Hiroaki Kotani

List of Publications by Citations

81 papers	4,105 citations	35 h-index	63 g-index
86 ext. papers	4,495 ext. citations	9.7 avg, IF	5.33 L-index

#	Paper	IF	Citations
81	Electron-transfer state of 9-mesityl-10-methylacridinium ion with a much longer lifetime and higher energy than that of the natural photosynthetic reaction center. *Journal of the American Chemical Society*, **2004**, 126, 1600-1	16.4	452
80	Photocatalytic oxygenation of anthracenes and olefins with dioxygen via selective radical coupling using 9-mesityl-10-methylacridinium ion as an effective electron-transfer photocatalyst. *Journal of the American Chemical Society*, **2004**, 126, 15999-6006	16.4	204
79	Crystal structure of a metal ion-bound oxoiron(IV) complex and implications for biological electron transfer. *Nature Chemistry*, **2010**, 2, 756-9	17.6	199
78	Production of an ultra-long-lived charge-separated state in a zinc chlorin-C60 dyad by one-step photoinduced electron transfer. *Angewandte Chemie - International Edition*, **2004**, 43, 853-6	16.4	180
77	Catalytic mechanisms of hydrogen evolution with homogeneous and heterogeneous catalysts. *Energy and Environmental Science*, **2011**, 4, 2754	35.4	159
76	Metal ion-coupled electron transfer of a nonheme oxoiron(IV) complex: remarkable enhancement of electron-transfer rates by Sc3+. *Journal of the American Chemical Society*, **2011**, 133, 403-5	16.4	151
75	Visible-Light-Driven Photocatalytic CO Reduction by a Ni(II) Complex Bearing a Bioinspired Tetradentate Ligand for Selective CO Production. *Journal of the American Chemical Society*, **2017**, 139, 6538-6541	16.4	136
74	Fundamental electron-transfer properties of non-heme oxoiron(IV) complexes. *Journal of the American Chemical Society*, **2008**, 130, 434-5	16.4	128
73	Cupric superoxo-mediated intermolecular C-H activation chemistry. *Journal of the American Chemical Society*, **2011**, 133, 1702-5	16.4	126
72	Highly efficient photocatalytic oxygenation reactions using water as an oxygen source. *Nature Chemistry*, **2011**, 3, 38-41	17.6	114
71	Mononuclear copper complex-catalyzed four-electron reduction of oxygen. *Journal of the American Chemical Society*, **2010**, 132, 6874-5	16.4	106
70	Hydrogen atom abstraction and hydride transfer reactions by iron(IV)-oxo porphyrins. *Angewandte Chemie - International Edition*, **2008**, 47, 7321-4	16.4	103
69	Homogeneous catalytic O2 reduction to water by a cytochrome c oxidase model with trapping of intermediates and mechanistic insights. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 13990-4	11.5	93
68	Photocatalytic hydrogen evolution under highly basic conditions by using Ru nanoparticles and 2-phenyl-4-(1-naphthyl)quinolinium ion. *Journal of the American Chemical Society*, **2011**, 133, 16136-45	16.4	91
67	Size- and shape-dependent activity of metal nanoparticles as hydrogen-evolution catalysts: mechanistic insights into photocatalytic hydrogen evolution. *Chemistry - A European Journal*, **2011**, 17, 2777-85	4.8	86
66	Photocatalytic hydrogen evolution with Ni nanoparticles by using 2-phenyl-4-(1-naphthyl)quinolinium ion as a photocatalyst. *Energy and Environmental Science*, **2012**, 5, 6111	35.4	82
65	Sequential electron-transfer and proton-transfer pathways in hydride-transfer reactions from dihydronicotinamide adenine dinucleotide analogues to non-heme oxoiron(IV) complexes and p-chloranil. Detection of radical cations of NADH analogues in acid-promoted hydride-transfer reactions. *Journal of the American Chemical Society*, **2008**, 130, 15134-42	16.4	78

