

Wolfgang Schuhmann

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801
papers

30,229
citations

80
h-index

129
g-index

859
ext. papers

34,033
ext. citations

7.2
avg, IF

7.55
L-index

#	Paper	IF	Citations
801	Co@Co ₃ O ₄ Encapsulated in Carbon Nanotube-Grafted Nitrogen-Doped Carbon Polyhedra as an Advanced Bifunctional Oxygen Electrode. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 4087-91	16.4	869
800	Finding optimal surface sites on heterogeneous catalysts by counting nearest neighbors. <i>Science</i> , 2015 , 350, 185-9	33.3	554
799	Amorphous Cobalt Boride (Co ₂ B) as a Highly Efficient Nonprecious Catalyst for Electrochemical Water Splitting: Oxygen and Hydrogen Evolution. <i>Advanced Energy Materials</i> , 2016 , 6, 1502313	21.8	539
798	On the Role of Metals in Nitrogen-Doped Carbon Electrocatalysts for Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 10102-20	16.4	514
797	Electrocatalytic Activity and Stability of Nitrogen-Containing Carbon Nanotubes in the Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 14302-14310	3.8	497
796	Mn(x)O(y)/NC and Co(x)O(y)/NC nanoparticles embedded in a nitrogen-doped carbon matrix for high-performance bifunctional oxygen electrodes. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 8508-12	16.4	432
795	Enzymatic fuel cells: Recent progress. <i>Electrochimica Acta</i> , 2012 , 84, 223-234	6.7	361
794	Electron transfer between glucose oxidase and electrodes via redox mediators bound with flexible chains to the enzyme surface. <i>Journal of the American Chemical Society</i> , 1991 , 113, 1394-1397	16.4	318
793	Nitrogen-doped carbon nanotubes as a cathode catalyst for the oxygen reduction reaction in alkaline medium. <i>Electrochemistry Communications</i> , 2010 , 12, 338-341	5.1	279
792	Spinel Mn-Co oxide in N-doped carbon nanotubes as a bifunctional electrocatalyst synthesized by oxidative cutting. <i>Journal of the American Chemical Society</i> , 2014 , 136, 7551-4	16.4	247
791	Ultrathin High Surface Area Nickel Boride (Ni ₃ B) Nanosheets as Highly Efficient Electrocatalyst for Oxygen Evolution. <i>Advanced Energy Materials</i> , 2017 , 7, 1700381	21.8	245
790	PtRu nanoparticles supported on nitrogen-doped multiwalled carbon nanotubes as catalyst for methanol electrooxidation. <i>Electrochimica Acta</i> , 2009 , 54, 4208-4215	6.7	230
789	Electron-transfer mechanisms in amperometric biosensors. <i>Fresenius Journal of Analytical Chemistry</i> , 2000 , 366, 560-8		227
788	A redox hydrogel protects hydrogenase from high-potential deactivation and oxygen damage. <i>Nature Chemistry</i> , 2014 , 6, 822-7	17.6	183
787	Fabrication and Characterization of Needle-Type. <i>Electroanalysis</i> , 2002 , 14, 22-28	3	176
786	Electrocatalytic oxidation of reduced nicotinamide coenzymes at gold and platinum electrode surfaces modified with a monolayer of pyrroloquinoline quinone. Effect of Ca ²⁺ cations. <i>Journal of Electroanalytical Chemistry</i> , 1994 , 373, 189-200	4.1	174
785	Conducting polymer based amperometric enzyme electrodes. <i>Mikrochimica Acta</i> , 1995 , 121, 1-29	5.8	173

