## **Robert M Rioux**

List of Publications by Year in descending order

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POREDT M PIOLIX

#	Article	IF	CITATIONS
1	Formation of Hollow Nanocrystals Through the Nanoscale Kirkendall Effect. Science, 2004, 304, 711-714.	12.6	3,255
2	Phenomena Affecting Catalytic Reactions at Solid–Liquid Interfaces. ACS Catalysis, 2016, 6, 8286-8307.	11.2	189
3	Controlling activity and selectivity using water in the Au-catalysed preferential oxidation of CO in H2. Nature Chemistry, 2016, 8, 584-589.	13.6	165
4	Intermolecular N–H Oxidative Addition of Ammonia, Alkylamines, and Arylamines to a Planar σ <sup>3</sup> -Phosphorus Compound via an Entropy-Controlled Electrophilic Mechanism. Journal of the American Chemical Society, 2014, 136, 4640-4650.	13.7	130
5	Effects of chloride ions in acid-catalyzed biomass dehydration reactions in polar aprotic solvents. Nature Communications, 2019, 10, 1132.	12.8	117
6	Highly regio- and stereoselective hydrothiolation of acetylenes with thiols catalyzed by a well-defined supported Rh complex. Chemical Communications, 2011, 47, 6557.	4.1	106
7	Synthesis and Modeling of Hollow Intermetallic Ni–Zn Nanoparticles Formed by the Kirkendall Effect. Nano Letters, 2013, 13, 3618-3625.	9.1	82
8	Zinc inclusion to heterogeneous nickel catalysts reduces oligomerization during the semi-hydrogenation of acetylene. Journal of Catalysis, 2014, 316, 164-173.	6.2	82
9	Modifying structure-sensitive reactions by addition of Zn to Pd. Journal of Catalysis, 2014, 318, 75-84.	6.2	80
10	Evaluating differences in the active-site electronics of supported Au nanoparticle catalysts using Hammett and DFT studies. Nature Chemistry, 2018, 10, 268-274.	13.6	78
11	Anisotropic Growth of Silver Nanoparticles Is Kinetically Controlled by Polyvinylpyrrolidone Binding. Journal of the American Chemical Society, 2019, 141, 4328-4337.	13.7	77
12	Operando Solid-State NMR Observation of Solvent-Mediated Adsorption-Reaction of Carbohydrates in Zeolites. ACS Catalysis, 2017, 7, 3489-3500.	11.2	70
13	Intermetallics in catalysis: An exciting subset of multimetallic catalysts. Catalysis Today, 2019, 330, 2-15.	4.4	70
14	Revisiting the Polyol Synthesis of Silver Nanostructures: Role of Chloride in Nanocube Formation. ACS Nano, 2019, 13, 1849-1860.	14.6	69
15	Cu(i)-catalyzed aerobic cross-dehydrogenative coupling of terminal alkynes with thiols for the construction of alkynyl sulfides. Green Chemistry, 2013, 15, 3170.	9.0	68
16	Highly stereoselective anti-Markovnikov hydrothiolation of alkynes and electron-deficient alkenes by a supported Cu-NHC complex. Green Chemistry, 2014, 16, 3916-3925.	9.0	68
17	Charge Transfer Stabilization of Late Transition Metal Oxide Nanoparticles on a Layered Niobate Support. Journal of the American Chemical Society, 2015, 137, 16216-16224.	13.7	60
18	Enhanced Surface Activity of MWW Zeolite Nanosheets Prepared via a One-Step Synthesis. Journal of the American Chemical Society, 2020, 142, 8211-8222.	13.7	57

