Sebastian Kunz

List of Publications by Year
in descending order

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65	2,654	218381	182168
papers	citations	26 h-index	51 g-index

66	66	66	3751
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The effect of particle proximity on the oxygen reduction rate of size-selected platinum clusters. Nature Materials, 2013, 12, 919-924.	13.3	327
2	Adsorptive Separation of Isobutene and Isobutane on Cu₃(BTC)₂. Langmuir, 2008, 24, 8634-8642.	1.6	310
3	Control and Manipulation of Gold Nanocatalysis: Effects of Metal Oxide Support Thickness and Composition. Journal of the American Chemical Society, 2009, 131, 538-548.	6.6	203
4	Functionalization of Platinum Nanoparticles with <scp>l</scp>-Proline: Simultaneous Enhancements of Catalytic Activity and Selectivity. Journal of the American Chemical Society, 2015, 137, 905-912.	6.6	144
5	Investigating Particle Size Effects in Catalysis by Applying a Size-Controlled and Surfactant-Free Synthesis of Colloidal Nanoparticles in Alkaline Ethylene Glycol: Case Study of the Oxygen Reduction Reaction on Pt. ACS Catalysis, 2018, 8, 6627-6635.	5.5	119
6	Direct synthesis of H2O2 on Pd and AuxPd1 clusters: Understanding the effects of alloying Pd with Au. Journal of Catalysis, 2018, 357, 163-175.	3.1	106
7	CW and Pulsed ESR Spectroscopy of Cupric Ions in the Metalâ˜'Organic Framework Compound Cu₃(BTC)₂. Journal of Physical Chemistry C, 2008, 112, 2678-2684.	1.5	101
8	Size-selected clusters as heterogeneous model catalysts under applied reaction conditions. Physical Chemistry Chemical Physics, 2010, 12, 10288.	1.3	81
9	Temperature Dependent CO Oxidation Mechanisms on Size-Selected Clusters. Journal of Physical Chemistry C, 2010, 114, 1651-1654.	1.5	76
10	Surface Chemistry of â€œUnprotectedâ€•Nanoparticles: A Spectroscopic Investigation on Colloidal Particles. Journal of Physical Chemistry C, 2015, 119, 17655-17661.	1.5	64
11	Electrochemically induced nanocluster migration. Electrochimica Acta, 2010, 56, 810-816.	2.6	59
12	Asymmetric Heterogeneous Catalysis: Transfer of Molecular Principles to Nanoparticles by Ligand Functionalization. ACS Catalysis, 2017, 7, 3979-3987.	5.5	54
13	Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. Angewandte Chemie - International Edition, 2018, 57, 12338-12341.	7.2	53
14	A fast and sensitive catalytic gas sensors for hydrogen detection based on stabilized nanoparticles as catalytic layer. Sensors and Actuators B: Chemical, 2014, 193, 895-903.	4.0	49
15	Supported, Ligand-Functionalized Nanoparticles: An Attempt to Rationalize the Application and Potential of Ligands in Heterogeneous Catalysis. Topics in Catalysis, 2016, 59, 1671-1685.	1.3	48
16	Influence of Organic Amino and Thiol Ligands on the Geometric and Electronic Surface Properties of Colloidally Prepared Platinum Nanoparticles. Journal of Physical Chemistry C, 2014, 118, 8925-8932.	1.5	45
17	Oxidation State and Symmetry of Magnesia-Supported Pd₁₃O_x Nanocatalysts Influence Activation Barriers of CO Oxidation. Journal of the American Chemical Society, 2012, 134, 7690-7699.	6.6	43
18	Oxidation of Magnesia-Supported Pd₃₀ Nanoclusters and Catalyzed CO Combustion: Size-Selected Experiments and First-Principles Theory. Journal of Physical Chemistry C, 2012, 116, 9594-9607.	1.5	40