784	Metallic NiPS ₃ @NiOOH CoreShell Heterostructures as Highly Efficient and Stable Electrocatalyst for the Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2017 , 7, 229-237	13.1	168
783	Formation and Imaging of Microscopic Enzymatically Active Spots on an Alkanethiolate-Covered Gold Electrode by Scanning Electrochemical Microscopy. <i>Analytical Chemistry</i> , 1997 , 69, 5059-5066	7.8	168
782	High current density "wired" quinoprotein glucose dehydrogenase electrode. <i>Analytical Chemistry</i> , 1993 , 65, 238-241	7.8	160
781	Nucleic acid hybridization on an electrically reconfigurable network of gold-coated magnetic nanoparticles enables microRNA detection in blood. <i>Nature Nanotechnology</i> , 2018 , 13, 1066-1071	28.7	159
780	Electrochemical nanoprobe for single-cell analysis. <i>ACS Nano</i> , 2014 , 8, 875-84	16.7	158
779	Combination of a photosystem 1-based photocathode and a photosystem 2-based photoanode to a Z-scheme mimic for biophotovoltaic applications. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 14233-6	16.4	152
778	Redox competition mode of scanning electrochemical microscopy (RC-SECM) for visualisation of local catalytic activity. <i>Physical Chemistry Chemical Physics</i> , 2006 , 8, 5359-65	3.6	152
777	Lateral deposition of polypyrrole lines by means of the scanning electrochemical microscope. <i>Advanced Materials</i> , 1995 , 7, 38-40	24	151
776	Topography feedback mechanism for the scanning electrochemical microscope based on hydrodynamic forces between tip and sample. <i>Review of Scientific Instruments</i> , 1995 , 66, 2857-2860	1.7	149
775	Electrocatalytic Oxidation of 5-(Hydroxymethyl)furfural Using High-Surface-Area Nickel Boride. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 11460-11464	16.4	146
774	Constant-distance mode scanning electrochemical microscopy (SECM)--Part I: Adaptation of a non-optical shear-force-based positioning mode for SECM tips. <i>Chemistry - A European Journal</i> , 2003 , 9, 2025-33	4.8	144
773	Single-cell microelectrochemistry. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 8760-77	16.4	141
772	Electron-transfer pathways in amperometric biosensors. Ferrocene-modified enzymes entrapped in conducting-polymer layers. <i>Biosensors and Bioelectronics</i> , 1995 , 10, 181-193	11.8	141
771	Polypyrrole-entrapped quinohemoprotein alcohol dehydrogenase. Evidence for direct electron transfer via conducting-polymer chains. <i>Analytical Chemistry</i> , 1999 , 71, 3581-6	7.8	138
770	Koutecky-Levich analysis applied to nanoparticle modified rotating disk electrodes: Electrocatalysis or misinterpretation. <i>Nano Research</i> , 2014 , 7, 71-78	10	133
769	Nanoporous Nitrogen-Doped Graphene Oxide/Nickel Sulfide Composite Sheets Derived from a Metal-Organic Framework as an Efficient Electrocatalyst for Hydrogen and Oxygen Evolution. <i>Advanced Functional Materials</i> , 2017 , 27, 1700451	15.6	133
768	Electropolymerized Azines: Part II. In a Search of the Best Electrocatalyst of NADH Oxidation. <i>Electroanalysis</i> , 1999 , 11, 553-557	3	133
767	Immobilization method for the preparation of biosensors based on pH shift-induced deposition of biomolecule-containing polymer films. <i>Analytical Chemistry</i> , 2002 , 74, 355-61	7.8	131

