Richard G Finke

List of Publications by Year in Descending Order

120 papers	11,358 citations	53 h-index	106 g-index
123 ext. papers	12,168 ext. citations	9.4 avg, IF	6.74 L-index

#	Paper	IF	Citations
120	Estimating reaction parameters in mechanism-enabled population balance models of nanoparticle size distributions: A Bayesian inverse problem approach. *Journal of Computational Chemistry*, **2022**, 43, 43-56	3.5	2
119	Nanoparticle Formation Kinetics, Mechanisms, and Accurate Rate Constants: Examination of a Second-Generation Ir(0)n Particle Formation System by Five Monitoring Methods Plus Initial Mechanism-Enabled Population Balance Modeling. *Journal of Physical Chemistry C*, **2021**, 125, 13449-13476	3.8	4
118	Carbon-Electrode-Mediated Electrochemical Synthesis of Hypervalent Iodine Reagents Using Water as the O-Atom Source. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 10453-10467	8.3	3
117	LaMer's 1950 model of particle formation: a review and critical analysis of its classical nucleation and fluctuation theory basis, of competing models and mechanisms for phase-changes and particle formation, and then of its application to silver halide, semiconductor, metal, and metal-oxide nanoparticles. *Materials Advances*, **2021**, 2, 186-235	3.3	20
116	Pseudoelementary Steps: A Key Concept and Tool for Studying the Kinetics and Mechanisms of Complex Chemical Systems.. *Journal of Physical Chemistry A*, **2021**, 125, 10687-10705	2.8	1
115	Particle Size Distributions via Mechanism-Enabled Population Balance Modeling. *Journal of Physical Chemistry C*, **2020**, 124, 4852-4880	3.8	19
114	Dust Effects on Ir(0) Nanoparticle Formation Nucleation and Growth Kinetics and Particle Size-Distributions: Analysis by and Insights from Mechanism-Enabled Population Balance Modeling. *Langmuir*, **2020**, 36, 1496-1506	4	8
113	Response to Particle Size Is a Primary Determinant for Sigmoidal Kinetics of Nanoparticle Formation: A Disproof of the Finke-Watzky (F-W) Nanoparticle Nucleation and Growth Mechanism *Chemistry of Materials*, **2020**, 32, 3657-3672	9.6	13
112	Copper Metal-Organic Framework Surface Catalysis: Catalyst Poisoning, IR Spectroscopic, and Kinetic Evidence Addressing the Nature and Number of the Catalytically Active Sites En Route to Improved Applications. *ACS Applied Materials & Interfaces*, **2020**, 12, 39043-39055	9.5	8
111	Burst Nucleation vs Autocatalytic, Burst Growth in Near-Monodisperse Particle-Formation Reactions. *Journal of Physical Chemistry C*, **2020**, 124, 24543-24554	3.8	8
110	LaMer's 1950 Model for Particle Formation of Instantaneous Nucleation and Diffusion-Controlled Growth: A Historical Look at the Model's Origins, Assumptions, Equations, and Underlying Sulfur Sol Formation Kinetics Data. *Chemistry of Materials*, **2019**, 31, 7116-7132	9.6	60
109	Mechanism-Enabled Population Balance Modeling of Particle Formation en Route to Particle Average Size and Size Distribution Understanding and Control. *Journal of the American Chemical Society*, **2019**, 141, 15827-15839	16.4	29
108	Nanoparticle Formation Kinetics and Mechanistic Studies Important to Mechanism-Based Particle-Size Control: Evidence for Ligand-Based Slowing of the Autocatalytic Surface Growth Step Plus Postulated Mechanisms. *Journal of Physical Chemistry C*, **2019**, 123, 14047-14057	3.8	12