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19	Rational design, characterization and catalytic application of metal clusters functionalized with hydrophilic, chiral ligands: a proof of principle study. Physical Chemistry Chemical Physics, 2013, 15, 19253.	1.3	38
20	Mechanistic Evidence for Sequential Displacementâ€“Reduction Routes in the Synthesis of Pdâ€“Au Clusters with Uniform Size and Clean Surfaces. Journal of Physical Chemistry C, 2014, 118, 7468-7479.	1.5	38
21	Nanoparticles in a box: a concept to isolate, store and re-use colloidal surfactant-free precious metal nanoparticles. Journal of Materials Chemistry A, 2017, 5, 6140-6145.	5.2	37
22	UVâ€Induced Synthesis and Stabilization of Surfactantâ€Free Colloidal Pt Nanoparticles with Controlled Particle Size in Ethylene Glycol. ChemNanoMat, 2017, 3, 89-93.	1.5	30
23	Monovalent Alkali Cations: Simple and Eco-Friendly Stabilizers for Surfactant-Free Precious Metal Nanoparticle Colloids. ACS Sustainable Chemistry and Engineering, 2019, 7, 13680-13686.	3.2	29
24	Insights into the reaction mechanism and particle size effects of CO oxidation over supported Pt nanoparticle catalysts. Journal of Catalysis, 2019, 377, 662-672.	3.1	29
25	The effect of particle size and ligand configuration on the asymmetric catalytic properties of proline-functionalized Pt-nanoparticles. Chemical Communications, 2015, 51, 16221-16224.	2.2	28
26	Dual pulsed-beam controlled mole fraction studies of the catalytic oxidation of CO on supported Pd nanocatalysts. Journal of Catalysis, 2008, 255, 234-240.	3.1	27
27	Controlled Synthesis of Surfactantâ€Free Waterâ€Dispersible Colloidal Platinum Nanoparticles by the Co4Cat Process. ChemSusChem, 2019, 12, 1229-1239.	3.6	27
28	Solventâ€Dependent Growth and Stabilization Mechanisms of Surfactantâ€Free Colloidal Pt Nanoparticles. Chemistry - A European Journal, 2020, 26, 9012-9023.	1.7	26
29	Stabilizing Catalytically Active Nanoparticles by Ligand Linking: Toward Three-Dimensional Networks with High Catalytic Surface Area. Langmuir, 2014, 30, 5564-5573.	1.6	25
30	Beyond Active Site Design: A Surfactantâ€Free Toolbox Approach for Optimized Supported Nanoparticle Catalysts. ChemCatChem, 2021, 13, 1692-1705.	1.8	23
31	Adsorption and Diffusion of Hydrogen on the Surface of the Pt₂₄ Subnanoparticle. A DFT Study. Journal of Physical Chemistry C, 2016, 120, 18570-18587.	1.5	20
32	Ligand-functionalized Pt nanoparticles as asymmetric heterogeneous catalysts: molecular reaction control by ligandâ€“reactant interactions. Catalysis Science and Technology, 2018, 8, 6062-6075.	2.1	19
33	Effects of Particle Size on Strong Metalâ€“Support Interactions Using Colloidal â€œSurfactant-Freeâ€•Pt Nanoparticles Supported on Fe₃O₄. ACS Catalysis, 2020, 10, 4136-4150.	5.5	19
34	Ligand-stabilized Pt nanoparticles (NPs) as novel materials for catalytic gas sensing: influence of the ligand on important catalytic properties. Physical Chemistry Chemical Physics, 2014, 16, 21243-21251.	1.3	18
35	Mechanistic study on â€“Câ€“Oâ€“ and â€“Câ€“Câ€“ hydrogenolysis over Cu catalysts: identification of reaction pathways and key intermediates. Catalysis Science and Technology, 2018, 8, 755-767.	2.1	18
36	Temperature Modulation of a Catalytic Gas Sensor. Sensors, 2014, 14, 20372-20381.	2.1	17