766	Amperometric enzyme biosensors based on optimised electron-transfer pathways and non-manual immobilisation procedures. <i>Reviews in Molecular Biotechnology</i> , 2002 , 82, 425-41		131
765	New amperometric dehydrogenase electrodes based on electrocatalytic NADH-oxidation at poly (methylene blue)-modified electrodes. <i>Electroanalysis</i> , 1994 , 6, 821-829	3	131
764	Discovery of a Multinary Noble Metal-Free Oxygen Reduction Catalyst. <i>Advanced Energy Materials</i> , 2018 , 8, 1802269	21.8	131
763	Photo-Induced Electron Transfer Between Photosystem 2 via Cross-linked Redox Hydrogels. <i>Electroanalysis</i> , 2008 , 20, 1043-1047	3	129
762	Facilitated tip-positioning and applications of non-electrode tips in scanning electrochemical microscopy using a shear force based constant-distance mode. <i>Chemistry - A European Journal</i> , 2000 , 6, 1547-54	4.8	123
761	PEDOT-CNT Composite Microelectrodes for Recording and Electrostimulation Applications: Fabrication, Morphology, and Electrical Properties. <i>Frontiers in Neuroengineering</i> , 2012 , 5, 8		122
760	Trace metal residues promote the activity of supposedly metal-free nitrogen-modified carbon catalysts for the oxygen reduction reaction. <i>Electrochemistry Communications</i> , 2013 , 34, 113-116	5.1	120
759	Wiring photosynthetic enzymes to electrodes. <i>Energy and Environmental Science</i> , 2011 , 4, 3263	35.4	117
758	Nanoelectrodes: Applications in electrocatalysis, single-cell analysis and high-resolution electrochemical imaging. <i>TrAC - Trends in Analytical Chemistry</i> , 2016 , 79, 46-59	14.6	116
757	Direct electron transfer between the covalently immobilized enzyme microperoxidase MP-11 and a cystamine-modified gold electrode. <i>Journal of Electroanalytical Chemistry</i> , 1994 , 377, 291-294	4.1	114
756	Pulse technique for the electrochemical deposition of polymer films on electrode surfaces. <i>Biosensors and Bioelectronics</i> , 1997 , 12, 1157-67	11.8	112
755	Low Overpotential Water Splitting Using Cobalt-Cobalt Phosphide Nanoparticles Supported on Nickel Foam. <i>ACS Energy Letters</i> , 2016 , 1, 1192-1198	20.1	111
754	Pentlandite rocks as sustainable and stable efficient electrocatalysts for hydrogen generation. <i>Nature Communications</i> , 2016 , 7, 12269	17.4	111
753	Metal-free catalysts for oxygen reduction in alkaline electrolytes: Influence of the presence of Co, Fe, Mn and Ni inclusions. <i>Electrochimica Acta</i> , 2014 , 128, 271-278	6.7	110
752	An Oxygen-Insensitive Reagentless Glucose Biosensor Based on Osmium-Complex Modified Polypyrrole. <i>Electroanalysis</i> , 2000 , 12, 1383-1389	3	110
751	Rational wiring of photosystem II to hierarchical indium tin oxide electrodes using redox polymers. <i>Energy and Environmental Science</i> , 2016 , 9, 3698-3709	35.4	110
750	Oxygen reduction reaction using N4-metallomacrocyclic catalysts: fundamentals on rational catalyst design. <i>Journal of Porphyrins and Phthalocyanines</i> , 2012 , 16, 761-784	1.8	106
749	Amperometric biosensors produced by immobilization of redox enzymes at polythiophene-modified electrode surfaces. <i>Advanced Materials</i> , 1996 , 8, 219-222	24	106

748	Electropolymerized manganese porphyrin/polypyrrole films as catalytic surfaces for the oxidation of nitric oxide. <i>Electrochimica Acta</i> , 2001 , 47, 265-273	6.7	105
747	Polypyrrole, a new possibility for covalent binding of oxidoreductases to electrode surfaces as a base for stable biosensors. <i>Sensors and Actuators B: Chemical</i> , 1990 , 1, 537-541	8.5	103
746	Engineered electron-transfer chain in photosystem 1 based photocathodes outperforms electron-transfer rates in natural photosynthesis. <i>Chemistry - A European Journal</i> , 2014 , 20, 11029-34	4.8	102
745	Effect of reduction temperature on the preparation and characterization of Pt-Ru nanoparticles on multiwalled carbon nanotubes. <i>Langmuir</i> , 2009 , 25, 3853-60	4	100
744	Spatially Resolved Detection of Neurotransmitter Secretion from Individual Cells by Means of Scanning Electrochemical Microscopy. <i>Angewandte Chemie - International Edition</i> , 2001 , 40, 905-908	16.4	100
743	Photocurrent generation by photosystem 1 integrated in crosslinked redox hydrogels. <i>Energy and Environmental Science</i> , 2011 , 4, 2435	35.4	99
742	Trimetallic Mn-Fe-Ni Oxide Nanoparticles Supported on Multi-Walled Carbon Nanotubes as High-Performance Bifunctional ORR/OER Electrocatalyst in Alkaline Media. <i>Advanced Functional Materials</i> , 2020 , 30, 1905992	15.6	98
741	Metal-free and electrocatalytically active nitrogen-doped carbon nanotubes synthesized by coating with polyaniline. <i>Nanoscale</i> , 2010 , 2, 981-7	7.7	97
740	Anisotropic orientation of horseradish peroxidase by reconstitution on a thiol-modified gold electrode. <i>Chemistry - A European Journal</i> , 2000 , 6, 592-9	4.8	97
739	Localised electrochemical impedance spectroscopy with high lateral resolution by means of alternating current scanning electrochemical microscopy. <i>Electrochemistry Communications</i> , 2002 , 4, 134-138	5.1	95
738	Single-Compound Libraries of Organic Materials: From the Combinatorial Synthesis of Conjugated Oligomers to Structure-Property Relationships This work was made possible with funds donated from Fonds der Chemischen Industrie, the BMBF (Kekullégrant to C.A.B) and the DFG (Schu 929/5-1). We thank Prof. V. Austel, the University of Ulm, for valuable discussions and also	16.4	95
737	Conducting polymer-based amperometric enzyme electrodes: Towards the development of miniaturized reagentless biosensors. <i>Synthetic Metals</i> , 1993 , 61, 31-35	3.6	95
736	Rational design of the electrode morphology for oxygen evolution enhancing the performance for catalytic water oxidation. <i>RSC Advances</i> , 2014 , 4, 9579	3.7	92
735	Synergistic Effect of Cobalt and Iron in Layered Double Hydroxide Catalysts for the Oxygen Evolution Reaction. <i>ChemSusChem</i> , 2017 , 10, 156-165	8.3	91
734	Mesoporous nitrogen-rich carbon materials as catalysts for the oxygen reduction reaction in alkaline solution. <i>ChemSusChem</i> , 2012 , 5, 637-41	8.3	90
733	Electron transfer principles in amperometric biosensors: direct electron transfer between enzymes and electrode surface. <i>Sensors and Actuators B: Chemical</i> , 1996 , 33, 50-54	8.5	90
732	Influence of the Fe:Ni Ratio and Reaction Temperature on the Efficiency of (Fe _x Ni _{1-x}) ₉ S ₈ Electrocatalysts Applied in the Hydrogen Evolution Reaction. <i>ACS Catalysis</i> , 2018 , 8, 987-996	13.1	90
731	Powder Catalyst Fixation for Post-Electrolysis Structural Characterization of NiFe Layered Double Hydroxide Based Oxygen Evolution Reaction Electrocatalysts. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 11258-11262	16.4	89

730	Alternating current techniques in scanning electrochemical microscopy (AC-SECM). <i>Analyst, The</i> , 2008 , 133, 1486-97	5	88
729	Complete Prevention of Dendrite Formation in Zn Metal Anodes by Means of Pulsed Charging Protocols. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 18691-18698	9.5	86
728	Highly active metal-free nitrogen-containing carbon catalysts for oxygen reduction synthesized by thermal treatment of polypyridine-carbon black mixtures. <i>Electrochemistry Communications</i> , 2011 , 13, 593-596	5.1	84
727	Constant-Distance Mode Scanning Electrochemical Microscopy. Part II: High-Resolution SECM Imaging Employing Pt Nanoelectrodes as Miniaturized Scanning Probes. <i>Electroanalysis</i> , 2004 , 16, 60-65 ³		83
726	In situ visualization of Li-ion intercalation and formation of the solid electrolyte interphase on TiO ₂ based paste electrodes using scanning electrochemical microscopy. <i>Chemical Communications</i> , 2013 , 49, 9347-9	5.8	82
725	A redox hydrogel protects the O ₂ -sensitive [FeFe]-hydrogenase from <i>Chlamydomonas reinhardtii</i> from oxidative damage. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 12329-33	16.4	82
724	Toward a Paradigm Shift in Electrocatalysis Using Complex Solid Solution Nanoparticles. <i>ACS Energy Letters</i> , 2019 , 4, 1206-1214	20.1	81
723	Imaging of microstructured biochemically active surfaces by means of scanning electrochemical microscopy. <i>Electrochimica Acta</i> , 1997 , 42, 3105-3111	6.7	81
722	Polypyrrole towers grown with the scanning electrochemical microscope. <i>Advanced Materials</i> , 1996 , 8, 634-637	24	80
721	Bifunktionale Sauerstoffelektroden durch Einbettung von Co@Co ₃ O ₄ -Nanopartikeln in CNT-gekoppelte Stickstoff-dotierte Kohlenstoffpolyeder. <i>Angewandte Chemie</i> , 2016 , 128, 4155-4160	3.6	80
720	Local Surface Structure and Composition Control the Hydrogen Evolution Reaction on Iron Nickel Sulfides. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 4093-4097	16.4	79
719	Mechanism of protection of catalysts supported in redox hydrogel films. <i>Journal of the American Chemical Society</i> , 2015 , 137, 5494-505	16.4	78
718	Making the hydrogen evolution reaction in polymer electrolyte membrane electrolyzers even faster. <i>Nature Communications</i> , 2016 , 7, 10990	17.4	78
717	Membrane-Less Biofuel Cell Based on Cellobiose Dehydrogenase (Anode)/Laccase (Cathode) Wired via Specific Os-Redox Polymers. <i>Fuel Cells</i> , 2009 , 9, 53-62	2.9	78
716	An advanced biological scanning electrochemical microscope (Bio-SECM) for studying individual living cells. <i>Physical Chemistry Chemical Physics</i> , 2004 , 6, 4003	3.6	78
715	Quinohemoprotein alcohol dehydrogenase-based reagentless amperometric biosensor for ethanol monitoring during wine fermentation. <i>Analytica Chimica Acta</i> , 2002 , 463, 39-51	6.6	78
714	Synthesis of nano-porous carbon and nitrogen doped carbon dots from an anionic MOF: a trace cobalt metal residue in carbon dots promotes electrocatalytic ORR activity. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 13573-13580	13	76
713	Pulsed electrodeposition of Pt nanoclusters on carbon nanotubes modified carbon materials using diffusion restricting viscous electrolytes. <i>Electrochemistry Communications</i> , 2007 , 9, 1348-1354	5.1	76

712	MoSSe@reduced graphene oxide nanocomposite heterostructures as efficient and stable electrocatalysts for the hydrogen evolution reaction. <i>Nano Energy</i> , 2016 , 29, 46-53	17.1	76
711	Enhanced photoelectrochemical properties of WO ₃ thin films fabricated by reactive magnetron sputtering. <i>International Journal of Hydrogen Energy</i> , 2011 , 36, 4724-4731	6.7	74
710	Enhanced direct electron transfer between laccase and hierarchical carbon microfibers/carbon nanotubes composite electrodes. Comparison of three enzyme immobilization methods. <i>Electrochimica Acta</i> , 2012 , 82, 218-223	6.7	73
709	High resolution constant-distance mode alternating current scanning electrochemical microscopy (AC-SECM). <i>Electrochemistry Communications</i> , 2004 , 6, 288-293	5.1	73
708	Poly(methylene blue)-modified thick-film gold electrodes for the electrocatalytic oxidation of NADH and their application in glucose biosensors. <i>Biosensors and Bioelectronics</i> , 1996 , 11, 215-23	11.8	73
707	Spearhead Nanometric Field-Effect Transistor Sensors for Single-Cell Analysis. <i>ACS Nano</i> , 2016 , 10, 3214-3221	11.2	71
706	Pulse-mode scanning ion conductance microscopy--a method to investigate cultured hippocampal cells. <i>Journal of Neuroscience Methods</i> , 2002 , 116, 113-7	3	71
705	Direct electron transfer of bilirubin oxidase (<i>Myrothecium verrucaria</i>) at an unmodified nanoporous gold biocathode. <i>Electrochemistry Communications</i> , 2012 , 16, 92-95	5.1	70
704	A reagentless glucose biosensor based on glucose oxidase entrapped into osmium-complex modified polypyrrole films. <i>Sensors and Actuators B: Chemical</i> , 2001 , 79, 150-156	8.5	70
703	Über die Rolle von Metallen in Elektrokatalysatoren auf Basis von stickstoffdotiertem Kohlenstoff für die Sauerstoffreduktion. <i>Angewandte Chemie</i> , 2015 , 127, 10240-10259	3.6	69
702	Highly concentrated aqueous dispersions of graphene exfoliated by sodium taurodeoxycholate: dispersion behavior and potential application as a catalyst support for the oxygen-reduction reaction. <i>Chemistry - A European Journal</i> , 2012 , 18, 6972-8	4.8	69
701	Label-free electrochemical recognition of DNA hybridization by means of modulation of the feedback current in SECM. <i>Angewandte Chemie - International Edition</i> , 2004 , 43, 3482-5	16.4	69
700	On the faradaic selectivity and the role of surface inhomogeneity during the chlorine evolution reaction on ternary Ti-Ru-Ir mixed metal oxide electrocatalysts. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 13741-7	3.6	68
699	The importance of cell geometry for electrochemical impedance spectroscopy in three-electrode lithium ion battery test cells. <i>Electrochemistry Communications</i> , 2012 , 22, 120-123	5.1	68
698	Precursor sites for localised corrosion on lacquered tinplates visualised by means of alternating current scanning electrochemical microscopy. <i>Electrochimica Acta</i> , 2003 , 48, 1115-1121	6.7	68
697	Direct Growth of Highly Strained Pt Islands on Branched Ni Nanoparticles for Improved Hydrogen Evolution Reaction Activity. <i>Journal of the American Chemical Society</i> , 2019 , 141, 16202-16207	16.4	67
696	Mesoporous nitrogen containing carbon materials for the simultaneous detection of ascorbic acid, dopamine and uric acid. <i>Sensors and Actuators B: Chemical</i> , 2016 , 230, 544-555	8.5	66
695	Minizymes. A new strategy for the development of reagentless amperometric biosensors based on direct electron-transfer processes. <i>Bioelectrochemistry</i> , 1997 , 42, 1-6		66