107	Nucleation Kinetics and Molecular Mechanism in Transition-Metal Nanoparticle Formation: The Intriguing, Informative Case of a Bimetallic Precursor, {[(1,5-COD)IrI HPO4]2}2 *Chemistry of Materials*, **2019**, 31, 2848-2862	9.6	13
106	Copper ion vs copper metal-organic framework catalyzed NO release from bioavailable S-Nitrosoglutathione en route to biomedical applications: Direct H NMR monitoring in water allowing identification of the distinct, true reaction stoichiometries and thiol dependencies. *Journal of Inorganic Biochemistry*, **2019**, 199, 110760	4.2	11
105	Gold Nanoparticle Formation Kinetics and Mechanism: A Critical Analysis of the "Redox Crystallization" Mechanism. *ACS Omega*, **2018**, 3, 1555-1563	3.9	17
104	Alcohol Solvent Effects in the Synthesis of CoO Metal-Oxide Nanoparticles: Disproof of a Surface-Ligand Thermodynamic Effect en Route to Alternative Kinetic and Thermodynamic Explanations. *Inorganic Chemistry*, **2018**, 57, 1517-1526	5.1	5

103	"Weakly Ligated, Labile Ligand" Nanoparticles: The Case of Ir(0) (HCl). *ACS Omega*, **2018**, 3, 14538-14550	3.9	7
102	Electrochemically Driven Water-Oxidation Catalysis Beginning with Six Exemplary Cobalt Polyoxometalates: Is It Molecular, Homogeneous Catalysis or Electrode-Bound, Heterogeneous CoO Catalysis?. *Journal of the American Chemical Society*, **2018**, 140, 12040-12055	16.4	41
101	Sigmoidal Nucleation and Growth Curves Across Nature Fit by the Finke Watzky Model of Slow Continuous Nucleation and Autocatalytic Growth: Explicit Formulas for the Lag and Growth Times Plus Other Key Insights. *Journal of Physical Chemistry C*, **2017**, 121, 5302-5312	3.8	64
100	Nanoparticle Nucleation Is Termolecular in Metal and Involves Hydrogen: Evidence for a Kinetically Effective Nucleus of Three {IrH PWNbO} in Ir(0) Nanoparticle Formation From [(1,5-COD)Ir PWNbO] Plus Dihydrogen. *Journal of the American Chemical Society*, **2017**, 139, 5444-5457	16.4	35
99	A Classic Azo-Dye Agglomeration System: Evidence for Slow, Continuous Nucleation, Autocatalytic Agglomerative Growth, Plus the Effects of Dust Removal by Microfiltration on the Kinetics. *Journal of Physical Chemistry A*, **2017**, 121, 7071-7078	2.8	6
98	Catalyst Sintering Kinetics Data: Is There a Minimal Chemical Mechanism Underlying Kinetics Previously Fit by Empirical Power-Law Expressions and if So, What Are Its Implications?. *Industrial & Engineering Chemistry Research*, **2017**, 56, 10271-10286	3.9	10
97	Sensitization of Nanocrystalline Metal Oxides with a Phosphonate-Functionalized Perylene Diimide for Photoelectrochemical Water Oxidation with a CoO Catalyst. *ACS Applied Materials & Interfaces*, **2017**, 9, 27625-27637	9.5	30
96	Water-oxidation photoanodes using organic light-harvesting materials: a review. *Journal of Materials Chemistry A*, **2017**, 5, 19560-19592	13	74
95	Silver Nanoparticles Synthesized by Microwave Heating: A Kinetic and Mechanistic Re-Analysis and Re-Interpretation. *Journal of Physical Chemistry C*, **2017**, 121, 27643-27654	3.8	19
94	Dust Effects on Nucleation Kinetics and Nanoparticle Product Size Distributions: Illustrative Case Study of a Prototype Ir(0) Transition-Metal Nanoparticle Formation System. *Langmuir*, **2017**, 33, 6550-6562	4	18