64	Efficient photocatalytic hydrogen evolution without an electron mediator using a simple electron donor-acceptor dyad. *Physical Chemistry Chemical Physics*, **2007**, 9, 1487-92	3.6	73
63	Electron-transfer reduction of dinuclear copper peroxo and bis-μ-oxo complexes leading to the catalytic four-electron reduction of dioxygen to water. *Chemistry - A European Journal*, **2012**, 18, 1084-93	4.8	71
62	Photocatalytic generation of a non-heme oxoiron(IV) complex with water as an oxygen source. *Journal of the American Chemical Society*, **2011**, 133, 3249-51	16.4	69
61	Electron-transfer properties of an efficient nonheme iron oxidation catalyst with a tetradentate bispidine ligand. *Angewandte Chemie - International Edition*, **2010**, 49, 2622-5	16.4	67
60	Viologen-modified platinum clusters acting as an efficient catalyst in photocatalytic hydrogen evolution. *Journal of Physical Chemistry B*, **2006**, 110, 24047-53	3.4	67
59	Misleading effects of impurities derived from the extremely long-lived electron-transfer state of 9-mesityl-10-methylacridinium ion. *Chemical Communications*, **2005**, 4520-2	5.8	65
58	Electron- and hydride-transfer reactivity of an isolable manganese(V)-oxo complex. *Journal of the American Chemical Society*, **2011**, 133, 1859-69	16.4	63
57	Mechanistic insights into hydride-transfer and electron-transfer reactions by a manganese(IV)-oxo porphyrin complex. *Journal of the American Chemical Society*, **2009**, 131, 17127-34	16.4	61
56	Homogeneous Photocatalytic Water Oxidation with a Dinuclear Co(III)-Pyridylmethylamine Complex. *Inorganic Chemistry*, **2016**, 55, 1154-64	5.1	58
55	Determination of the structural features of a long-lived electron-transfer state of 9-mesityl-10-methylacridinium ion. *Journal of the American Chemical Society*, **2012**, 134, 4569-72	16.4	57
54	Response: Why had long-lived electron-transfer states of donor-substituted 10-methylacridinium ions been overlooked? Formation of the dimer radical cations detected in the near-IR region. *Physical Chemistry Chemical Physics*, **2008**, 10, 5159-62	3.6	56
53	Efficient Photocatalytic CO Reduction by a Ni(II) Complex Having Pyridine Pendants through Capturing a Mg Ion as a Lewis-Acid Cocatalyst. *Journal of the American Chemical Society*, **2019**, 141, 20309-20317	16.4	56
52	Formation of a long-lived electron-transfer state of a naphthalene-quinolinium ion dyad and the pi-dimer radical cation. *Faraday Discussions*, **2012**, 155, 89-102; discussion 103-14	3.6	54
51	Production of an Ultra-Long-Lived Charge-Separated State in a Zinc Chlorin–C60 Dyad by One-Step Photoinduced Electron Transfer. *Angewandte Chemie*, **2004**, 116, 871-874	3.6	49
50	Characteristics and reactivity of ruthenium-oxo complexes. *Dalton Transactions*, **2016**, 45, 16727-16750	4.3	47
49	High-valent manganese(v)-oxo porphyrin complexes in hydride transfer reactions. *Chemical Communications*, **2009**, 704-6	5.8	40
48	Contrasting effects of axial ligands on electron-transfer versus proton-coupled electron-transfer reactions of nonheme oxoiron(IV) complexes. *Chemistry - A European Journal*, **2010**, 16, 354-61	4.8	39
47	Photoelectrochemical properties of supramolecular composite of fullerene nanoclusters and 9-mesityl-10-carboxymethylacridinium ion on SnO2. *Organic Letters*, **2004**, 6, 3103-6	6.2	39

