Enno KÃ¤telhÃ¶n

List of Publications by Year
in descending order

78 papers	1,927 citations	236833 25 h-index	289141 40 g-index
80 all docs	80 docs citations	80 times ranked	1427 citing authors

#	Article	IF	Citations
1	Predicting Voltammetry Using Physics-Informed Neural Networks. Journal of Physical Chemistry Letters, 2022, 13, 536-543.	2.1	15
2	Experimental Voltammetry Analyzed Using Artificial Intelligence: Thermodynamics and Kinetics of the Dissociation of Acetic Acid in Aqueous Solution. Analytical Chemistry, 2022, 94, 5901-5908.	3.2	5
3	Determination of standard electrochemical rate constants from semi-circular sweep voltammetry: A combined theoretical and experimental study. Journal of Electroanalytical Chemistry, 2021, 880, 114891.	1.9	4
4	Use of Artificial Intelligence in Electrode Reaction Mechanism Studies: Predicting Voltammograms and Analyzing the Dissociative CE Reaction at a Hemispherical Electrode. Analytical Chemistry, 2021, 93, 13360-13372.	3.2	14
5	A new approach to characterising the porosity of particle modified electrodes: Potential step chronoamperometry and the diffusion indicator. Applied Materials Today, 2021, 25, 101249.	2.3	2
6	Particle-modified electrodes: General mass transport theory, experimental validation, and the role of electrostatics. Applied Materials Today, 2020, 18, 100480.	2.3	9
7	Unscrambling illusionary catalysis in three-dimensional particle-modified electrodes: Reversible reactions at conducting particles. Applied Materials Today, 2020, 18, 100514.	2.3	10
8	Reversible voltammetry at cylindrical electrodes: Validity of a one-dimensional model. Journal of Electroanalytical Chemistry, 2020, 859, 113865.	1.9	1
9	Stripping voltammetry with semi-circular potential waves: Reversible systems. Journal of Electroanalytical Chemistry, 2019, 848, 113290.	1.9	4
10	Semi-circular potential sweep voltammetry: Experimental verification and determination of the formal potential of a reversible redox couple. Journal of Electroanalytical Chemistry, 2019, 836, 62-67.	1.9	9
11	Unscrambling illusory inhibition and catalysis in nanoparticle electrochemistry: Experiment and theory. Applied Materials Today, 2019, 16, 141-145.	2.3	23
12	Nanoparticle electrocatalysis: Unscrambling illusory inhibition and catalysis. Applied Materials Today, 2019, 15, 139-144.	2.3	22
13	Characterising the nature of diffusion via a new indicator: Microcylinder and microring electrodes. Journal of Electroanalytical Chemistry, 2019, 855, 113602.	1.9	8
14	Sweep voltammetry with a semi-circular potential waveform: ElectrodeÂkinetics. Journal of Electroanalytical Chemistry, 2019, 835, 60-66.	1.9	12
15	Single-entity electrochemistry: Diffusion-controlled transport of an analyte inside a particle. Electrochimica Acta, 2019, 298, 778-787.	2.6	16
16	Non-triangular potential sweep cyclic voltammetry of reversible electron transfer: Experiment meets theory. Journal of Electroanalytical Chemistry, 2018, 815, 24-29.	1.9	7
17	Nanoscopic carbon electrodes: Structure, electrical properties and application for electrochemistry. Carbon, 2018, 130, 768-774.	5.4	15
18	Cyclic voltammetry with non-triangular waveforms: Electrochemically irreversible and quasi-reversible systems. Journal of Electroanalytical Chemistry, 2018, 810, 135-144.	1.9	12