93	Electrochemical Water Oxidation Catalysis Beginning with Co(II) Polyoxometalates: The Case of the Precatalyst Co4V2W18O6810 *ACS Catalysis*, **2017**, 7, 7-16	13.1	42
92	Synthesis of Heterogeneous Ir0~600 900/ Al2O3 in One Pot From the Precatalyst Ir(1,5-COD)Cl/ Al2O3: Discovery of Two Competing Trace Ethyl Acetate Effects on the Nucleation Step and Resultant Product. *ACS Catalysis*, **2016**, 6, 5449-5461	13.1	9
91	Palladium(0) Nanoparticle Formation, Stabilization, and Mechanistic Studies: Pd(acac) as a Preferred Precursor, [Bu N] HPO Stabilizer, plus the Stoichiometry, Kinetics, and Minimal, Four-Step Mechanism of the Palladium Nanoparticle Formation and Subsequent Agglomeration Reactions. *Langmuir*, **2016**, 32, 3699-716	4	23
90	Cobalt Polyoxometalate Co4V2W18O68(10-): A Critical Investigation of Its Synthesis, Purity, and Observed (51)V Quadrupolar NMR. *Inorganic Chemistry*, **2016**, 55, 5343-55	5.1	15
89	Agglomerative Sintering of an Atomically Dispersed Ir1/Zeolite Y Catalyst: Compelling Evidence Against Ostwald Ripening but for Bimolecular and Autocatalytic Agglomeration Catalyst Sintering Steps. *ACS Catalysis*, **2015**, 5, 3514-3527	13.1	47
88	Unintuitive Inverse Dependence of the Apparent Turnover Frequency on Precatalyst Concentration: A Quantitative Explanation in the Case of Ziegler-Type Nanoparticle Catalysts Made from [(1,5-COD)Ir(O2C8H15)]2 and AlEt3. *ACS Catalysis*, **2015**, 5, 3342-3353	13.1	21
87	Determination of the Dominant Catalyst Derived from the Classic [RhCp*Cl2]2 Precatalyst System: Is it Single-Metal Rh1Cp*-Based, Subnanometer Rh4 Cluster-Based, or Rh(0)n Nanoparticle-Based Cyclohexene Hydrogenation Catalysis at Room Temperature and Mild Pressures?. *ACS Catalysis*, **2015**, 5, 3876-3886	13.1	22
86	Triniobium, Wells-Dawson-type polyoxoanion, [(n-C4H9)4N]9P2W15Nb3O62: improvements in the synthesis, its reliability, the purity of the product, and the detailed synthetic procedure. *Inorganic Chemistry*, **2014**, 53, 2666-76	5.1	15

85	Visible-light-assisted photoelectrochemical water oxidation by thin films of a phosphonate-functionalized perylene diimide plus CoOx cocatalyst. *ACS Applied Materials & Interfaces*, **2014**, 6, 13367-77	9.5	91
84	Water Oxidation Catalysis Beginning with Co4(H2O)2(PW9O34)210 When Driven by the Chemical Oxidant Ruthenium(III)tris(2,2?-bipyridine): Stoichiometry, Kinetic, and Mechanistic Studies en Route to Identifying the True Catalyst. *ACS Catalysis*, **2014**, 4, 79-89	13.1	69
83	A four-step mechanism for the formation of supported-nanoparticle heterogenous catalysts in contact with solution: the conversion of Ir(1,5-COD)Cl/ Al2O3 to Ir(0)(~170)/ Al2O3. *Journal of the American Chemical Society*, **2014**, 136, 1930-41	16.4	38
82	Distinguishing Homogeneous from Heterogeneous Water Oxidation Catalysis when Beginning with Polyoxometalates. *ACS Catalysis*, **2014**, 4, 909-933	13.1	173
81	Nucleation is second order: an apparent kinetically effective nucleus of two for Ir(0)n nanoparticle formation from [(1,5-COD)Ir(I) P2W15Nb3O62]8- plus hydrogen. *Journal of the American Chemical Society*, **2014**, 136, 17601-15	16.4	50
