Kristina Tschulik

List of Publications by Year in Descending Order

136 papers	3,418 citations	33 h-index	48 g-index
153 ext. papers	4,061 ext. citations	6.5 avg, IF	5.69 L-index

#	Paper	IF	Citations
136	3D atomic-scale imaging of mixed Co-Fe spinel oxide nanoparticles during oxygen evolution reaction.. *Nature Communications*, **2022**, 13, 179	17.4	15
135	Electrochemistry under confinement.. *Chemical Society Reviews*, **2022**,	58.5	11
134	Single CoO Nanocubes Electrocatalyzing the Oxygen Evolution Reaction: Nano-Impact Insights into Intrinsic Activity and Support Effects. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	4
133	Stripping away ion hydration shells in electrical double-layer formation: Water networks matter. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	7
132	Thermal Detection of Glucose in Urine Using a Molecularly Imprinted Polymer as a Recognition Element. *ACS Sensors*, **2021**,	9.2	6
131	Interface Sensitivity in Electron/Ion Yield X-ray Absorption Spectroscopy: The TiO-HO Interface. *Journal of Physical Chemistry Letters*, **2021**, 12, 10212-10217	6.4	3
130	Design Strategies for Electrocatalysts from an Electrochemist Perspective. *ACS Catalysis*, **2021**, 11, 5318-5346	13.1	26
129	Nanoparticle impact electrochemistry. *Frontiers of Nanoscience*, **2021**, 18, 203-252	0.7	1
128	Direct Detection of Surface Species Formed on Iridium Electrocatalysts during the Oxygen Evolution Reaction. *Angewandte Chemie*, **2021**, 133, 21566-21573	3.6	4
127	Direct Detection of Surface Species Formed on Iridium Electrocatalysts during the Oxygen Evolution Reaction. *Angewandte Chemie - International Edition*, **2021**, 60, 21396-21403	16.4	6
126	A Perspective on Heterogeneous Catalysts for the Selective Oxidation of Alcohols. *Chemistry - A European Journal*, **2021**, 27, 16809-16833	4.8	8
125	Metal-Rich Chalcogenides for Electrocatalytic Hydrogen Evolution: Activity of Electrodes and Bulk Materials. *ChemElectroChem*, **2020**, 7, 1514-1527	4.3	32
124	Enhanced antibacterial performance of ultrathin silver/platinum nanopatches by a sacrificial anode mechanism. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2020**, 24, 102126	6	8
123	Implications of resistance and mass transport limitations on the common Tafel approach at composite catalyst thin-film electrodes. *Journal of Electroanalytical Chemistry*, **2020**, 872, 114345	4.1	7
122	Ultrafast Construction of Oxygen-Containing Scaffold over Graphite for Trapping Ni into Single Atom Catalysts. *ACS Nano*, **2020**, 14, 11662-11669	16.7	9
121	Electrochemical dealloying as a tool to tune the porosity, composition and catalytic activity of nanomaterials. *Journal of Materials Chemistry A*, **2020**, 8, 19405-19413	13	7
120	Enhanced dissolution of silver nanoparticles in a physical mixture with platinum nanoparticles based on the sacrificial anode effect. *Nanotechnology*, **2020**, 31, 055703	3.4	5

119	The electrochemical dissolution of single silver nanoparticles enlightened by hyperspectral dark-field microscopy. *Electrochimica Acta*, **2019**, 301, 458-464	6.7	21
118	Intrinsic Activity of Oxygen Evolution Catalysts Probed at Single CoFeO Nanoparticles. *Journal of the American Chemical Society*, **2019**, 141, 9197-9201	16.4	60
117	Partikel f□ Partikel □elektrochemische Einschlagsexperimente zur Synthese oberfl□henimmobilisierter Goldnanopartikel f□ die Elektrokatalyse. *Angewandte Chemie*, **2019**, 131, 8305-8309	3.6	1
116	Piece by Piece-Electrochemical Synthesis of Individual Nanoparticles and their Performance in ORR Electrocatalysis. *Angewandte Chemie - International Edition*, **2019**, 58, 8221-8225	16.4	25