#	ARTICLE	IF	CITATIONS
19	A quantitative methodology for the study of particleâ€“electrode impacts. Physical Chemistry Chemical Physics, 2018, 20, 13537-13546.	1.3	37
20	Linear sweep voltammetry with non-triangular waveforms: New opportunities in electroanalysis. Journal of Electroanalytical Chemistry, 2018, 818, 140-148.	1.9	19
21	Theoretical prediction of a transient accumulation of nanoparticles at a well-defined distance from an electrified liquidâ€“solid interface. Nanoscale, 2018, 10, 19459-19468.	2.8	4
22	Role of Nanomorphology and Interfacial Structure of Platinum Nanoparticles in Catalyzing the Hydrogen Oxidation Reaction. ACS Catalysis, 2018, 8, 6192-6202.	5.5	21
23	Linear sweep voltammetry with non-triangular waveforms at a microdisc electrode. Journal of Electroanalytical Chemistry, 2018, 823, 465-473.	1.9	11
24	Electrochemistry of Single Enzymes: Fluctuations of Catalase Activities. Journal of Physical Chemistry Letters, 2018, 9, 2814-2817.	2.1	30
25	The Influence of Supporting Ions on the Electrochemical Detection of Individual Silver Nanoparticles: Understanding the Shape and Frequency of Current Transients in Nanoâ€impacts. Chemistry - A European Journal, 2017, 23, 4638-4643.	1.7	33
26	Reply to Comment on â€œCan Nanoimpacts Detect Single-Enzyme Activity? Theoretical Considerations and an Experimental Study of Catalase Impactsâ€. ACS Catalysis, 2017, 7, 3594-3596.	5.5	7
27	Lithiumâ€Ionâ€Transfer Kinetics of Single LiMn₂O₄ Particles. Angewandte Chemie, 2017, 129, 656-659.	1.6	18
28	Reaction Layer Imaging Using Fluorescence Electrochemical Microscopy. Analytical Chemistry, 2017, 89, 6870-6877.	3.2	24
29	Voltammetry using multiple cycles: Porous electrodes. Journal of Electroanalytical Chemistry, 2017, 799, 126-133.	1.9	13
30	Lithiumâ€Ionâ€Transfer Kinetics of Single LiMn₂O₄ Particles. Angewandte Chemie - International Edition, 2017, 56, 641-644.	7.2	46
31	Catalytic activity of catalaseâ€“silica nanoparticle hybrids: from ensemble to individual entity activity. Chemical Science, 2017, 8, 2303-2308.	3.7	26
32	Non-linear sweep voltammetry of adsorbed species: theory and a method to determine formal potentials. Physical Chemistry Chemical Physics, 2017, 19, 28820-28823.	1.3	5
33	Immobilised Electrocatalysts: Nafion Particles Doped with Ruthenium(II) Tris(2,2â€²â€bipyridyl). Chemistry - A European Journal, 2017, 23, 17605-17611.	1.7	5
34	Understanding single enzyme activity via the nano-impact technique. Chemical Science, 2017, 8, 6423-6432.	3.7	35
35	Voltammetry at electrodes decorated with an insulating porous film: Understanding the effects of adsorption. Journal of Electroanalytical Chemistry, 2017, 801, 135-140.	1.9	9
36	Improving Single-Carbon-Nanotubeâ€“Electrode Contacts Using Molecular Electronics. Journal of Physical Chemistry Letters, 2017, 8, 3908-3911.	2.1	12

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37	Cyclic voltammetry with non-triangular waveforms: Electrochemically reversible systems. Journal of Electroanalytical Chemistry, 2017, 801, 381-387.	1.9	14
38	<i>In situ</i> Detection of Microplastics: SingleÂMicroparticleâ€electrodeÂImpacts. Electroanalysis, 2017, 29, 2200-2207.	1.5	15
39	Electrodeâ€“particle impacts: a users guide. Physical Chemistry Chemical Physics, 2017, 19, 28-43.	1.3	196
40	The Role of Entropy in Nanoparticle Agglomeration. ChemPhysChem, 2017, 18, 51-54.	1.0	11
41	Near-wall hindered diffusion: Implications for surface-based sensors. Sensors and Actuators B: Chemical, 2016, 234, 420-425.	4.0	11
42	Understanding nano-impacts: Reversible agglomeration and near-wall hindered diffusion. Journal of Electroanalytical Chemistry, 2016, 779, 18-24.	1.9	9
43	Nanoscale Electrochemical Sensor Arrays: Redox Cycling Amplification in Dual-Electrode Systems. Accounts of Chemical Research, 2016, 49, 2031-2040.	7.6	75
44	When does near-wall hindered diffusion influence mass transport towards targets?. Physical Chemistry Chemical Physics, 2016, 18, 26539-26549.	1.3	23
45	Understanding Nano-Impact Current Spikes: Electrochemical Doping of Impacting Nanoparticles. Journal of Physical Chemistry C, 2016, 120, 17029-17034.	1.5	38
46	Voltammetry of porous layers: Staircase vs analog voltammetry. Journal of Electroanalytical Chemistry, 2016, 776, 25-33.	1.9	18
47	Fluorescence Monitored Voltammetry of Single Attoliter Droplets. Analytical Chemistry, 2016, 88, 11213-11221.	3.2	29
48	Can Nanoimpacts Detect Single-Enzyme Activity? Theoretical Considerations and an Experimental Study of Catalase Impacts. ACS Catalysis, 2016, 6, 8313-8320.	5.5	38
49	Near-Wall Hindered Diffusion in Convective Systems: Transport Limitations in Colloidal and Nanoparticulate Systems. Journal of Physical Chemistry C, 2016, 120, 10629-10640.	1.5	18
50	Destructive nano-impacts: What information can be extracted from spike shapes?. Electrochimica Acta, 2016, 199, 297-304.	2.6	84
51	Recent Advances in Voltammetry. ChemistryOpen, 2015, 4, 224-260.	0.9	130
52	Understanding Nanoâ€Impacts: Binary Nature of Charge Transfer during Mediated Reactions. ChemElectroChem, 2015, 2, 64-67.	1.7	24
53	Testing and validating electroanalytical simulations. Analyst, The, 2015, 140, 2592-2598.	1.7	47
54	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.	1.9	28