80	Water Oxidation Catalysis Beginning with 2.5 M [Co4(H2O)2(PW9O34)2]10 Investigation of the True Electrochemically Driven Catalyst at 600 mV Overpotential at a Glassy Carbon Electrode. *ACS Catalysis*, **2013**, 3, 1209-1219	13.1	108
79	A review of the kinetics and mechanisms of formation of supported-nanoparticle heterogeneous catalysts. *Journal of Molecular Catalysis A*, **2012**, 355, 1-38		126
78	Kinetic Evidence for Bimolecular Nucleation in Supported-Transition-Metal-Nanoparticle Catalyst Formation in Contact with Solution: The Prototype Ir(1,5-COD)Cl/ Al2O3 to Ir(0)~900/ Al2O3 System. *ACS Catalysis*, **2012**, 2, 298-305	13.1	14
77	Gold Nanocluster Agglomeration Kinetic Studies: Evidence for Parallel Bimolecular Plus Autocatalytic Agglomeration Pathways as a Mechanism-Based Alternative to an Avrami-Based Analysis. *Chemistry of Materials*, **2012**, 24, 1718-1725	9.6	37
76	Synthesis and characterization of [Ir(1,5-cyclooctadiene)(H)]4: a tetrametallic Ir4H4-core, coordinatively unsaturated cluster. *Inorganic Chemistry*, **2012**, 51, 3186-93	5.1	16
75	Mononuclear Zeolite-Supported Iridium: Kinetic, Spectroscopic, Electron Microscopic, and Size-Selective Poisoning Evidence for an Atomically Dispersed True Catalyst at 22 C. *ACS Catalysis*, **2012**, 2, 1947-1957	13.1	45
74	Quantitative 1,10-Phenanthroline Catalyst-Poisoning Kinetic Studies of Rh(0) Nanoparticle and Rh4 Cluster Benzene Hydrogenation Catalysts: Estimates of the Poison Kassociation Binding Constants, of the Equivalents of Poison Bound and of the Number of Catalytically Active Sites for Each Catalyst. *ACS Catalysis*, **2012**, 2, 1867-1875	13.1	44
73	Hydrocarbon-Soluble, Isolable Ziegler-Type Ir(0)n Nanoparticle Catalysts Made from [(1,5-COD)Ir(O2C8H15)]2 and 2 Equivalents of AlEt3: Their High Catalytic Activity, Long Lifetime, and AlEt3-Dependent, Exceptional, 200 C Thermal Stability. *ACS Catalysis*, **2012**, 2, 632-641	13.1	13
72	Electrocatalytic water oxidation beginning with the cobalt polyoxometalate [Co4(H2O)2(PW9O34)2]10-: identification of heterogeneous CoOx as the dominant catalyst. *Journal of the American Chemical Society*, **2011**, 133, 14872-5	16.4	355
71	Supported-nanoparticle heterogeneous catalyst formation in contact with solution: kinetics and proposed mechanism for the conversion of Ir(1,5-COD)Cl/ Al2O3 to Ir(0)(~900)/ Al2O3. *Journal of the American Chemical Society*, **2011**, 133, 7744-56	16.4	28
70	Is it homogeneous or heterogeneous catalysis derived from [RhCp*Cl2]2? In operando XAFS, kinetic, and crucial kinetic poisoning evidence for subnanometer Rh4 cluster-based benzene hydrogenation catalysis. *Journal of the American Chemical Society*, **2011**, 133, 18889-902	16.4	126
69	Improved Syntheses for the Compounds [(1,5-COD)M(O2C8H15)]2 (M = Ir, Rh). *Organometallics*, **2011**, 30, 5068-5070	3.8	3
68	Reply to Comment on Fitting and Interpreting Transition-Metal Nanocluster Formation and Other Sigmoidal-Appearing Kinetic Data: A More Thorough Testing of Dispersive Kinetic vs Chemical-Mechanism-Based Equations and Treatments for 4-Step Type Kinetic Data *Chemistry of Materials*, **2010**, 22, 2687-2688	9.6	5

(2007-2010)