46	Photoinduced Electron Transfer in 9-Substituted 10-Methylacridinium Ions. *Chemistry - A European Journal*, **2017**, 23, 1306-1317	4.8	33
45	Formation and characterization of a reactive chromium(v)-oxo complex: mechanistic insight into hydrogen-atom transfer reactions. *Chemical Science*, **2015**, 6, 945-955	9.4	32
44	Formation of hydrogen peroxide from coal tar as hydrogen sources using 9-mesityl-10-methylacridinium ion as an effective photocatalyst. *Applied Catalysis B: Environmental*, **2008**, 77, 317-324	21.8	31
43	A Ruthenium(III)-Oxyl Complex Bearing Strong Radical Character. *Angewandte Chemie - International Edition*, **2016**, 55, 14041-14045	16.4	31
42	Mechanistic Insights into Homogeneous Electrocatalytic and Photocatalytic Hydrogen Evolution Catalyzed by High-Spin Ni(II) Complexes with SN-Type Tetradentate Ligands. *Inorganic Chemistry*, **2018**, 57, 7180-7190	5.1	29
41	Hydrogen atom abstraction reactions independent of C–H bond dissociation energies of organic substrates in water: significance of oxidant–substrate adduct formation. *Chemical Science*, **2014**, 5, 1429-1436	9.4	27
40	An efficient fluorescence sensor for superoxide with an acridinium ion-linked porphyrin triad. *Journal of the American Chemical Society*, **2011**, 133, 11092-5	16.4	24
39	Synthesis and photodynamics of 9-mesitylacridinium ion-modified gold nanoclusters. *Journal of the American Chemical Society*, **2010**, 132, 11002-3	16.4	24
38	A supramolecular photocatalyst composed of a polyoxometalate and a photosensitizing water-soluble porphyrin diacid for the oxidation of organic substrates in water. *Green Chemistry*, **2018**, 20, 1975-1980	10	22
37	Hydrogen Atom Abstraction and Hydride Transfer Reactions by Iron(IV)–Oxo Porphyrins. *Angewandte Chemie*, **2008**, 120, 7431-7434	3.6	22
36	Peptide Cross-linkers: Immobilization of Platinum Nanoparticles Highly Dispersed on Graphene Oxide Nanosheets with Enhanced Photocatalytic Activities. *ACS Applied Materials & Interfaces*, **2017**, 9, 9996-10002	9.5	20
35	Mechanistic Insights into C-H Oxidations by Ruthenium(III)-Pterin Complexes: Impact of Basicity of the Pterin Ligand and Electron Acceptability of the Metal Center on the Transition States. *Journal of the American Chemical Society*, **2016**, 138, 9508-20	16.4	18
34	Enhancement of 4-electron O2 reduction by a Cu(ii)-pyridylamine complex via protonation of a pendant pyridine in the second coordination sphere in water. *Chemical Communications*, **2015**, 51, 13385-8	5.8	17
33	Reactivity of a Ru(III)-hydroxo complex in substrate oxidation in water. *Chemical Communications*, **2014**, 50, 15018-21	5.8	17
32	Elektronentransfereigenschaften eines effizienten Nichthäm- Eisenkatalysators mit einem vierzähnigen Bispidinligand. *Angewandte Chemie*, **2010**, 122, 2679-2682	3.6	17
31	Mechanistic Insight into Dioxygen Evolution from Diastereomeric μ-Peroxo Dinuclear Co(III) Complexes Based on Stoichiometric Electron-Transfer Oxidation. *Inorganic Chemistry*, **2019**, 58, 3676-3682	5.1	16
30	Redox-Noninnocent Behavior of Tris(2-pyridylmethyl)amine Bound to a Lewis Acidic Rh(III) Ion Induced by C-H Deprotonation. *Journal of the American Chemical Society*, **2015**, 137, 11222-5	16.4	14
29	A Ruthenium(III)–Oxyl Complex Bearing Strong Radical Character. *Angewandte Chemie*, **2016**, 128, 14247-14251	3.6	14