115	Operando Studies of the Electrochemical Dissolution of Silver Nanoparticles in Nitrate Solutions Observed With Hyperspectral Dark-Field Microscopy. *Frontiers in Chemistry*, **2019**, 7, 912	5	18
114	Single entity electrochemistry for the elucidation of lithiation kinetics of TiO2 particles in non-aqueous batteries. *Nano Energy*, **2019**, 57, 827-834	17.1	10
113	Evaluation of the intrinsic catalytic activity of nanoparticles without prior knowledge of the mass loading. *Faraday Discussions*, **2018**, 210, 317-332	3.6	10
112	Deciphering the Surface Composition and the Internal Structure of Alloyed Silver-Gold Nanoparticles. *Chemistry - A European Journal*, **2018**, 24, 9051-9060	4.8	23
111	Nano Impact Electrochemistry: Effects of Electronic Filtering on Peak Height, Duration and Area. *ChemElectroChem*, **2018**, 5, 3000-3005	4.3	30
110	Single Nanoparticle Growth from Nanoparticle Tracking Analysis: From Monte Carlo Simulations to Nanoparticle Electrogeneration. *ChemElectroChem*, **2018**, 5, 3036-3043	4.3	7
109	Simultaneous Opto- and Spectro-Electrochemistry: Reactions of Individual Nanoparticles Uncovered by Dark-Field Microscopy. *Journal of the American Chemical Society*, **2018**, 140, 12658-12661	16.4	51
108	Electrochemical C-H Cyanation of Electron-Rich (Hetero)Arenes. *Chemistry - A European Journal*, **2018**, 24, 11288-11291	4.8	30
107	Time-resolved impact electrochemistry - A new method to determine diffusion coefficients of ions in solution. *Electrochimica Acta*, **2018**, 282, 317-323	6.7	17
106	Nano-Impact Electrochemistry: Effects of Electronic Filtering on Peak Height, Duration, and Area. *ChemElectroChem*, **2018**, 5, 2917-2917	4.3	2
105	A Unified Interdisciplinary Approach to Design Antibacterial Coatings for Fast Silver Release. *ChemElectroChem*, **2017**, 4, 1975-1983	4.3	10
104	Antibacterial activity of microstructured sacrificial anode thin films by combination of silver with platinum group elements (platinum, palladium, iridium). *Materials Science and Engineering C*, **2017**, 74, 536-541	8.3	16
103	A materials driven approach for understanding single entity nano impact electrochemistry. *Current Opinion in Electrochemistry*, **2017**, 6, 38-45	7.2	74
102	Time-resolved impact electrochemistry for quantitative measurement of single-nanoparticle reaction kinetics. *Nano Research*, **2017**, 10, 3680-3689	10	31

101	Detection of individual nanoparticle impacts using etched carbon nanoelectrodes. *Electrochemistry Communications*, **2016**, 73, 67-70	5.1	20
100	Reactions at the nanoscale: general discussion. *Faraday Discussions*, **2016**, 193, 265-292	3.6	1
99	Interplay of the Open Circuit Potential-Relaxation and the Dissolution Behavior of a Single H2Bubble Generated at a Pt Microelectrode. *Journal of Physical Chemistry C*, **2016**, 120, 15137-15146	3.8	7
98	Electrochemical bromination of organosulfur containing species for the determination of the strength of garlic (A. sativum). *Food Chemistry*, **2016**, 199, 817-21	8.5	2
97	Exploring the mineral-water interface: reduction and reaction kinetics of single hematite (□FeO) nanoparticles. *Chemical Science*, **2016**, 7, 1408-1414	9.4	18
96	The Electrochemical Characterization of Single Core-Shell Nanoparticles. *Angewandte Chemie - International Edition*, **2016**, 55, 397-400	16.4	40
95	Single Nanoparticle Voltammetry: Contact Modulation of the Mediated Current. *Angewandte Chemie*, **2016**, 128, 4368-4371	3.6	12
94	Single Nanoparticle Voltammetry: Contact Modulation of the Mediated Current. *Angewandte Chemie - International Edition*, **2016**, 55, 4296-9	16.4	45