67	Development plus kinetic and mechanistic studies of a prototype supported-nanoparticle heterogeneous catalyst formation system in contact with solution: Ir(1,5-COD)Cl/gamma-Al2O3 and its reduction by H2 to Ir(0)n/gamma-Al2O3. *Journal of the American Chemical Society*, **2010**, 132, 9701-14	16.4	50
66	Stereospecific Polymerization of Chiral Oxazolidinone-Functionalized Alkenes. *Macromolecules*, **2010**, 43, 7504-7514	5.5	20
65	In situ formed "weakly ligated/labile ligand" iridium(0) nanoparticles and aggregates as catalysts for the complete hydrogenation of neat benzene at room temperature and mild pressures. *Langmuir*, **2010**, 26, 12455-64	4	59
64	Protein aggregation kinetics, mechanism, and curve-fitting: a review of the literature. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2009**, 1794, 375-97	4	492
63	Alpha-synuclein aggregation variable temperature and variable pH kinetic data: a re-analysis using the Finke-Watzky 2-step model of nucleation and autocatalytic growth. *Biophysical Chemistry*, **2009**, 140, 9-15	3.5	52
62	Is There a Minimal Chemical Mechanism Underlying Classical Avrami-Erofe□v Treatments of Phase-Transformation Kinetic Data?. *Chemistry of Materials*, **2009**, 21, 4692-4705	9.6	104
61	Monitoring supported-nanocluster heterogeneous catalyst formation: product and kinetic evidence for a 2-step, nucleation and autocatalytic growth mechanism of Pt(0)n formation from H2PtCl6 on Al2O3 or TiO2. *Journal of the American Chemical Society*, **2009**, 131, 6389-96	16.4	57
60	Fitting and Interpreting Transition-Metal Nanocluster Formation and Other Sigmoidal-Appearing Kinetic Data: A More Thorough Testing of Dispersive Kinetic vs Chemical-Mechanism-Based Equations and Treatments for 4-Step Type Kinetic Data. *Chemistry of Materials*, **2009**, 21, 4468-4479	9.6	51
59	The Four-Step, Double-Autocatalytic Mechanism for Transition-Metal Nanocluster Nucleation, Growth, and Then Agglomeration: Metal, Ligand, Concentration, Temperature, and Solvent Dependency Studies. *Chemistry of Materials*, **2008**, 20, 1956-1970	9.6	72
58	Fitting neurological protein aggregation kinetic data via a 2-step, minimal/"Ockham's razor" model: the Finke-Watzky mechanism of nucleation followed by autocatalytic surface growth. *Biochemistry*, **2008**, 47, 2413-27	3.2	226
57	Transition-metal nanocluster size vs formation time and the catalytically effective nucleus number: a mechanism-based treatment. *Journal of the American Chemical Society*, **2008**, 130, 11959-69	16.4	134
56	Transition-Metal Nanocluster Stabilization versus Agglomeration Fundamental Studies: Measurement of the Two Types of Rate Constants for Agglomeration Plus Their Activation Parameters under Catalytic Conditions. *Chemistry of Materials*, **2008**, 20, 2592-2601	9.6	29
55	Platinum-catalyzed phenyl and methyl group transfer from tin to iridium: evidence for an autocatalytic reaction pathway with an unusual preference for methyl transfer. *Journal of the American Chemical Society*, **2008**, 130, 1839-41	16.4	27
54	Supersensitivity of transition-metal nanoparticle formation to initial precursor concentration and reaction temperature: understanding its origins. *Journal of Nanoscience and Nanotechnology*, **2008**, 8, 1551-6	1.3	15