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37	Halideâ€Induced Leaching of Pt Nanoparticles â€“ Manipulation of Particle Size by Controlled Ostwald Ripening. ChemNanoMat, 2019, 5, 462-471.	1.5	17
38	Novel nanoparticle catalysts for catalytic gas sensing. Catalysis Science and Technology, 2016, 6, 339-348.	2.1	16
39	Microkinetic simulations of the oxidation of CO on Pd based nanocatalysis: a model including co-dependent support interactions. Physical Chemistry Chemical Physics, 2008, 10, 5875.	1.3	15
40	Influence of Sn content on the hydrogenation of crotonaldehyde catalysed by colloidally prepared PtSn nanoparticles. Physical Chemistry Chemical Physics, 2015, 17, 28186-28192.	1.3	15
41	Synthesis Mechanism and Influence of Light on Unprotected Platinum Nanoparticles Synthesis at Room Temperature. ChemNanoMat, 2016, 2, 104-107.	1.5	15
42	Reactive oxygen species (ROS) formation ability and stability of small copper (Cu) nanoparticles (NPs). RSC Advances, 2016, 6, 76980-76988.	1.7	15
43	Dual reverse spill-over: Microkinetic simulations of the CO oxidation on Pd nanocatalysts. Chemical Physics Letters, 2008, 461, 235-237.	1.2	14
44	Visible-Light-Induced Synthesis of â€œSurfactant-Freeâ€•Pt Nanoparticles in Ethylene Glycol as a Synthetic Approach for Mechanistic Studies on Nanoparticle Formation. Journal of Physical Chemistry C, 2020, 124, 21798-21809.	1.5	13
45	1-Naphthylamine functionalized Pt nanoparticles: electrochemical activity and redox chemistry occurring on one surface. New Journal of Chemistry, 2015, 39, 2557-2564.	1.4	12
46	Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. Angewandte Chemie, 2018, 130, 12518-12521.	1.6	12
47	Room temperature CO oxidation catalysed by supported Pt nanoparticles revealed by solid-state NMR and DNP spectroscopy. Catalysis Science and Technology, 2019, 9, 3743-3752.	2.1	12
48	Improving metastable impact electron spectroscopy and ultraviolet photoelectron spectroscopy signals by means of a modified time-of-flight separation. Review of Scientific Instruments, 2012, 83, 013114.	0.6	11
49	Design and Fabrication Challenges of a Highly Sensitive Thermoelectric-Based Hydrogen Gas Sensor. Micromachines, 2019, 10, 650.	1.4	10
50	Elucidation of the Active Sites for Monodisperse FePt and Pt Nanocrystal Catalysts for p-WSe₂ Photocathodes. Journal of Physical Chemistry C, 2020, 124, 11877-11885.	1.5	10
51	Same ligand â€“ Different binding: A way to control the binding of N-acetyl-cysteine (NAC) to Pt clusters. Journal of Colloid and Interface Science, 2014, 426, 264-269.	5.0	9
52	Kinetic analysis of the asymmetric hydrogenation of ÃŸ-keto esters over Î±-amino acid-functionalized Pt nanoparticles. Journal of Catalysis, 2019, 374, 82-92.	3.1	9
53	Characterization of a highly sensitive and selective hydrogen gas sensor employing Pt nanoparticle network catalysts based on different bifunctional ligands. Sensors and Actuators B: Chemical, 2020, 322, 128619.	4.0	9
54	Ligand-Linked Nanoparticles-Based Hydrogen Gas Sensor with Excellent Homogeneous Temperature Field and a Comparative Stability Evaluation of Different Ligand-Linked Catalysts. Sensors, 2019, 19, 1205.	2.1	8

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55	Molecular Insights into the Ligandâ€Reactant Interactions of Pt Nanoparticles Functionalized with Î±â€Amino Acids as Asymmetric Catalysts for Î²â€Keto Esters. ChemCatChem, 2019, 11, 2732-2742.	1.8	8
56	Size effect studies in catalysis: a simple surfactant-free synthesis of sub 3Ânm Pd nanocatalysts supported on carbon. RSC Advances, 2018, 8, 33794-33797.	1.7	7
57	Anion Dependent Particle Size Control of Platinum Nanoparticles Synthesized in Ethylene Glycol. Nanomaterials, 2021, 11, 2092.	1.9	6
58	Adsorption studies of trichloroethylene (TCE) on MgO(100)/Mo(100). Surface Science, 2010, 604, 2184-2189.	0.8	5
59	Synthesis and Characterization of Ligandâ€Linked Pt Nanoparticles: Tunable, Threeâ€Dimensional, Porous Networks for Catalytic Hydrogen Sensing. ChemistryOpen, 2021, 10, 697-712.	0.9	4
60	Shaping of mesoporous molecular sieves. Studies in Surface Science and Catalysis, 2007, 165, 181-184.	1.5	3
61	Highly Sensitive and Selective Hydrogen Gas Sensor with Platinum Nanoparticles Linked by 4,4"-Diamino-P-Terphenyl (Dater). , 2019, , .		3
62	Biorefinery Zeitz of the SÃ¼dzucker Group â€“ Status Quo and Future Perspectives. Chemie-Ingenieur-Technik, 2020, 92, 1752-1763.	0.4	3
63	Structureâ€“selectivity relationships for polyol hydrogenolysis over Ru catalysts. Reaction Chemistry and Engineering, 2020, 5, 1671-1681.	1.9	2
64	Catalytic Micro Gas Sensor with Excellent Homogeneous Temperature Distribution and Low Power Consumption for Long-Term Stable Operation. Proceedings (mdpi), 2018, 2, .	0.2	1
65	Surfactant-Free Preparation of Ir Based Oer Catalysts in Low Boiling Point Solvents and Their Catalytic Evaluation. ECS Meeting Abstracts, 2018, , .	0.0	0