Nikolay Kornienko

List of Publications by Year
in descending order

71 papers	10,258 citations	87888 38 h-index	98798 67 g-index
86 all docs	86 docs citations	86 times ranked	15330 citing authors

#	Article	IF	Citations
1	Covalent organic frameworks comprising cobalt porphyrins for catalytic CO ₂ reduction in water. Science, 2015, 349, 1208-1213.	12.6	2,046
2	Atomically thin two-dimensional organic-inorganic hybrid perovskites. Science, 2015, 349, 1518-1521.	12.6	1,159
3	Metalâ€“Organic Frameworks for Electrocatalytic Reduction of Carbon Dioxide. Journal of the American Chemical Society, 2015, 137, 14129-14135.	13.7	966
4	Efficient hydrogen peroxide generation using reduced graphene oxide-based oxygen reduction electrocatalysts. Nature Catalysis, 2018, 1, 282-290.	34.4	699
5	Reticular Electronic Tuning of Porphyrin Active Sites in Covalent Organic Frameworks for Electrocatalytic Carbon Dioxide Reduction. Journal of the American Chemical Society, 2018, 140, 1116-1122.	13.7	457
6	Synthesis of Composition Tunable and Highly Luminescent Cesium Lead Halide Nanowires through Anion-Exchange Reactions. Journal of the American Chemical Society, 2016, 138, 7236-7239.	13.7	397
7	<i>Operando</i> Spectroscopic Analysis of an Amorphous Cobalt Sulfide Hydrogen Evolution Electrocatalyst. Journal of the American Chemical Society, 2015, 137, 7448-7455.	13.7	330
8	Interfacing natureâ€™s catalytic machinery with synthetic materials for semi-artificial photosynthesis. Nature Nanotechnology, 2018, 13, 890-899.	31.5	322
9	Visible-Light Photoredox Catalysis: Selective Reduction of Carbon Dioxide to Carbon Monoxide by a Nickel <i>N</i>-Heterocyclic Carbeneâ€“Isoquinoline Complex. Journal of the American Chemical Society, 2013, 135, 14413-14424.	13.7	317
10	TiO₂/BiVO₄ Nanowire Heterostructure Photoanodes Based on Type II Band Alignment. ACS Central Science, 2016, 2, 80-88.	11.3	263
11	Anisotropic phase segregation and migration of Pt in nanocrystals en route to nanoframe catalysts. Nature Materials, 2016, 15, 1188-1194.	27.5	244
12	2-D Array Photonic Crystal Sensing Motif. Journal of the American Chemical Society, 2011, 133, 9152-9155.	13.7	207
13	Atomic Structure of Pt₃Ni Nanoframe Electrocatalysts by <i>in Situ</i> X-ray Absorption Spectroscopy. Journal of the American Chemical Society, 2015, 137, 15817-15824.	13.7	197
14	Bias-free photoelectrochemical water splitting with photosystem II on a dye-sensitized photoanode wired to hydrogenase. Nature Energy, 2018, 3, 944-951.	39.5	192
15	Mesoscopic Constructs of Ordered and Oriented Metalâ€“Organic Frameworks on Plasmonic Silver Nanocrystals. Journal of the American Chemical Society, 2015, 137, 2199-2202.	13.7	141
16	Spectroscopic elucidation of energy transfer in hybrid inorganicâ€“biological organisms for solar-to-chemical production. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11750-11755.	7.1	125
17	Atomic Resolution Imaging of Halide Perovskites. Nano Letters, 2016, 16, 7530-7535.	9.1	125
18	Electrochemical biomass valorization on gold-metal oxide nanoscale heterojunctions enables investigation of both catalyst and reaction dynamics with <i>operando</i> surface-enhanced Raman spectroscopy. Chemical Science, 2020, 11, 1798-1806.	7.4	120

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19	Physical Biology of the Materialsâ€“Microorganism Interface. Journal of the American Chemical Society, 2018, 140, 1978-1985.	13.7	115
20	Interfacing Formate Dehydrogenase with Metal Oxides for the Reversible Electrocatalysis and Solarâ€Đriven Reduction of Carbon Dioxide. Angewandte Chemie - International Edition, 2019, 58, 4601-4605.	13.8	115
21	Cyborgian Material Design for Solar Fuel Production: The Emerging Photosynthetic Biohybrid Systems. Accounts of Chemical Research, 2017, 50, 476-481.	15.6	114
22	Single-nanowire photoelectrochemistry. Nature Nanotechnology, 2016, 11, 609-612.	31.5	111
23	Construction of Câ€“N bonds from small-molecule precursors through heterogeneous electrocatalysis. Nature Reviews Chemistry, 2022, 6, 303-319.	30.2	108
24	Solar Water Splitting with a Hydrogenase Integrated in Photoelectrochemical Tandem Cells. Angewandte Chemie - International Edition, 2018, 57, 10595-10599.	13.8	93
25	2020 Roadmap on two-dimensional nanomaterials for environmental catalysis. Chinese Chemical Letters, 2019, 30, 2065-2088.	9.0	90
26	Probing CO₂ Conversion Chemistry on Nanostructured Surfaces with Operando Vibrational Spectroscopy. Nano Letters, 2019, 19, 4817-4826.	9.1	86
27	Catalysis by design: development of a bifunctional water splitting catalyst through an operando measurement directed optimization cycle. Chemical Science, 2018, 9, 5322-5333.	7.4	73
28	Growth and Photoelectrochemical Energy Conversion of Wurtzite Indium Phosphide Nanowire Arrays. ACS Nano, 2016, 10, 5525-5535.	14.6	70
29	Extending the Compositional Space of Mixed Lead Halide Perovskites by Cs, Rb, K, and Na Doping. Journal of Physical Chemistry C, 2018, 122, 13548-13557.	3.1	70
30	Advancing Techniques for Investigating the Enzymeâ€“Electrode Interface. Accounts of Chemical Research, 2019, 52, 1439-1448.	15.6	59
31	Disparity of Cytochrome Utilization in Anodic and Cathodic Extracellular Electron Transfer Pathways of <i>Geobacter sulfurreducens</i> Biofilms. Journal of the American Chemical Society, 2020, 142, 5194-5203.	13.7	59
32	Critical Role of Methylammonium Librational Motion in Methylammonium Lead Iodide (CH₃NH₃PbI₃) Perovskite Photochemistry. Nano Letters, 2017, 17, 4151-4157.	9.1	55
33	Rational incorporation of defects within metalâ€“organic frameworks generates highly active electrocatalytic sites. Chemical Science, 2021, 12, 7324-7333.	7.4	50
34	Investigation of mixed-metal (oxy)fluorides as a new class of water oxidation electrocatalysts. Chemical Science, 2019, 10, 9209-9218.	7.4	47
35	Bioinspired Synthesis of Reduced Graphene Oxide-Wrapped <i>Geobacter sulfurreducens</i> as a Hybrid Electrocatalyst for Efficient Oxygen Evolution Reaction. Chemistry of Materials, 2019, 31, 3686-3693.	6.7	47
36	Solution Phase Synthesis of Indium Gallium Phosphide Alloy Nanowires. ACS Nano, 2015, 9, 3951-3960.	14.6	44