694	Cascade Reactions in Nanozymes: Spatially Separated Active Sites inside Ag-Core-Porous-Cu-Shell Nanoparticles for Multistep Carbon Dioxide Reduction to Higher Organic Molecules. <i>Journal of the American Chemical Society</i> , 2019 , 141, 14093-14097	16.4	65
693	Scanning electrochemical microscopy of Li-ion batteries. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 28441-50	3.6	65
692	Scanning electrochemical microscopy in neuroscience. <i>Annual Review of Analytical Chemistry</i> , 2010 , 3, 299-318	12.5	65
691	MOFs for Electrocatalysis: From Serendipity to Design Strategies. <i>Small Methods</i> , 2019 , 3, 1800415	12.8	65
690	Ultrathin 2D Cobalt Zeolite-Imidazole Framework Nanosheets for Electrocatalytic Oxygen Evolution. <i>Advanced Science</i> , 2018 , 5, 1801029	13.6	65
689	Activation of oxygen evolving perovskites for oxygen reduction by functionalization with Fe-N(x)/C groups. <i>Chemical Communications</i> , 2014 , 50, 14760-2	5.8	64
688	Eine Stickstoff-dotierte Kohlenstoffmatrix mit eingeschlossenen MnxOy/NC- und CoxOy/NC-Nanopartikeln für leistungs-fähige bifunktionale Sauerstoffelektroden. <i>Angewandte Chemie</i> , 2014 , 126, 8648-8652	3.6	64
687	Label-Free Detection of DNA Hybridization in Presence of Intercalators Using Electrochemical Impedance Spectroscopy. <i>Electroanalysis</i> , 2009 , 21, 325-331	3	64
686	Localised visualisation of O2 consumption and H2O2 formation by means of SECM for the characterisation of fuel cell catalyst activity. <i>Electrochimica Acta</i> , 2007 , 53, 1164-1169	6.7	64
685	Leaching of dimethylferrocene, a redox mediator in amperometric enzyme electrodes. <i>Sensors and Actuators B: Chemical</i> , 1990 , 1, 571-575	8.5	64
684	High-yield exfoliation of graphite in acrylate polymers: A stable few-layer graphene nanofluid with enhanced thermal conductivity. <i>Carbon</i> , 2013 , 64, 288-294	10.4	63
683	N-doped carbon synthesized from N-containing polymers as metal-free catalysts for the oxygen reduction under alkaline conditions. <i>Electrochimica Acta</i> , 2013 , 98, 139-145	6.7	63
682	Amperometric polypyrrole enzyme electrodes: effect of permeability and enzyme location. <i>Sensors and Actuators B: Chemical</i> , 1992 , 6, 106-112	8.5	63
681	Electrocatalysis as the Nexus for Sustainable Renewable Energy: The Gordian Knot of Activity, Stability, and Selectivity. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 15298-15312	16.4	62
680	Activation and Stabilization of Nitrogen-Doped Carbon Nanotubes as Electrocatalysts in the Oxygen Reduction Reaction at Strongly Alkaline Conditions. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 24283-24291	3.8	62
679	Constant-distance mode AC-SECM for the visualisation of corrosion pits. <i>Electrochemistry Communications</i> , 2007 , 9, 1793-1797	5.1	62
678	Live cyanobacteria produce photocurrent and hydrogen using both the respiratory and photosynthetic systems. <i>Nature Communications</i> , 2018 , 9, 2168	17.4	61
677	Evaluation of perovskites as electrocatalysts for the oxygen evolution reaction. <i>ChemPhysChem</i> , 2014 , 15, 2810-6	3.2	61

