	13.8	73
8	Advanced Applications of NEXAFS Spectroscopy for Functionalized Surfaces. <i>Springer Series in Surface Sciences</i> , 2013, , 277-303.	0.3	60
9	Chemical activity of oxygen vacancies on ceria: a combined experimental and theoretical study on CeO ₂ (111). <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 24165-24168.	2.8	40
10	Carbon dioxide adsorption on a ZnO(101̄,0) substrate studied by infrared reflection absorption spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 1672-1678.	2.8	38
11	Boron-Doped Graphene Nanoribbons: Electronic Structure and Raman Fingerprint. <i>ACS Nano</i> , 2018, 12, 7571-7582.	14.6	38
12	Rendering Photoreactivity to Ceria: The Role of Defects. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 14301-14305.	13.8	37
13	Methanol adsorption on monocrystalline ceria surfaces. <i>Journal of Catalysis</i> , 2016, 336, 116-125.	6.2	34
14	Carbon Dioxide Adsorption on CeO ₂ (110): An XPS and NEXAFS Study. <i>ChemPhysChem</i> , 2017, 18, 1874-1880.	2.1	34
15	Surface Refaceting Mechanism on Cubic Ceria. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 7925-7931.	4.6	34
16	Nano- and Microstructured Copper/Copper Oxide Composites on Laser-Induced Carbon for Enzyme-Free Glucose Sensors. <i>ACS Applied Nano Materials</i> , 2021, 4, 13747-13760.	5.0	27
17	Interaction of Water Molecules with the $\sqrt{3}\times\sqrt{3}$ -Fe ₂ O ₃ (0001) Surface: A Combined Experimental and Computational Study. <i>Journal of Physical Chemistry C</i> , 2019, 123, 8324-8335.	3.1	26
18	Structural Evolution of $\sqrt{3}\times\sqrt{3}$ -Fe ₂ O ₃ (0001) Surfaces Under Reduction Conditions Monitored by Infrared Spectroscopy. <i>Frontiers in Chemistry</i> , 2019, 7, 451.	3.6	25

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19	IR-spectroscopy of CO adsorption on mixed-terminated ZnO surfaces. <i>Surface Science</i> , 2016, 652, 247-252.	1.9	23
20	Structural Evolution of Water on ZnO(100): From Isolated Monomers via Anisotropic H ₂ O-Bonded 2D and 3D Structures to Isotropic Multilayers. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 17751-17757.	13.8	22
21	Defect-Engineered Metal-Organic Frameworks: A Thorough Characterization of Active Sites Using CO as a Probe Molecule. <i>Journal of Physical Chemistry C</i> , 2021, 125, 593-601.	3.1	15
22	Oberflächenfunktionalisierung und Rekonstruktion von Ceroxid-Nanopartikeln. <i>Angewandte Chemie</i> , 2017, 129, 382-387.	2.0	14
23	Hydrophobic Properties of Calcium-Silicate Hydrates Doped with Rare-Earth Elements. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 14669-14678.	6.7	13
24	Vibrational Frequencies of Cerium-Oxide-Bound CO: A Challenge for Conventional DFT Methods. <i>Physical Review Letters</i> , 2020, 125, 256101.	7.8	13
25	Synthesis and spectroscopic characterization of alkali-metal intercalated ZrSe ₂ . <i>Dalton Transactions</i> , 2018, 47, 2986-2991.	3.3	12
26	CO adsorption on the calcite(10.4) surface: a combined experimental and theoretical study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 7696-7702.	2.8	12
27	Thermally Driven Ag-Au Compositional Changes at the Ligament Surface in Nanoporous Gold: Implications for Electrocatalytic Applications. <i>ACS Applied Nano Materials</i> , 2020, 3, 2197-2206.	5.0	11
28	Chemical Properties of Metal-Silicates Rendered by Metal Exchange Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 8449-8457.	6.7	10
29	Zusammenwirken elektronischer und sterischer Effekte bei der Tieftemperatur-CO-Oxidation an Einzelatom-Metallzentren in defekt-manipuliertem HKUST-1. <i>Angewandte Chemie</i> , 2020, 132, 10600-10604.	2.0	9
30	Doping-Induced Electron Transfer at Organic/Oxide Interfaces: Direct Evidence from Infrared Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2020, 124, 4511-4516.	3.1	7
31	Neutron spectroscopy study of the diffusivity of hydrogen in MoS ₂ . <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 7961-7973.	2.8	7
32	Polarization-dependent vibrational shifts on dielectric substrates. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 17129-17133.	2.8	6
33	Exploring the Preparation Dependence of Crystalline 2D-Extended Ultrathin C8-BTBT-C8 Films. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 16830-16838.	8.0	6
34	Dynamic Structural Evolution of Ceria-Supported Pt Particles: A Thorough Spectroscopic Study. <i>Journal of Physical Chemistry C</i> , 2022, 126, 9051-9058.	3.1	6
35	Spectroscopic Study of Water Adsorption and Desorption on/from Oligo(ethylene glycol)-Substituted Alkanethiolate Self-Assembled Monolayers. <i>Journal of Physical Chemistry C</i> , 2018, 122, 10918-10928.	3.1	5
36	Chemical Reactivity of Supported ZnO Clusters: Undercoordinated Zinc and Oxygen Atoms as Active Sites. <i>ChemPhysChem</i> , 2020, 21, 2553-2564.	2.1	5

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37	Interaction of water with oligo(ethylene glycol) terminated monolayers: wetting <i>versus</i> hydration. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 8088-8095.	2.8	5
38	Formation and Stability of Nontoxic Perovskite Precursor. <i>Langmuir</i> , 2019, 35, 16217-16225.	3.5	4
39	Structural Evolution of Water on ZnO(100): From Isolated Monomers via Anisotropic H-Bonded 2D and 3D Structures to Isotropic Multilayers. <i>Angewandte Chemie</i> , 2019, 131, 17915-17921.	2.0	3
40	N ₂ O Adsorption and Photochemistry on Ceria Surfaces. <i>Journal of Physical Chemistry C</i> , 2022, 126, 2253-2263.	3.1	1
41	Conductance Switching in Liquid Crystal-Inspired Self-Assembled Monolayer Junctions. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 31044-31053.	8.0	1