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37	Hostâ€“Guest Chemistry Meets Electrocatalysis: Cucurbit[6]uril on a Au Surface as a Hybrid System in CO₂ Reduction. ACS Catalysis, 2020, 10, 751-761.	11.2	43
38	Metal-based nanomaterials for efficient CO2 electroreduction: Recent advances in mechanism, material design and selectivity. Nano Energy, 2020, 78, 105311.	16.0	42
39	Electrochemically Triggered Dynamics within a Hybrid Metalâ€“Organic Electrocatalyst. Journal of the American Chemical Society, 2020, 142, 12382-12393.	13.7	40
40	Electrochemically driven Câ€“N bond formation from CO₂ and ammonia at the triple-phase boundary. Chemical Science, 2022, 13, 3957-3964.	7.4	38
41	Interfacing Formate Dehydrogenase with Metal Oxides for the Reversible Electrocatalysis and Solarâ€Driven Reduction of Carbon Dioxide. Angewandte Chemie, 2019, 131, 4649-4653.	2.0	34
42	Artificial photosynthesis with metal and covalent organic frameworks (MOFs and COFs): challenges and prospects in fuelâ€forming electrocatalysis. Physiologia Plantarum, 2019, 166, 460-471.	5.2	31
43	<i>Operando</i> vibrational spectroscopy for electrochemical biomass valorization. Chemical Communications, 2020, 56, 8726-8734.	4.1	28
44	Amorphous Ironâ€“Manganese Oxyfluorides, Promising Catalysts for Oxygen Evolution Reaction under Acidic Media. ACS Applied Energy Materials, 2021, 4, 1173-1181.	5.1	25
45	<i>Operando</i> Raman probing of electrocatalytic biomass oxidation on gold nanoparticle surfaces. Chemical Communications, 2019, 55, 11996-11999.	4.1	23
46	Electrocatalytic carbon dioxide reduction in acid. Chem Catalysis, 2022, 2, 29-38.	6.1	23
47	Enhancing Catalysis through Substitute-Driven Redox Tuning. Joule, 2018, 2, 207-209.	24.0	20
48	Heterogeneous electrocatalytic reduction of CO₂ promoted by secondary coordination sphere effects. New Journal of Chemistry, 2020, 44, 4246-4252.	2.8	20
49	<i>Operando</i> spectroscopy of nanoscopic metal/covalent organic framework electrocatalysts. Nanoscale, 2021, 13, 1507-1514.	5.6	20
50	Probing electrosynthetic reactions with furfural on copper surfaces. Chemical Communications, 2021, 57, 5127-5130.	4.1	20
51	Oxygenic Photoreactivity in Photosystem II Studied by Rotating Ring Disk Electrochemistry. Journal of the American Chemical Society, 2018, 140, 17923-17931.	13.7	18
52	A Oneâ€Pot Route to Faceted FePtâ€Fe₃O₄ Dumbbells: Probing Morphologyâ€“Catalytic Activity Effects in O₂ Reduction Catalysis. Advanced Functional Materials, 2020, 30, 2002633.	14.9	18
53	Solar Water Splitting with a Hydrogenase Integrated in Photoelectrochemical Tandem Cells. Angewandte Chemie, 2018, 130, 10755-10759.	2.0	16
54	Aerobic Conditions Enhance the Photocatalytic Stability of CdS/CdOxQuantum Dots. Chemistry - A European Journal, 2018, 24, 18385-18388.	3.3	11

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55	Shell isolated nanoparticle enhanced Raman spectroscopy for renewable energy electrocatalysis. New Journal of Chemistry, 2020, 44, 19953-19960.	2.8	10
56	Câ‰¡N triple bond cleavage via transmembrane hydrogenation. Chem Catalysis, 2022, 2, 499-507.	6.1	10
57	Speeding up Nanoscience and Nanotechnology with Ultrafast Plasmonics. Nano Letters, 2020, 20, 5593-5596.	9.1	8
58	Towards atomic precision in HMF and methane oxidation electrocatalysts. Chemical Communications, 2021, 57, 4230-4238.	4.1	7
59	Adaptive framework CO2 catalysis. CheM, 2021, 7, 2554-2555.	11.7	6
60	Strategies for heterogeneous small-molecule electrosynthesis. Cell Reports Physical Science, 2021, 2, 100682.	5.6	6
61	Mechanochemical synthesis of cobalt/copper fluorophosphate generates a multifunctional electrocatalyst. Chemical Communications, 2020, 56, 9276-9279.	4.1	5
62	Highly efficient water oxidation via a bimolecular reaction mechanism on rutile structured mixed-metal oxyfluorides. Chem Catalysis, 2022, 2, 1114-1127.	6.1	5
63	Low-Temperature Solution-Phase Growth of Silicon and Silicon-Containing Alloy Nanowires. Journal of Physical Chemistry C, 2016, 120, 20525-20529.	3.1	4
64	Conductive Metalâ€Organic Frameworks Bearing Mâˆ’O₄ Active Sites as Highly Active Biomass Valorization Electrocatalysts. ChemSusChem, 2022, 15, .	6.8	4
65	Pushing the methodological envelope in understanding the photo/electrosynthetic materials-microorganism interface. IScience, 2021, 24, 103049.	4.1	3
66	Linkerâ€Modulated Peroxide Electrosynthesis Using Metalâ€Organic Nanosheets**. ChemElectroChem, 2022, 9, .	3.4	3
67	Emerging opportunities with metal-organic framework electrosynthetic platforms. Chemical Physics Reviews, 2022, 3, .	5.7	3
68	Integrating Materials Design and Operando Spectroscopy for the Development of Next Generation CO2 Reduction and Biomass Valorization Catalytic Systems. ECS Meeting Abstracts, 2020, MA2020-01, 1513-1513.	0.0	0
69	Expanding the Scope of Electrocatalysis Through Catalyst Design and Operando Spectroscopy. , 0, , .		0
70	Host-guest Chemistry Meets Electrocatalysis: Cucurbit[6]uril on a Au Surface as Hybrid System in CO2 Reduction. , 0, , .		0
71	A super basic strategy. Joule, 2022, 6, 32-34.	24.0	0