Sebastian Kunz

List of Publications by Citations

63 papers	2,202 citations	24 h-index	46 g-index
66 ext. papers	2,444 ext. citations	6 avg, IF	4.98 L-index

#	Paper	IF	Citations
63	The effect of particle proximity on the oxygen reduction rate of size-selected platinum clusters. *Nature Materials*, **2013**, 12, 919-24	27	286
62	Adsorptive separation of isobutene and isobutane on Cu3(BTC)2. *Langmuir*, **2008**, 24, 8634-42	4	283
61	Control and manipulation of gold nanocatalysis: effects of metal oxide support thickness and composition. *Journal of the American Chemical Society*, **2009**, 131, 538-48	16.4	184
60	Functionalization of platinum nanoparticles with L-proline: simultaneous enhancements of catalytic activity and selectivity. *Journal of the American Chemical Society*, **2015**, 137, 905-12	16.4	119
59	CW and Pulsed ESR Spectroscopy of Cupric Ions in the Metal-Organic Framework Compound Cu3(BTC)2. *Journal of Physical Chemistry C*, **2008**, 112, 2678-2684	3.8	89
58	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	13.1	79
57	Direct synthesis of H2O2 on Pd and AuxPd1 clusters: Understanding the effects of alloying Pd with Au. *Journal of Catalysis*, **2018**, 357, 163-175	7.3	79
56	Size-selected clusters as heterogeneous model catalysts under applied reaction conditions. *Physical Chemistry Chemical Physics*, **2010**, 12, 10288-91	3.6	73
55	Temperature Dependent CO Oxidation Mechanisms on Size-Selected Clusters. *Journal of Physical Chemistry C*, **2010**, 114, 1651-1654	3.8	68
54	Surface Chemistry of “Unprotected” Nanoparticles: A Spectroscopic Investigation on Colloidal Particles. *Journal of Physical Chemistry C*, **2015**, 119, 17655-17661	3.8	55
53	Electrochemically induced nanocluster migration. *Electrochimica Acta*, **2010**, 56, 810-816	6.7	49
52	Asymmetric Heterogeneous Catalysis: Transfer of Molecular Principles to Nanoparticles by Ligand Functionalization. *ACS Catalysis*, **2017**, 7, 3979-3987	13.1	44
51	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	3.8	40
50	Oxidation state and symmetry of magnesia-supported Pd13O(x) nanocatalysts influence activation barriers of CO oxidation. *Journal of the American Chemical Society*, **2012**, 134, 7690-9	16.4	39
49	Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. *Angewandte Chemie - International Edition*, **2018**, 57, 12338-12341	16.4	38
48	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	8.5	38
47	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	3.8	38

46	Supported, Ligand-Functionalized Nanoparticles: An Attempt to Rationalize the Application and Potential of Ligands in Heterogeneous Catalysis. *Topics in Catalysis*, **2016**, 59, 1671-1685	2.3	36
45	Mechanistic Evidence for Sequential Displacement–Reduction Routes in the Synthesis of Pd–Au Clusters with Uniform Size and Clean Surfaces. *Journal of Physical Chemistry C*, **2014**, 118, 7468-7479	3.8	36
44	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, 19253-61	3.6	34
43	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	13	32
42	Dual pulsed-beam controlled mole fraction studies of the catalytic oxidation of CO on supported Pd nanocatalysts. *Journal of Catalysis*, **2008**, 255, 234-240	7.3	27
41	The effect of particle size and ligand configuration on the asymmetric catalytic properties of proline-functionalized Pt-nanoparticles. *Chemical Communications*, **2015**, 51, 16221-4	5.8	26
40	Controlled Synthesis of Surfactant-Free Water-Dispersible Colloidal Platinum Nanoparticles by the Co4Cat Process. *ChemSusChem*, **2019**, 12, 1229-1239	8.3	24
39	UV-Induced Synthesis and Stabilization of Surfactant-Free Colloidal Pt Nanoparticles with Controlled Particle Size in Ethylene Glycol. *ChemNanoMat*, **2017**, 3, 89-93	3.5	22
38	Stabilizing catalytically active nanoparticles by ligand linking: toward three-dimensional networks with high catalytic surface area. *Langmuir*, **2014**, 30, 5564-73	4	20
37	Monovalent Alkali Cations: Simple and Eco-Friendly Stabilizers for Surfactant-Free Precious Metal Nanoparticle Colloids. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 13680-13686	8.3	19
36	Adsorption and Diffusion of Hydrogen on the Surface of the Pt24 Subnanoparticle. A DFT Study. *Journal of Physical Chemistry C*, **2016**, 120, 18570-18587	3.8	17
35	Insights into the reaction mechanism and particle size effects of CO oxidation over supported Pt nanoparticle catalysts. *Journal of Catalysis*, **2019**, 377, 662-672	7.3	16
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, 21243-51	3.6	16
33	Solvent-Dependent Growth and Stabilization Mechanisms of Surfactant-Free Colloidal Pt Nanoparticles. *Chemistry - A European Journal*, **2020**, 26, 9012-9023	4.8	15
32	Microkinetic simulations of the oxidation of CO on Pd based nanocatalysis: a model including co-dependent support interactions. *Physical Chemistry Chemical Physics*, **2008**, 10, 5875-81	3.6	15
31	Mechanistic study on C–O and C–C hydrogenolysis over Cu catalysts: identification of reaction pathways and key intermediates. *Catalysis Science and Technology*, **2018**, 8, 755-767	5.5	15
30	Ligand-functionalized Pt nanoparticles as asymmetric heterogeneous catalysts: molecular reaction control by ligand–reactant interactions. *Catalysis Science and Technology*, **2018**, 8, 6062-6075	5.5	15
29	Novel nanoparticle catalysts for catalytic gas sensing. *Catalysis Science and Technology*, **2016**, 6, 339-348	5.5	14