93	From single cells to single molecules: general discussion. *Faraday Discussions*, **2016**, 193, 141-170	3.6	4
92	Electrochemistry of single nanoparticles: general discussion. *Faraday Discussions*, **2016**, 193, 387-413	3.6	13
91	Electrochemistry at single bimetallic nanoparticles - using nano impacts for sizing and compositional analysis of individual AgAu alloy nanoparticles. *Faraday Discussions*, **2016**, 193, 327-338	3.6	41
90	The Electrochemical Characterization of Single Core□Shell Nanoparticles. *Angewandte Chemie*, **2016**, 128, 405-408	3.6	10
89	Ferrocene Aryl Derivatives for the Redox Tagging of Graphene Nanoplatelets. *Electroanalysis*, **2016**, 28, 197-202	3	11
88	Advancing from Rules of Thumb: Quantifying the Effects of Small Density Changes in Mass Transport to Electrodes. Understanding Natural Convection. *Analytical Chemistry*, **2015**, 87, 7226-34	7.8	34
87	Diffusional impacts of nanoparticles on microdisc and microwire electrodes: The limit of detection and first passage statistics. *Journal of Electroanalytical Chemistry*, **2015**, 755, 136-142	4.1	26
86	Nanoparticle Capping Agent Dynamics and Electron Transfer: Polymer-Gated Oxidation of Silver Nanoparticles. *Journal of Physical Chemistry C*, **2015**, 119, 18808-18815	3.8	27
85	Diffusional Nanoimpacts: The Stochastic Limit. *Journal of Physical Chemistry C*, **2015**, 119, 14400-14410	3.8	16
84	Influence of Adsorption Kinetics upon the Electrochemically Reversible Hydrogen Oxidation Reaction. *Journal of Physical Chemistry C*, **2015**, 119, 16121-16130	3.8	17

83	The fate of nano-silver in aqueous media. *Nanoscale*, **2015**, 7, 12361-4	7.7	22
82	The Subtleties of the Reversible Hydrogen Evolution Reaction Arising from the Nonunity Stoichiometry. *Journal of Physical Chemistry C*, **2015**, 119, 9402-9410	3.8	24
81	The effect of insulator nano-sheath thickness on the steady state current at a micro-disc electrode. *Journal of Electroanalytical Chemistry*, **2015**, 745, 66-71	4.1	8
80	Single graphene nanoplatelets: capacitance, potential of zero charge and diffusion coefficient. *Chemical Science*, **2015**, 6, 2869-2876	9.4	65
79	Electrochemical detection of single E. coli bacteria labeled with silver nanoparticles. *Biomaterials Science*, **2015**, 3, 816-20	7.4	77
78	Molecular-Scale Hybridization of Clay Monolayers and Conducting Polymer for Thin-Film Supercapacitors. *Advanced Functional Materials*, **2015**, 25, 2745-2753	15.6	62
77	Magnetic control: Switchable ultrahigh magnetic gradients at Fe3O4 nanoparticles to enhance solution-phase mass transport. *Nano Research*, **2015**, 8, 3293-3306	10	21
76	Reversible or not? Distinguishing agglomeration and aggregation at the nanoscale. *Analytical Chemistry*, **2015**, 87, 10033-9	7.8	100
75	Capping agent promoted oxidation of gold nanoparticles: cetyl trimethylammonium bromide. *Physical Chemistry Chemical Physics*, **2015**, 17, 26054-8	3.6	15
74	Non-Invasive Probing of Nanoparticle Electrostatics. *ChemElectroChem*, **2015**, 2, 112-118	4.3	21
73	Magnetostatic nearest neighbor interactions in a Co48Fe52 nanowire array probed by in-field magnetic force microscopy. *Journal of Applied Physics*, **2015**, 118, 233901	2.5	10
72	In Situ Detection of Particle Aggregation on Electrode Surfaces. *ChemPhysChem*, **2015**, 16, 2338-47	3.2	12
71	Are Nanoparticles Spherical or Quasi-Spherical?. *Chemistry - A European Journal*, **2015**, 21, 10741-6	4.8	27
70	Ultra-small Palladium Nanoparticle Decorated Carbon Nanotubes: Conductivity and Reactivity. *ChemPhysChem*, **2015**, 16, 2322-5	3.2	9