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55	Diffusional Nanoimpacts: The Stochastic Limit. Journal of Physical Chemistry C, 2015, 119, 14400-14410.	1.5	20
56	The Subtleties of the Reversible Hydrogen Evolution Reaction Arising from the Nonunity Stoichiometry. Journal of Physical Chemistry C, 2015, 119, 9402-9410.	1.5	29
57	A Thermodynamic View of Agglomeration. Journal of Physical Chemistry C, 2015, 119, 25093-25099.	1.5	30
58	Voltammetric Peak Heights of the Protonâ€"Hydrogen Redox Couple: A Comprehensive Analysis. Journal of Physical Chemistry C, 2015, 119, 23203-23210.	1.5	6
59	Nanocavity crossbar arrays for parallel electrochemical sensing on a chip. Beilstein Journal of Nanotechnology, 2014, 5, 1137-1143.	1.5	16
60	Simulation of the impact of reversible adsorption on the response time of interdigitated electrode arrays. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1352-1356.	0.8	1
61	Nanoparticles in sensing applications: on what timescale do analyte species adsorb on the particle surface?. Analyst, The, 2014, 139, 2411.	1.7	9
62	Sensing with nanopores â€" the influence of asymmetric blocking on electrochemical redox cycling current. Analyst, The, 2014, 139, 5499-5503.	1.7	3
63	Understanding nano-impacts: impact times and near-wall hindered diffusion. Chemical Science, 2014, 5, 4592-4598.	3.7	47
64	Nanoparticleâ€Impact Experiments are Highly Sensitive to the Presence of Adsorbed Species on Electrode Surfaces. ChemElectroChem, 2014, 1, 1057-1062.	1.7	24
65	Noise Phenomena Caused by Reversible Adsorption in Nanoscale Electrochemical Devices. ACS Nano, 2014, 8, 4924-4930.	7.3	27
66	Cover Picture: Nanoparticle-Impact Experiments are Highly Sensitive to the Presence of Adsorbed		

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73	On-chip redox cycling techniques for electrochemical detection. Reviews in Analytical Chemistry, 2012, 31, .	1.5	23
74	Stochasticity in Single-Molecule Nanoelectrochemistry: Origins, Consequences, and Solutions. ACS Nano, 2012, 6, 9662-9671.	7.3	57
75	Simulationâ€based investigations on noise characteristics of redoxâ€cycling sensors. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 881-884.	0.8	7
76	Nanocavity electrode array for recording from electrogenic cells. Lab on A Chip, 2011, 11, 1054.	3.1	42
77	Time-resolved mapping of neurotransmitter fluctuations by arrays of nanocavity redox-cycling sensors. Procedia Engineering, 2010, 5, 956-958.	1.2	2
78	Nanocavity Redox Cycling Sensors for the Detection of Dopamine Fluctuations in Microfluidic Gradients. Analytical Chemistry, 2010, 82, 8502-8509.	3.2	70