53	Nanocluster nucleation and growth kinetic and mechanistic studies: a review emphasizing transition-metal nanoclusters. *Journal of Colloid and Interface Science*, **2008**, 317, 351-74	9.3	295
52	Fitting yeast and mammalian prion aggregation kinetic data with the Finke-Watzky two-step model of nucleation and autocatalytic growth. *Biochemistry*, **2008**, 47, 10790-800	3.2	68
51	Metal Complexes of the Lacunary Heteropolytungstates [B-□-PW9O34]9- and [□-P2W15O56]12-. *Inorganic Syntheses*, **2007**, 167-185		16
50	Transition-metal nanocluster stabilization for catalysis: A critical review of ranking methods and putative stabilizers. *Coordination Chemistry Reviews*, **2007**, 251, 1075-1100	23.2	390

49	Transition Metal Complexes of the Lacunary Heteropolytungstate, [P2W17O61]10-. *Inorganic Syntheses*, **2007**, 242-268		5
48	Polyoxoanion-Supported, Atomically Dispersed Iridium(I) and Rhodium(I): Na3[(C4H9)4N]5[Ir[□-Nb3P2W15O62]{□4-C8H12}] and Na3[(C4H9)4N]5[Rh[□-Nb3P2W15O62]{□4-C8H12}]. *Inorganic Syntheses*, **2007**, 186-201		17
47	Nanocluster formation and stabilization fundamental studies: investigating "solvent-only" stabilization en route to discovering stabilization by the traditionally weakly coordinating anion BF4- plus high dielectric constant solvents. *Inorganic Chemistry*, **2006**, 45, 8382-93	5.1	85
46	A test of the transition-metal nanocluster formation and stabilization ability of the most common polymeric stabilizer, poly(vinylpyrrolidone), as well as four other polymeric protectants. *Langmuir*, **2006**, 22, 9357-67	4	39
45	Autoxidation-product-initiated dioxygenases: vanadium-based, record catalytic lifetime catechol dioxygenase catalysis. *Inorganic Chemistry*, **2005**, 44, 8521-30	5.1	25
44	A mechanism for transition-metal nanoparticle self-assembly. *Journal of the American Chemical Society*, **2005**, 127, 8179-84	16.4	184
43	Iridium(0) nanocluster, acid-assisted catalysis of neat acetone hydrogenation at room temperature: exceptional activity, catalyst lifetime, and selectivity at complete conversion. *Journal of the American Chemical Society*, **2005**, 127, 4800-8	16.4	68
42	Is it homogeneous or heterogeneous catalysis? Compelling evidence for both types of catalysts derived from [Rh(eta5-C5Me5)Cl2]2 as a function of temperature and hydrogen pressure. *Journal of the American Chemical Society*, **2005**, 127, 4423-32	16.4	113
41	Kinetic and mechanistic studies of vanadium-based, extended catalytic lifetime catechol dioxygenases. *Journal of the American Chemical Society*, **2005**, 127, 13988-96	16.4	38
40	Supramolecular Triruthenium Cluster-Based Benzene Hydrogenation Catalysis:□Fact or Fiction?. *Organometallics*, **2005**, 24, 1819-1831	3.8	107
39	Nanocluster Nucleation, Growth, and Then Agglomeration Kinetic and Mechanistic Studies: A More General, Four-Step Mechanism Involving Double Autocatalysis. *Chemistry of Materials*, **2005**, 17, 4925-4938	9.6	140
38	The hydrogenphosphate complex of (1,5-cyclooctadiene)iridium(I), {[Bu4N][(1,5-COD)Ir □HPO4]}n: synthesis, spectroscopic characterization, and ES-MS of a new, preferred precursor to HPO42□and Bu4N+ stabilized Ir(0)n nanoclusters. *Journal of Organometallic Chemistry*, **2004**, 689, 493-501	2.3	10