69	Core–Shell Nanoparticles: Characterizing Multifunctional Materials beyond Imaging—Distinguishing and Quantifying Perfect and Broken Shells. *Advanced Functional Materials*, **2015**, 25, 5149-5158	15.6	25
68	In situ nanoparticle sizing with zeptomole sensitivity. *Analyst, The*, **2015**, 140, 5048-54	5	83
67	Bifunctional redox tagging of carbon nanoparticles. *Nanoscale*, **2015**, 7, 2069-75	7.7	3
66	Metal-halide Nanoparticle Formation: Electrolytic and Chemical Synthesis of Mercury(I) Chloride Nanoparticles. *ChemElectroChem*, **2015**, 2, 522-528	4.3	18

65	Gold electrodes from recordable CDs for the sensitive, semi-quantitative detection of commercial silver nanoparticles in seawater media. *Sensors and Actuators B: Chemical*, **2014**, 195, 223-229	8.5	18
64	The use of cylindrical micro-wire electrodes for nano-impact experiments; facilitating the sub-picomolar detection of single nanoparticles. *Sensors and Actuators B: Chemical*, **2014**, 200, 47-52	8.5	66
63	A proof-of-concept Using pre-created nucleation centres to improve the limit of detection in anodic stripping voltammetry. *Sensors and Actuators B: Chemical*, **2014**, 193, 315-319	8.5	14
62	Electrochemical Detection of Glutathione Using a Poly(caffeic acid) Nanocarbon Composite Modified Electrode. *Electroanalysis*, **2014**, 26, 366-373	3	55
61	Nanoparticle impacts reveal magnetic field induced agglomeration and reduced dissolution rates. *Physical Chemistry Chemical Physics*, **2014**, 16, 13909-13	3.6	44
60	Use of the capping agent for the electrochemical detection and quantification of nanoparticles: CdSe quantum dots. *Sensors and Actuators B: Chemical*, **2014**, 204, 445-449	8.5	1
59	Diffusional transport to and through thin-layer nanoparticle film modified electrodes: capped CdSe nanoparticle modified electrodes. *Physical Chemistry Chemical Physics*, **2014**, 16, 18034-41	3.6	10
58	The strong catalytic effect of Pb(II) on the oxygen reduction reaction on 5 nm gold nanoparticles. *Physical Chemistry Chemical Physics*, **2014**, 16, 3200-8	3.6	17
57	Electrochemical studies of silver nanoparticles: a guide for experimentalists and a perspective. *Physical Chemistry Chemical Physics*, **2014**, 16, 616-23	3.6	54
56	Nanoparticle-Impact Experiments are Highly Sensitive to the Presence of Adsorbed Species on Electrode Surfaces. *ChemElectroChem*, **2014**, 1, 1057-1062	4.3	22
55	Chemical interactions between silver nanoparticles and thiols: a comparison of mercaptohexanol against cysteine. *Science China Chemistry*, **2014**, 57, 1199-1210	7.9	40
54	Cover Picture: Nanoparticle-Impact Experiments are Highly Sensitive to the Presence of Adsorbed Species on Electrode Surfaces (ChemElectroChem 6/2014. *ChemElectroChem*, **2014**, 1, 1085-1085	4.3	1
53	Electrochemical observation of single collision events: fullerene nanoparticles. *ACS Nano*, **2014**, 8, 7648-56	12.7	91
52	Electrochemical quantification of iodide ions in synthetic urine using silver nanoparticles: a proof-of-concept. *Analyst, The*, **2014**, 139, 3986-90	5	26
51	Strong negative nanocatalysis: oxygen reduction and hydrogen evolution at very small (2 nm) gold nanoparticles. *Nanoscale*, **2014**, 6, 11024-30	7.7	26
50	A Critical Evaluation of the Interpretation of Electrocatalytic Nanoimpacts. *Journal of Physical Chemistry C*, **2014**, 118, 17756-17763	3.8	29
49	Simultaneous electrochemical and 3D optical imaging of silver nanoparticle oxidation. *Chemical Physics Letters*, **2014**, 597, 20-25	2.5	30
48	Planar diffusion to macro disc electrodes What electrode size is required for the Cottrell and Randles-Sevcik equations to apply quantitatively?. *Journal of Solid State Electrochemistry*, **2014**, 18, 3251-3257	2.6	82

47	Retarding the corrosion of iron by inhomogeneous magnetic fields. *Materials and Corrosion - Werkstoffe Und Korrosion*, **2014**, 65, 803-808	1.6	6
46	The Surface Energy of Single Nanoparticles Probed via Anodic Stripping Voltammetry. *ChemElectroChem*, **2014**, 1, 87-89	4.3	12
45	Improving the Rate of Silver Nanoparticle Adhesion to Sticky Electrodes Stick and Strip Experiments at a DMSA-Modified Gold Electrode. *Electroanalysis*, **2014**, 26, 285-291	3	11
44	Magnetic vortex observation in FeCo nanowires by quantitative magnetic force microscopy. *Applied Physics Letters*, **2014**, 105, 172409	3.4	44
43	Magnetic Separation of Paramagnetic Ions From Initially Homogeneous Solutions. *IEEE Transactions on Magnetics*, **2014**, 50, 1-4	2	8
42	Magnetic field templated patterning of the soft magnetic alloy CoFe. *Electrochimica Acta*, **2014**, 123, 477-484	6.7	7
41	Electrochemical Detection and Characterisation of Polymer Nanoparticles. *Electroanalysis*, **2014**, 26, 248-253	3	8
40	Electrochemical micromachining of passive electrodes. *Electrochimica Acta*, **2013**, 109, 562-569	6.7	13
39	Optical velocity measurements of electrolytic boundary layer flows influenced by magnetic fields. *European Physical Journal: Special Topics*, **2013**, 220, 79-89	2.3	5
38	Capacitance performance of cobalt hydroxide-based capacitors with utilization of near-neutral electrolytes. *Electrochimica Acta*, **2013**, 90, 166-170	6.7	20
37	Nanocarbon Paste Electrodes. *Electroanalysis*, **2013**, 25, 2435-2444	3	19
36	Coulometric sizing of nanoparticles: Cathodic and anodic impact experiments open two independent routes to electrochemical sizing of Fe3O4 nanoparticles. *Nano Research*, **2013**, 6, 836-841	10	80
35	A disposable sticky electrode for the detection of commercial silver NPs in seawater. *Nanotechnology*, **2013**, 24, 505501	3.4	22
34	Nanoparticle impacts show high-ionic-strength citrate avoids aggregation of silver nanoparticles. *ChemPhysChem*, **2013**, 14, 3895-7	3.2	47
33	A kinetic study of oxygen reduction reaction and characterization on electrodeposited gold nanoparticles of diameter between 17 nm and 40 nm in 0.5 M sulfuric acid. *Nanoscale*, **2013**, 5, 9699-708	7.7	26
32	Electrochemical detection of commercial silver nanoparticles: identification, sizing and detection in environmental media. *Nanotechnology*, **2013**, 24, 444002	3.4	45
31	Analysis of the electrolyte convection inside the concentration boundary layer during structured electrodeposition of copper in high magnetic gradient fields. *Analytical Chemistry*, **2013**, 85, 3087-94	7.8	16
30	The anodic stripping voltammetry of nanoparticles: electrochemical evidence for the surface agglomeration of silver nanoparticles. *Nanoscale*, **2013**, 5, 4884-93	7.7	97

29	Electrochemical detection of chloride levels in sweat using silver nanoparticles: a basis for the preliminary screening for cystic fibrosis. *Analyst, The*, **2013**, 138, 4292-7	5	68
28	'Sticky electrodes' for the detection of silver nanoparticles. *Nanotechnology*, **2013**, 24, 295502	3.4	23
27	Performance of silver nanoparticles in the catalysis of the oxygen reduction reaction in neutral media: Efficiency limitation due to hydrogen peroxide escape. *Nano Research*, **2013**, 6, 511-524	10	62
26	Structured electrodeposition in magnetic gradient fields. *European Physical Journal: Special Topics*, **2013**, 220, 287-302	2.3	33
25	Get more out of your data: a new approach to agglomeration and aggregation studies using nanoparticle impact experiments. *ChemistryOpen*, **2013**, 2, 69-75	2.3	68
24	Electrochemical Deposition of Co(Cu)/Cu Multilayered Nanowires. *Journal of the Electrochemical Society*, **2013**, 160, D13-D19	3.9	15
23	Nanotoxicity - an electrochemist perspective. *Portugaliae Electrochimica Acta*, **2013**, 31, 249-256	2.4	2
22	Electrochemical Quartz Crystal Microbalance Study of the Fe-Ga Co-Deposition. *Journal of the Electrochemical Society*, **2012**, 159, H633-H637	3.9	6
21	Enrichment of Paramagnetic Ions from Homogeneous Solutions in Inhomogeneous Magnetic Fields. *Journal of Physical Chemistry Letters*, **2012**, 3, 3559-64	6.4	28
20	Clarifying the mechanism of reverse structuring during electrodeposition in magnetic gradient fields. *Analytical Chemistry*, **2012**, 84, 2328-34	7.8	23
19	Comment on "Magnetic structuring of electrodeposits". *Physical Review Letters*, **2012**, 109, 229401; author reply 229402	7.4	16
18	Micropatterning of Fe-based bulk metallic glass surfaces by pulsed electrochemical micromachining. *Journal of Materials Research*, **2012**, 27, 3033-3040	2.5	12
17	Effect of magnetization state on the corrosion behaviour of NdFeB permanent magnets. *Corrosion Science*, **2011**, 53, 2843-2852	6.8	26
16	Effect of high gradient magnetic fields on the anodic behaviour and localized corrosion of iron in sulphuric acid solutions. *Corrosion Science*, **2011**, 53, 3222-3230	6.8	41
15	How to obtain structured metal deposits from diamagnetic ions in magnetic gradient fields?. *Electrochemistry Communications*, **2011**, 13, 946-950	5.1	22
14	In situ analysis of three-dimensional electrolyte convection evolving during the electrodeposition of copper in magnetic gradient fields. *Analytical Chemistry*, **2011**, 83, 3275-81	7.8	25
13	Electrodeposition of separated 3D metallic structures by pulse-reverse plating in magnetic gradient fields. *Electrochimica Acta*, **2011**, 56, 5174-5177	6.7	20
12	Magnetic field effects on the active dissolution of iron. *Electrochimica Acta*, **2011**, 56, 5866-5871	6.7	33

11	Zeitaufgelöste 3D3K Geschwindigkeitsfeldmessungen mit der fernmikroskopischen Astigmatismus PTV zur Analyse der elektrochemischen Kupferabscheidung. *TM Technisches Messen*, **2011**, 78, 232-238	0.7	1
10	Studies regarding the homogeneity range of the zirconium phosphide telluride Zr2+δPTe2. *Solid State Sciences*, **2010**, 12, 2030-2035	3.4	5
9	Electrocrystallisation of metallic films under the influence of an external homogeneous magnetic field: Early stages of the layer growth. *Electrochimica Acta*, **2010**, 55, 6533-6541	6.7	17
8	Studies on the patterning effect of copper deposits in magnetic gradient fields. *Electrochimica Acta* , **2010**, 56, 297-304	6.7	30
7	Impact of magnetic field gradients on the free corrosion of iron. *Electrochimica Acta*, **2010**, 55, 5200-5208	6.7	47
6	On the action of magnetic gradient forces in micro-structured copper deposition. *Electrochimica Acta*, **2010**, 55, 9060-9066	6.7	64
5	Magnetoelectrochemical Surface Structuring: Electrodeposition of Structured Metallic Layers in Magnetic Gradient Fields. *ECS Transactions*, **2009**, 25, 149-155	1	7
4	Chemistry and Physical Properties of the Phosphide Telluride Zr2PTe2. *European Journal of Inorganic Chemistry*, **2009**, 2009, 3102-3110	2.3	17
3	Effects of well-defined magnetic field gradients on the electrodeposition of copper and bismuth. *Electrochemistry Communications*, **2009**, 11, 2241-2244	5.1	45
2	Characterization of Nanoparticles in Diverse Mixtures Using Localized Surface Plasmon Resonance and Nanoparticle Tracking by Dark-Field Microscopy with Redox Magnetohydrodynamics Microfluidics. *ACS Physical Chemistry Au*,		2
1	Operando electrochemical SERS monitors nanoparticle reactions by capping agent fingerprints. *Nano Research*,1	10	1