676	Patterned self-assembled alkanethiolate monolayers on gold. Patterning and imaging by means of scanning electrochemical microscopy. <i>Electroanalysis</i> , 1997 , 9, 746-750	3	61
675	ABTS-modified multiwalled carbon nanotubes as an effective mediating system for bioelectrocatalytic reduction of oxygen. <i>Analytical Chemistry</i> , 2008 , 80, 7643-8	7.8	61
674	Carbon fiber microelectrodes electrocoated with polycarbazole and poly(carbazole-co-p-tolylsulfonyl pyrrole) films for the detection of dopamine in presence of ascorbic acid. <i>Mikrochimica Acta</i> , 2008 , 160, 247-251	5.8	61
673	A reagentless bienzyme amperometric biosensor based on alcohol oxidase/peroxidase and an Os-complex modified electrodeposition paint. <i>Sensors and Actuators B: Chemical</i> , 2006 , 113, 590-598	8.5	61
672	Dual microelectrodes for distance control and detection of nitric oxide from endothelial cells by means of scanning electrochemical microscope. <i>Analytical Chemistry</i> , 2004 , 76, 6389-94	7.8	61
671	Reagentless oxidoreductase sensors. <i>Biosensors and Bioelectronics</i> , 1996 , 11, 127-135	11.8	61
670	Covalent binding of glucose oxidase to functionalized polyazulenes. The first application of polyazulenes in amperometric biosensors. <i>Advanced Materials</i> , 1993 , 5, 124-126	24	61
669	Co O @Co/NCNT Nanostructure Derived from a Dicyanamide-Based Metal-Organic Framework as an Efficient Bi-functional Electrocatalyst for Oxygen Reduction and Evolution Reactions. <i>Chemistry - A European Journal</i> , 2017 , 23, 18049-18056	4.8	60
668	Detection of nitric oxide release from single cells by using constant-distance-mode scanning electrochemical microscopy. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 7451-4	16.4	60
667	Copper nanoparticles stabilized on nitrogen-doped carbon nanotubes as efficient and recyclable catalysts for alkyne/aldehyde/cyclic amine A3-type coupling reactions. <i>Applied Catalysis A: General</i> , 2012 , 431-432, 88-94	5.1	59
666	Controlled Electrochemical Preparation of Amperometric Biosensors Based on Conducting Polymer Multilayers. <i>Electroanalysis</i> , 1998 , 10, 546-552	3	58
665	Online Monitoring of Electrochemical Carbon Corrosion in Alkaline Electrolytes by Differential Electrochemical Mass Spectrometry. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 1585-1589	16.4	58
664	Three-Dimensional Branched and Faceted Gold-Ruthenium Nanoparticles: Using Nanostructure to Improve Stability in Oxygen Evolution Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 10241-10245	16.4	57
663	Redox electrodeposition polymers: adaptation of the redox potential of polymer-bound Os complexes for bioanalytical applications. <i>Analytical and Bioanalytical Chemistry</i> , 2010 , 398, 1661-73	4.4	57
662	MOF-Templated Assembly Approach for Fe C Nanoparticles Encapsulated in Bamboo-Like N-Doped CNTs: Highly Efficient Oxygen Reduction under Acidic and Basic Conditions. <i>Chemistry - A European Journal</i> , 2017 , 23, 12125-12130	4.8	56
661	Oxygen Evolution Electrocatalysis of a Single MOF-Derived Composite Nanoparticle on the Tip of a Nanoelectrode. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 8927-8931	16.4	56
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