37	Molecular insights for how preferred oxoanions bind to and stabilize transition-metal nanoclusters: a tridentate, C3 symmetry, lattice size-matching binding model. *Coordination Chemistry Reviews*, **2004**, 248, 135-146	23.2	79
36	Transition-Metal Nanocluster Kinetic and Mechanistic Studies Emphasizing Nanocluster Agglomeration: Demonstration of a Kinetic Method That Allows Monitoring of All Three Phases of Nanocluster Formation and Aging. *Chemistry of Materials*, **2004**, 16, 3972-3972	9.6	13
35	Transition-Metal Nanocluster Kinetic and Mechanistic Studies Emphasizing Nanocluster Agglomeration: Demonstration of a Kinetic Method That Allows Monitoring of All Three Phases of Nanocluster Formation and Aging. *Chemistry of Materials*, **2004**, 16, 139-150	9.6	73
34	A review of the problem of distinguishing true homogeneous catalysis from soluble or other metal-particle heterogeneous catalysis under reducing conditions. *Journal of Molecular Catalysis A*, **2003**, 198, 317-341		1007
33	Is it homogeneous or heterogeneous catalysis? Identification of bulk ruthenium metal as the true catalyst in benzene hydrogenations starting with the monometallic precursor, Ru(II)(eta 6-C6Me6)(OAc)2, plus kinetic characterization of the heterogeneous nucleation, then autocatalytic surface-growth mechanism of metal film formation. *Journal of the American Chemical Society*, **2003**, 125, 10301-10	16.4	214
32	Transition-Metal Nanocluster Catalysts: Scaled-up Synthesis, Characterization, Storage Conditions, Stability, and Catalytic Activity before and after Storage of Polyoxoanion- and Tetrabutylammonium-Stabilized Ir(0) Nanoclusters. *Chemistry of Materials*, **2003**, 15, 899-909	9.6	29

31	Transition-Metal Nanocluster Stabilization Fundamental Studies: Hydrogen Phosphate as a Simple, Effective, Readily Available, Robust, and Previously Unappreciated Stabilizer for Well-Formed, Isolable, and Redissolvable Ir(0) and Other Transition-Metal Nanoclusters. *Langmuir*, **2003**, 19, 6247-6260	4	65
30	Nanoclusters in catalysis: a comparison of CS(2) catalyst poisoning of polyoxoanion- and tetrabutylammonium-stabilized 40 +/- 6 A Rh(0) nanoclusters to 5 Rh/Al(2)O(3), including an analysis of the literature related to the CS(2) to metal stoichiometry issue. *Inorganic Chemistry*, **2002**, 41, 1625-38	5.1	97
29	Nanocluster Formation and Stabilization Fundamental Studies. 2. Proton Sponge as an Effective H+Scavenger and Expansion of the Anion Stabilization Ability Series. *Langmuir*, **2002**, 18, 7653-7662	4	51
28	Nanocluster formation and stabilization fundamental studies: ranking commonly employed anionic stabilizers via the development, then application, of five comparative criteria. *Journal of the American Chemical Society*, **2002**, 124, 5796-810	16.4	265
27	Additional Investigations of a New Kinetic Method To Follow Transition-Metal Nanocluster Formation, Including the Discovery of Heterolytic Hydrogen Activation in Nanocluster Nucleation Reactions. *Chemistry of Materials*, **2001**, 13, 312-324	9.6	132
26	A review of modern transition-metal nanoclusters: their synthesis, characterization, and applications in catalysis. *Journal of Molecular Catalysis A*, **1999**, 145, 1-44		761