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19	Interfacial Bonding Stabilizes Rhodium and Rhodium Oxide Nanoparticles on Layered Nb Oxide and Ta Oxide Supports. Journal of the American Chemical Society, 2014, 136, 5687-5696.	13.7	56
20	In Situ Spectroscopic Characterization of Ni <sub>1–<i>x</i></sub> Zn <sub><i>x</i></sub> /ZnO Catalysts and Their Selectivity for Acetylene Semihydrogenation in Excess Ethylene. ACS Catalysis, 2015, 5, 3304-3315.	11.2	54
21	Nerve growth factor stimulates axon outgrowth through negative regulation of growth cone actomyosin restraint of microtubule advance. Molecular Biology of the Cell, 2016, 27, 500-517.	2.1	51
22	Atomic control of active-site ensembles in ordered alloys to enhance hydrogenation selectivity. Nature Chemistry, 2022, 14, 523-529.	13.6	51
23	Thermodynamic Profiles at the Solvated Inorganic–Organic Interface: The Case of Gold–Thiolate Monolayers. Nano Letters, 2013, 13, 4442-4448.	9.1	42
24	Kirkendall Growth of Hollow Mn <sub>3</sub> O <sub>4</sub> Nanoparticles upon Galvanic Reaction of MnO with Cu <sup>2+</sup> and Evaluation as Anode for Lithium-Ion Batteries. Journal of Physical Chemistry C, 2017, 121, 11089-11099.	3.1	34
25	Correlating Heat of Adsorption of CO to Reaction Selectivity: Geometric Effects vs Electronic Effects in Neopentane Isomerization over Pt and Pd Catalysts. ACS Catalysis, 2013, 3, 2487-2496.	11.2	32
26	Thermochemical Measurements of Cation Exchange in CdSe Nanocrystals Using Isothermal Titration Calorimetry. Nano Letters, 2018, 18, 6795-6803.	9.1	30
27	Impact of Transition Metal Carbide and Nitride Supports on the Electronic Structure of Thin Platinum Overlayers. ACS Catalysis, 2019, 9, 7090-7098.	11.2	30
28	Synthesis of cyclic organic carbonates via catalytic oxidative carboxylation of olefins in flow reactors. Catalysis Science and Technology, 2017, 7, 84-89.	4.1	29
29	Titanium–Germoxy Precursor Route to Germanium-Modified Epoxidation Catalysts with Enhanced Activity. ACS Catalysis, 2013, 3, 2269-2279.	11.2	28
30	Polyethylene Glycol (PEG) Addition to Polyethylenimine (PEI)-Impregnated Silica Increases Amine Accessibility during CO <sub>2</sub> Sorption. ACS Sustainable Chemistry and Engineering, 2019, 7, 14785-14795.	6.7	28
31	Supported Ni–Au Colloid Precursors for Active, Selective, and Stable Alkyne Partial Hydrogenation Catalysts. ACS Catalysis, 2020, 10, 2565-2580.	11.2	28
32	Synthesis of brookite TiO2 nanorods with isolated Co(ii) surface sites and photocatalytic degradation of 5,8-dihydroxy-1,4-naphthoquinone dye. Journal of Materials Chemistry A, 2013, 1, 7717.	10.3	27
33	Surface-Functionalized Boron Nanoparticles with Reduced Oxide Content by Nonthermal Plasma Processing for Nanoenergetic Applications. ACS Applied Materials & Interfaces, 2021, 13, 6844-6853.	8.0	27
34	Ag–TiO <sub>2</sub> Hybrid Nanocrystal Photocatalyst: Hydrogen Evolution under UV Irradiation but Not under Visible-Light Irradiation. ACS Applied Energy Materials, 2019, 2, 8274-8282.	5.1	24
35	Enhancement of Alkyne Semi-Hydrogenation Selectivity by Electronic Modification of Platinum. ACS Catalysis, 2020, 10, 6763-6770.	11.2	24
36	Addition of Sulfonic Acids to Terminal Alkynes Catalyzed by a Rhodium Complex: Ligand Concentration ontrolled Reaction Selectivity. ChemCatChem, 2013, 5, 3005-3013.	3.7	22