28	Synthesis and characterization of an azido-bridged dinuclear ruthenium(II) polypyridylamine complex forming a mixed-valence state. *Inorganic Chemistry*, **2013**, 52, 5507-14	5.1	14
27	Thermodynamics and Photodynamics of a Monoprotonated Porphyrin Directly Stabilized by Hydrogen Bonding with Polar Protic Solvents. *Chemistry - A European Journal*, **2017**, 23, 4669-4679	4.8	11
26	Identification of Intermediates in Peroxidase Catalytic Cycle of a DNAzyme Possessing Heme. *Bulletin of the Chemical Society of Japan*, **2019**, 92, 1729-1736	5.1	11
25	Catalytic Oxidative Cracking of Benzene Rings in Water. *ACS Catalysis*, **2019**, 9, 671-678	13.1	11
24	Dioxygen/Hydrogen Peroxide Interconversion Using Redox Couples of Saddle-Distorted Porphyrins and Isophlorins. *Journal of the American Chemical Society*, **2019**, 141, 5987-5994	16.4	10
23	Mechanistic Insight into Concerted Proton-Electron Transfer of a Ru(IV)-Oxo Complex: A Possible Oxidative Asynchronicity. *Journal of the American Chemical Society*, **2020**, 142, 16982-16989	16.4	10
22	Efficient photocatalytic proton-coupled electron-transfer reduction of O using a saddle-distorted porphyrin as a photocatalyst. *Chemical Communications*, **2019**, 55, 4925-4928	5.8	9
21	Efficient Near-Infrared Light-Driven Hydrogen Evolution Catalyzed by a Saddle-Distorted Porphyrin as a Photocatalyst. *ACS Applied Energy Materials*, **2020**, 3, 3193-3197	6.1	9
20	Intermediate-Spin Iron(III) Complexes Having a Redox-Noninnocent Macrocyclic Tetraamido Ligand. *Inorganic Chemistry*, **2018**, 57, 9683-9695	5.1	9
19	Fundamental electron-transfer and proton-coupled electron-transfer properties of Ru(iv)-oxo complexes. *Dalton Transactions*, **2019**, 48, 13154-13161	4.3	9
18	Cooperative Effects of Heterodinuclear Ir-M Complexes on Catalytic H Evolution from Formic Acid Dehydrogenation in Water. *Inorganic Chemistry*, **2020**, 59, 11976-11985	5.1	9
17	Binding of scandium ions to metalloporphyrin-flavin complexes for long-lived charge separation. *Chemistry - A European Journal*, **2014**, 20, 15518-32	4.8	7
16	Formation and Isolation of a Four-Electron-Reduced Porphyrin Derivative by Reduction of a Stable 20Isophlorin. *Angewandte Chemie - International Edition*, **2018**, 57, 1973-1977	16.4	7
15	Formation of supramolecular hetero-triads by controlling the hydrogen bonding of conjugate bases with a diprotonated porphyrin based on electrostatic interaction. *Chemical Communications*, **2017**, 53, 6359-6362	5.8	6
14	Excellent Oxygen Reduction Reaction Performance in Self-Assembled Amyloid-Platinum Nanoparticle Hybrids with Effective PlatinumNitrogen Bond Formation. *ACS Applied Energy Materials*, **2019**, 2, 6536-6541	6.1	6
13	Importance of the Reactant-State Potentials of Chromium(V)-Oxo Complexes to Determine the Reactivity in Hydrogen-Atom Transfer Reactions. *Inorganic Chemistry*, **2018**, 57, 13929-13936	5.1	6
12	Ruthenium(II) Complexes Having a Pincer-Type Ligand with Two N-Heterocyclic Carbene Moieties. *Zeitschrift Fur Anorganische Und Allgemeine Chemie*, **2018**, 644, 611-615	1.3	5
11	Formation of a Ruthenium(V)-Imido Complex and the Reactivity in Substrate Oxidation in Water through the Nitrogen Non-Rebound Mechanism. *Inorganic Chemistry*, **2019**, 58, 12815-12824	5.1	4

10	A Diprotonated Porphyrin as an Electron Mediator in Photoinduced Electron Transfer in Hydrogen-Bonded Supramolecular Assemblies. *Journal of Physical Chemistry C*, **2019**, 123, 11529-11538	3.8	4
9	Photocatalytic hydrogen evolution using a Ru(ii)-bound heteroaromatic ligand as a reactive site. *Dalton Transactions*, **2020**, 49, 17230-17242	4.3	4
8	Formation and Isolation of a Four-Electron-Reduced Porphyrin Derivative by Reduction of a Stable 20Isophlorin. *Angewandte Chemie*, **2018**, 130, 1991-1995	3.6	3
7	Mechanistic Insight into Synergistic Catalysis of Olefin Hydrogenation by a Hetero-Dinuclear Ru-Co Complex with Adjacent Reaction Sites. *Inorganic Chemistry*, **2019**, 58, 11284-11288	5.1	3
6	Selective catalytic 2e-oxidation of organic substrates by an Fe complex having an N-heterocyclic carbene ligand in water. *Chemical Communications*, **2020**, 56, 9783-9786	5.8	2
5	Significant Enhancement of Hole Transport Ability in Conjugated Polymer/Fullerene Bulk Heterojunction Microspheres. *ACS Applied Polymer Materials*, **2019**, 1, 118-123	4.3	2
4	A Mechanistic Dichotomy in Two-Electron Reduction of Dioxygen Catalyzed by N,NTDimethylated Porphyrin Isomers. *Chemistry - A European Journal*, **2020**, 26, 10480-10486	4.8	1
3	Redox properties of a bipyrimidine-bridged dinuclear ruthenium(II) complex. *Inorganic Chemistry Communication*, **2020**, 120, 108150	3.1	1
2	A cationic copolymer as a cocatalyst for a peroxidase-mimicking heme-DNAzyme. *Biomaterials Science*, **2021**, 9, 6142-6152	7.4	1
1	Tetranuclear ruthenium(II) complex with a dinucleating ligand forming multi-mixed-valence states. *Inorganic Chemistry*, **2014**, 53, 12677-9	5.1	