28	Dual reverse spill-over: Microkinetic simulations of the CO oxidation on Pd nanocatalysts. *Chemical Physics Letters*, **2008**, 461, 235-237	2.5	14
27	Halide-Induced Leaching of Pt Nanoparticles □Manipulation of Particle Size by Controlled Ostwald Ripening. *ChemNanoMat*, **2019**, 5, 462-471	3.5	14
26	Influence of Sn content on the hydrogenation of crotonaldehyde catalysed by colloidally prepared PtSn nanoparticles. *Physical Chemistry Chemical Physics*, **2015**, 17, 28186-92	3.6	13
25	Effects of Particle Size on Strong Metal□Support Interactions Using Colloidal □Surfactant-Free□Pt Nanoparticles Supported on Fe3O4. *ACS Catalysis*, **2020**, 10, 4136-4150	13.1	13
24	Beyond Active Site Design: A Surfactant-Free Toolbox Approach for Optimized Supported Nanoparticle Catalysts. *ChemCatChem*, **2021**, 13, 1692-1705	5.2	13
23	Reactive oxygen species (ROS) formation ability and stability of small copper (Cu) nanoparticles (NPs). *RSC Advances*, **2016**, 6, 76980-76988	3.7	12
22	1-Naphthylamine functionalized Pt nanoparticles: electrochemical activity and redox chemistry occurring on one surface. *New Journal of Chemistry*, **2015**, 39, 2557-2564	3.6	12
21	Synthesis Mechanism and Influence of Light on Unprotected Platinum Nanoparticles Synthesis at Room Temperature. *ChemNanoMat*, **2016**, 2, 104-107	3.5	12
20	Temperature modulation of a catalytic gas sensor. *Sensors*, **2014**, 14, 20372-81	3.8	11
19	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	1.7	10
18	Same ligand--different binding: a way to control the binding of N-acetyl-cysteine (NAC) to Pt clusters. *Journal of Colloid and Interface Science*, **2014**, 426, 264-9	9.3	8
17	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	5.5	7
16	Molecular Insights into the Ligand-Reactant Interactions of Pt Nanoparticles Functionalized with □Amino Acids as Asymmetric Catalysts for □Keto Esters. *ChemCatChem*, **2019**, 11, 2732-2742	5.2	7
15	Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. *Angewandte Chemie*, **2018**, 130, 12518-12521	3.6	7
14	Visible-Light-Induced Synthesis of □Surfactant-Free□Pt Nanoparticles in Ethylene Glycol as a Synthetic Approach for Mechanistic Studies on Nanoparticle Formation. *Journal of Physical Chemistry C*, **2020**, 124, 21798-21809	3.8	7
13	Size effect studies in catalysis: a simple surfactant-free synthesis of sub 3□nm Pd nanocatalysts supported on carbon.. *RSC Advances*, **2018**, 8, 33794-33797	3.7	6
12	Kinetic analysis of the asymmetric hydrogenation of □keto esters over □amino acid-functionalized Pt nanoparticles. *Journal of Catalysis*, **2019**, 374, 82-92	7.3	5
11	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,	3.8	5

10	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	3.8	5
9	Adsorption studies of trichloroethylene (TCE) on MgO(100)/Mo(100). *Surface Science*, **2010**, 604, 2184-2189	1.8	4
8	Design and Fabrication Challenges of a Highly Sensitive Thermoelectric-Based Hydrogen Gas Sensor. *Micromachines*, **2019**, 10,	3.3	3
7	Shaping of mesoporous molecular sieves. *Studies in Surface Science and Catalysis*, **2007**, 165, 181-184	1.8	3
6	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	8.5	3
5	Structure□selectivity relationships for polyol hydrogenolysis over Ru catalysts. *Reaction Chemistry and Engineering*, **2020**, 5, 1671-1681	4.9	2
4	Highly Sensitive and Selective Hydrogen Gas Sensor with Platinum Nanoparticles Linked by 4,4"-Diamino-P-Terphenyl (Dater) **2019**,		1
3	Biorefinery Zeitz of the S□zucker Group □Status Quo and Future Perspectives. *Chemie-Ingenieur-Technik*, **2020**, 92, 1752-1763	0.8	1
2	Synthesis and Characterization of Ligand-Linked Pt Nanoparticles: Tunable, Three-Dimensional, Porous Networks for Catalytic Hydrogen Sensing. *ChemistryOpen*, **2021**, 10, 697-712	2.3	1
1	Catalytic Micro Gas Sensor with Excellent Homogeneous Temperature Distribution and Low Power Consumption for Long-Term Stable Operation. *Proceedings (mdpi)*, **2018**, 2, 927	0.3	1