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37	Chemical Identity of Poly( <i>N</i> -vinylpyrrolidone) End Groups Impact Shape Evolution During the Synthesis of Ag Nanostructures. Journal of the American Chemical Society, 2021, 143, 184-195.	13.7	21
38	Structural elucidation of supported Rh complexes derived from RhCl(PPh3)3 immobilized on surface-functionalized SBA-15 and their catalytic performance for C-heteroatom (S, O) bond formation. Journal of Catalysis, 2018, 365, 43-54.	6.2	20
39	X-ray photoelectron spectroscopy of transition metal ions attached to the surface of rod-shape anatase TiO2 nanocrystals. Inorganica Chimica Acta, 2014, 422, 8-13.	2.4	19
40	Determination of Bulk and Surface Atomic Arrangement in Ni–Zn γ-Brass Phase at Different Ni to Zn Ratios. Chemistry of Materials, 2017, 29, 504-512.	6.7	17
41	Kinetics of H <sub>2</sub> Adsorption at the Metal–Support Interface of Au/TiO <sub>2</sub> Catalysts Probed by Broad Background IR Absorbance. Angewandte Chemie - International Edition, 2021, 60, 7735-7743.	13.8	16
42	Evidence for geometric effects in neopentane conversion on PdAu catalysts. Catalysis Science and Technology, 2014, 4, 4366-4377.	4.1	15
43	Development of a robust sulfur quantification and speciation method for SBA-15-supported sulfonic acid catalysts. Catalysis Science and Technology, 2016, 6, 5961-5971.	4.1	15
44	Catalyst Design for Selective Hydrogenation of Benzene to Cyclohexene through Density Functional Theory and Microkinetic Modeling. ACS Catalysis, 2021, 11, 11831-11842.	11.2	14
45	Characterization of sites of different thermodynamic affinities on the same metal center via isothermal titration calorimetry. Journal of Catalysis, 2013, 302, 1-9.	6.2	13
46	Understanding the Solution-Phase Growth of Cu and Ag Nanowires and Nanocubes from First Principles. Langmuir, 2021, 37, 4419-4431.	3.5	11
47	Synthesis and Characterization of Magnesium/Boron Solid Solutions for Energetic Applications. ACS Applied Energy Materials, 2022, 5, 6716-6723.	5.1	11
48	Illuminating surface atoms in nanoclusters by differential X-ray absorption spectroscopy. Physical Chemistry Chemical Physics, 2014, 16, 26528-26538.	2.8	10
49	Elucidating the roles of enthalpy, entropy, and donor atom in the chelate effect for binding different bidentate ligands on the same metal center. Journal of Catalysis, 2014, 309, 11-20.	6.2	9
50	Generalized approach for the synthesis of silica supported Pd-Zn, Cu-Zn and Ni-Zn gamma brass phase nanoparticles. Catalysis Today, 2019, 334, 231-242.	4.4	9
51	On the Limited Role of Electronic Support Effects in Selective Alkyne Hydrogenation: A Kinetic Study of Au/MO <sub>x</sub> Catalysts Prepared from Oleylamineâ€Capped Colloidal Nanoparticles. ChemCatChem, 2019, 11, 1650-1664.	3.7	9
52	Importance of Dimer Quantification for Accurate Catalytic Evaluation of Lactic Acid Dehydration to Acrylic Acid. Industrial & amp; Engineering Chemistry Research, 2017, 56, 5843-5851.	3.7	7
53	Identification of Second Shell Coordination in Transition Metal Species Using Theoretical XANES: Example of Ti–O–(C, Si, Ge) Complexes. Journal of Physical Chemistry A, 2017, 121, 162-167.	2.5	7
54	CO <sub>2</sub> Capacity and Heat of Sorption on a Polyethylenimine-Impregnated Silica under Equilibrium and Transient Sorption Conditions. Journal of Physical Chemistry C, 2018, 122, 11442-11449.	3.1	6

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55	Continuous Injection Isothermal Titration Calorimetry for In Situ Evaluation of Thermodynamic Binding Properties of Ligand–Receptor Binding Models. Journal of Physical Chemistry B, 2021, 125, 8075-8087.	2.6	6
56	Quantitative Attachment of Bimetal Combinations of Transition-Metal lons to the Surface of TiO <sub>2</sub> Nanorods. Langmuir, 2018, 34, 5422-5434.	3.5	5
57	Competitive Hydrogenation between Linear Alkenes and Aromatics on Close-Packed Late Transition Metal Surfaces. Journal of Physical Chemistry C, 2019, 123, 8370-8378.	3.1	5
58	Kinetics of H <sub>2</sub> Adsorption at the Metal–Support Interface of Au/TiO <sub>2</sub> Catalysts Probed by Broad Background IR Absorbance. Angewandte Chemie, 2021, 133, 7814-7822.	2.0	5
59	Solvent-Dependent Impact of Spectator Anions on the Thermodynamics of Cation Exchange in CdSe Nanocrystals. Journal of Physical Chemistry C, 2021, 125, 12792-12801.	3.1	5
60	Factors controlling the molecular modification of one-dimensional zeolites. Physical Chemistry Chemical Physics, 2021, 23, 18610-18617.	2.8	5
61	Spatiotemporal Modeling and Parametric Estimation of Isothermal CO2 Adsorption Columns. Industrial & Engineering Chemistry Research, 2016, 55, 6443-6453.	3.7	4
62	Single Site Metal Ions on the Surface of TiO2 Nanorods - A Platform for Theoretical and Experimental Investigation. ACS Symposium Series, 2015, , 103-116.	0.5	3
63	Diffusion doping of cobalt in rod-shape anatase TiO <sub>2</sub> nanocrystals leads to antiferromagnetism. Nanoscale Advances, 2020, 2, 4853-4862.	4.6	2
64	Investigation of CO <sub>2</sub> Sorption Mechanisms in Isothermal Columns via Transient Material and Energy Balance PDE Models. Industrial & Engineering Chemistry Research, 2018, 57, 10303-10314.	3.7	1
65	Platinum nanoparticle encapsulation during hydrothermal growth of mesoporous oxides: Synthesis, characterization and catalytic properties. Materials Research Society Symposia Proceedings, 2005, 900, 1.	0.1	0
66	Catalysis Science & Technology: Catalysis in the USA. Catalysis Science and Technology, 2015, 5, 1357-1359.	4.1	0
67	Molecular Surface Science, Nanomaterials & Catalysis: Symposium in Honor of Gabor Somorjai at 80. Topics in Catalysis, 2018, 61, 711-713.	2.8	0