25	An All-Inorganic, Polyoxometalate-Based Catechol Dioxygenase That Exhibits >100 000 Catalytic Turnovers. *Journal of the American Chemical Society*, **1999**, 121, 9831-9842	16.4	102
24	Oxygenation Catalysis by All-Inorganic, Oxidation-Resistant, Dawson-Type Polyoxoanion-Supported Transition Metal Precatalysts, [(CH3CN)xM]n+ Plus P2W15Nb3O629- (M = MnII, FeII, CoII, NiII, CuI, CuII, ZnII). *Inorganic Chemistry*, **1999**, 38, 2579-2591	5.1	41
23	Polyoxoanion- and Tetrabutylammonium-Stabilized, Near-Monodisperse, 40 ± 6 Å Rh(0)~1500 to Rh(0)~3700 Nanoclusters: Synthesis, Characterization, and Hydrogenation Catalysis. *Chemistry of Materials*, **1999**, 11, 1035-1047	9.6	73
22	The Second Isolable B12-Thiolate Complex, (Pentafluorophenylthiolato)cobalamin: Synthesis and Characterization. *Inorganic Chemistry*, **1998**, 37, 5109-5116	5.1	19
21	Synthesis of gamma-phosphate-linked nucleoside affinity chromatography resins for protein purification, including ribonucleoside triphosphate reductase. *Nucleosides & Nucleotides*, **1998**, 17, 1453-71		12
20	Nanocluster Formation Synthetic, Kinetic, and Mechanistic Studies. The Detection of, and Then Methods To Avoid, Hydrogen Mass-Transfer Limitations in the Synthesis of Polyoxoanion- and Tetrabutylammonium-Stabilized, Near-Monodisperse 40 ± 6 Å Rh(0) Nanoclusters. *Journal of the American Chemical Society*, **1998**, 120, 8545-8551	16.4	117
19	Rh(0) Nanoclusters in Benzene Hydrogenation Catalysis: Kinetic and Mechanistic Evidence that a Putative [(C8H17)3NCH3]+[RhCl4]- Ion-Pair Catalyst Is Actually a Distribution of Cl- and [(C8H17)3NCH3]+ Stabilized Rh(0) Nanoclusters. *Journal of the American Chemical Society*, **1998**, 120, 5653-5666	16.4	166
18	Nanocluster Size-Control and "Magic Number" Investigations. Experimental Tests of the "Living-Metal Polymer" Concept and of Mechanism-Based Size-Control Predictions Leading to the Syntheses of Iridium(0) Nanoclusters Centering about Four Sequential Magic Numbers. *Chemistry of Materials*, **1997**, 9, 3083-3095	9.6	193
17	Transition Metal Nanocluster Formation Kinetic and Mechanistic Studies. A New Mechanism When Hydrogen Is the Reductant: Slow, Continuous Nucleation and Fast Autocatalytic Surface Growth. *Journal of the American Chemical Society*, **1997**, 119, 10382-10400	16.4	724
16	The Catalytic Activity of Wells-Dawson and Keggin Heteropolyoxotungstates in the Selective Oxidation of Isobutane to Isobutene. *ACS Symposium Series*, **1996**, 140-154	0.4	2
15	Polyoxometalate Catalyst Precursors. Improved Synthesis, H+-Titration Procedure, and Evidence for 31P NMR as a Highly Sensitive Support-Site Indicator for the Prototype Polyoxoanion-Organometallic-Support System [(n-C4H9)4N]9P2W15Nb3O62. *Inorganic Chemistry*, **1996**, 35, 7905-7913	5.1	76
14	The solid-state rearrangement of the Wells-Dawson K6P2W18O62·10H2O to a stable Keggin-type heteropolyanion phase: a catalyst for the selective oxidation of isobutane to isobutene. *Catalysis Letters*, **1996**, 36, 75-79	2.8	36

13	A perspective on nanocluster catalysis: polyoxoanion and (n-C4H9)4N+ stabilized Ir(0)~300 nanocluster "soluble heterogeneous catalysts" *Journal of Molecular Catalysis A*, **1996**, 114, 29-51		133
12	Polyoxoanion-Supported Catalyst Precursors. Synthesis and Characterization of the Iridium(I) and Rhodium(I) