

Sebastian Kunz

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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 | Synthesis and Characterization of Ligand-Linked Pt Nanoparticles: Tunable, Three-Dimensional, Porous Networks for Catalytic Hydrogen Sensing. <i>ChemistryOpen</i> , 2021 , 10, 697-712 | 2.3 | 1 |
| 62 | Beyond Active Site Design: A Surfactant-Free Toolbox Approach for Optimized Supported Nanoparticle Catalysts. <i>ChemCatChem</i> , 2021 , 13, 1692-1705 | 5.2 | 13 |
| 61 | Biorefinery Zeitz of the Südzucker Group – Status Quo and Future Perspectives. <i>Chemie-Ingenieur-Technik</i> , 2020 , 92, 1752-1763 | 0.8 | 1 |
| 60 | Elucidation of the Active Sites for Monodisperse FePt and Pt Nanocrystal Catalysts for p-WSe ₂ Photocathodes. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 11877-11885 | 3.8 | 5 |
| 59 | Solvent-Dependent Growth and Stabilization Mechanisms of Surfactant-Free Colloidal Pt Nanoparticles. <i>Chemistry - A European Journal</i> , 2020 , 26, 9012-9023 | 4.8 | 15 |
| 58 | Effects of Particle Size on Strong Metal-Support Interactions Using Colloidal Surfactant-Free Pt Nanoparticles Supported on Fe ₃ O ₄ . <i>ACS Catalysis</i> , 2020 , 10, 4136-4150 | 13.1 | 13 |
| 57 | Visible-Light-Induced Synthesis of Surfactant-Free Pt Nanoparticles in Ethylene Glycol as a Synthetic Approach for Mechanistic Studies on Nanoparticle Formation. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 21798-21809 | 3.8 | 7 |
| 56 | Structure-Selectivity relationships for polyol hydrogenolysis over Ru catalysts. <i>Reaction Chemistry and Engineering</i> , 2020 , 5, 1671-1681 | 4.9 | 2 |
| 55 | Characterization of a highly sensitive and selective hydrogen gas sensor employing Pt nanoparticle network catalysts based on different bifunctional ligands. <i>Sensors and Actuators B: Chemical</i> , 2020 , 322, 128619 | 8.5 | 3 |
| 54 | Highly Sensitive and Selective Hydrogen Gas Sensor with Platinum Nanoparticles Linked by 4,4"-Diamino-P-Terphenyl (Dater) 2019 , | | 1 |
| 53 | Insights into the reaction mechanism and particle size effects of CO oxidation over supported Pt nanoparticle catalysts. <i>Journal of Catalysis</i> , 2019 , 377, 662-672 | 7.3 | 16 |
| 52 | Controlled Synthesis of Surfactant-Free Water-Dispersible Colloidal Platinum Nanoparticles by the Co4Cat Process. <i>ChemSusChem</i> , 2019 , 12, 1229-1239 | 8.3 | 24 |
| 51 | Room temperature CO oxidation catalysed by supported Pt nanoparticles revealed by solid-state NMR and DNP spectroscopy. <i>Catalysis Science and Technology</i> , 2019 , 9, 3743-3752 | 5.5 | 7 |
| 50 | Kinetic analysis of the asymmetric hydrogenation of α -keto esters over β -amino acid-functionalized Pt nanoparticles. <i>Journal of Catalysis</i> , 2019 , 374, 82-92 | 7.3 | 5 |
| 49 | Ligand-Linked Nanoparticles-Based Hydrogen Gas Sensor with Excellent Homogeneous Temperature Field and a Comparative Stability Evaluation of Different Ligand-Linked Catalysts. <i>Sensors</i> , 2019 , 19, | 3.8 | 5 |
| 48 | Molecular Insights into the Ligand-Reactant Interactions of Pt Nanoparticles Functionalized with β -Amino Acids as Asymmetric Catalysts for α -Keto Esters. <i>ChemCatChem</i> , 2019 , 11, 2732-2742 | 5.2 | 7 |
| 47 | Monovalent Alkali Cations: Simple and Eco-Friendly Stabilizers for Surfactant-Free Precious Metal Nanoparticle Colloids. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 13680-13686 | 8.3 | 19 |

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| 46 | Design and Fabrication Challenges of a Highly Sensitive Thermoelectric-Based Hydrogen Gas Sensor. <i>Micromachines</i> , 2019 , 10, | 3.3 | 3 |
| 45 | Halide-Induced Leaching of Pt Nanoparticles [Manipulation of Particle Size by Controlled Ostwald Ripening. <i>ChemNanoMat</i> , 2019 , 5, 462-471 | 3.5 | 14 |
| 44 | Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. <i>Angewandte Chemie</i> , 2018 , 130, 12518-12521 | 3.6 | 7 |
| 43 | Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 12338-12341 | 16.4 | 38 |
| 42 | 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. <i>ACS Catalysis</i> , 2018 , 8, 6627-6635 | 13.1 | 79 |
| 41 | Direct synthesis of H ₂ O ₂ on Pd and AuPd ₁ clusters: Understanding the effects of alloying Pd with Au. <i>Journal of Catalysis</i> , 2018 , 357, 163-175 | 7.3 | 79 |
| 40 | Mechanistic study on CO and CO ₂ hydrogenolysis over Cu catalysts: identification of reaction pathways and key intermediates. <i>Catalysis Science and Technology</i> , 2018 , 8, 755-767 | 5.5 | 15 |
| 39 | Ligand-functionalized Pt nanoparticles as asymmetric heterogeneous catalysts: molecular reaction control by ligand-reactant interactions. <i>Catalysis Science and Technology</i> , 2018 , 8, 6062-6075 | 5.5 | 15 |
| 38 | Size effect studies in catalysis: a simple surfactant-free synthesis of sub 3 nm Pd nanocatalysts supported on carbon.. <i>RSC Advances</i> , 2018 , 8, 33794-33797 | 3.7 | 6 |
| 37 | Catalytic Micro Gas Sensor with Excellent Homogeneous Temperature Distribution and Low Power Consumption for Long-Term Stable Operation. <i>Proceedings (mdpi)</i> , 2018 , 2, 927 | 0.3 | 1 |
| 36 | Nanoparticles in a box: a concept to isolate, store and re-use colloidal surfactant-free precious metal nanoparticles. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 6140-6145 | 13 | 32 |
| 35 | Asymmetric Heterogeneous Catalysis: Transfer of Molecular Principles to Nanoparticles by Ligand Functionalization. <i>ACS Catalysis</i> , 2017 , 7, 3979-3987 | 13.1 | 44 |
| 34 | UV-Induced Synthesis and Stabilization of Surfactant-Free Colloidal Pt Nanoparticles with Controlled Particle Size in Ethylene Glycol. <i>ChemNanoMat</i> , 2017 , 3, 89-93 | 3.5 | 22 |
| 33 | Supported, Ligand-Functionalized Nanoparticles: An Attempt to Rationalize the Application and Potential of Ligands in Heterogeneous Catalysis. <i>Topics in Catalysis</i> , 2016 , 59, 1671-1685 | 2.3 | 36 |
| 32 | Reactive oxygen species (ROS) formation ability and stability of small copper (Cu) nanoparticles (NPs). <i>RSC Advances</i> , 2016 , 6, 76980-76988 | 3.7 | 12 |
| 31 | Novel nanoparticle catalysts for catalytic gas sensing. <i>Catalysis Science and Technology</i> , 2016 , 6, 339-348 | 5.5 | 14 |
| 30 | Synthesis Mechanism and Influence of Light on Unprotected Platinum Nanoparticles Synthesis at Room Temperature. <i>ChemNanoMat</i> , 2016 , 2, 104-107 | 3.5 | 12 |
| 29 | Adsorption and Diffusion of Hydrogen on the Surface of the Pt ₂₄ Subnanoparticle. A DFT Study. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 18570-18587 | 3.8 | 17 |

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| 28 | Surface Chemistry of Unprotected Nanoparticles: A Spectroscopic Investigation on Colloidal Particles. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 17655-17661 | 3.8 | 55 |
| 27 | The effect of particle size and ligand configuration on the asymmetric catalytic properties of proline-functionalized Pt-nanoparticles. <i>Chemical Communications</i> , 2015 , 51, 16221-4 | 5.8 | 26 |
| 26 | Influence of Sn content on the hydrogenation of crotonaldehyde catalysed by colloiddally prepared PtSn nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 28186-92 | 3.6 | 13 |
| 25 | 1-Naphthylamine functionalized Pt nanoparticles: electrochemical activity and redox chemistry occurring on one surface. <i>New Journal of Chemistry</i> , 2015 , 39, 2557-2564 | 3.6 | 12 |
| 24 | Functionalization of platinum nanoparticles with L-proline: simultaneous enhancements of catalytic activity and selectivity. <i>Journal of the American Chemical Society</i> , 2015 , 137, 905-12 | 16.4 | 119 |
| 23 | Stabilizing catalytically active nanoparticles by ligand linking: toward three-dimensional networks with high catalytic surface area. <i>Langmuir</i> , 2014 , 30, 5564-73 | 4 | 20 |
| 22 | Ligand-stabilized Pt nanoparticles (NPs) as novel materials for catalytic gas sensing: influence of the ligand on important catalytic properties. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 21243-51 | 3.6 | 16 |
| 21 | Mechanistic Evidence for Sequential Displacement Reduction Routes in the Synthesis of PdAu Clusters with Uniform Size and Clean Surfaces. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 7468-7479 | 3.8 | 36 |
| 20 | Influence of Organic Amino and Thiol Ligands on the Geometric and Electronic Surface Properties of Colloiddally Prepared Platinum Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 8925-8932 | 3.8 | 40 |
| 19 | Same ligand--different binding: a way to control the binding of N-acetyl-cysteine (NAC) to Pt clusters. <i>Journal of Colloid and Interface Science</i> , 2014 , 426, 264-9 | 9.3 | 8 |
| 18 | A fast and sensitive catalytic gas sensors for hydrogen detection based on stabilized nanoparticles as catalytic layer. <i>Sensors and Actuators B: Chemical</i> , 2014 , 193, 895-903 | 8.5 | 38 |
| 17 | Temperature modulation of a catalytic gas sensor. <i>Sensors</i> , 2014 , 14, 20372-81 | 3.8 | 11 |
| 16 | The effect of particle proximity on the oxygen reduction rate of size-selected platinum clusters. <i>Nature Materials</i> , 2013 , 12, 919-24 | 27 | 286 |
| 15 | Rational design, characterization and catalytic application of metal clusters functionalized with hydrophilic, chiral ligands: a proof of principle study. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 19253-61 | 3.6 | 34 |
| 14 | Oxidation of Magnesia-Supported Pd ₃₀ Nanoclusters and Catalyzed CO Combustion: Size-Selected Experiments and First-Principles Theory. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 9594-9607 | 3.8 | 38 |
| 13 | Oxidation state and symmetry of magnesia-supported Pd ₁₃₀ (x) nanocatalysts influence activation barriers of CO oxidation. <i>Journal of the American Chemical Society</i> , 2012 , 134, 7690-9 | 16.4 | 39 |
| 12 | Improving metastable impact electron spectroscopy and ultraviolet photoelectron spectroscopy signals by means of a modified time-of-flight separation. <i>Review of Scientific Instruments</i> , 2012 , 83, 013117 | 1.7 | 10 |
| 11 | Temperature Dependent CO Oxidation Mechanisms on Size-Selected Clusters. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 1651-1654 | 3.8 | 68 |

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| 10 | Size-selected clusters as heterogeneous model catalysts under applied reaction conditions. <i>Physical Chemistry Chemical Physics</i> , 2010 , 12, 10288-91 | 3.6 | 73 |
| 9 | Electrochemically induced nanocluster migration. <i>Electrochimica Acta</i> , 2010 , 56, 810-816 | 6.7 | 49 |
| 8 | Adsorption studies of trichloroethylene (TCE) on MgO(100)/Mo(100). <i>Surface Science</i> , 2010 , 604, 2184-2189 | 1.8 | 4 |
| 7 | Control and manipulation of gold nanocatalysis: effects of metal oxide support thickness and composition. <i>Journal of the American Chemical Society</i> , 2009 , 131, 538-48 | 16.4 | 184 |
| 6 | Dual pulsed-beam controlled mole fraction studies of the catalytic oxidation of CO on supported Pd nanocatalysts. <i>Journal of Catalysis</i> , 2008 , 255, 234-240 | 7.3 | 27 |
| 5 | Adsorptive separation of isobutene and isobutane on Cu ₃ (BTC) ₂ . <i>Langmuir</i> , 2008 , 24, 8634-42 | 4 | 283 |
| 4 | CW and Pulsed ESR Spectroscopy of Cupric Ions in the MetalOrganic Framework Compound Cu ₃ (BTC) ₂ . <i>Journal of Physical Chemistry C</i> , 2008 , 112, 2678-2684 | 3.8 | 89 |
| 3 | Microkinetic simulations of the oxidation of CO on Pd based nanocatalysis: a model including co-dependent support interactions. <i>Physical Chemistry Chemical Physics</i> , 2008 , 10, 5875-81 | 3.6 | 15 |
| 2 | Dual reverse spill-over: Microkinetic simulations of the CO oxidation on Pd nanocatalysts. <i>Chemical Physics Letters</i> , 2008 , 461, 235-237 | 2.5 | 14 |
| 1 | Shaping of mesoporous molecular sieves. <i>Studies in Surface Science and Catalysis</i> , 2007 , 165, 181-184 | 1.8 | 3 |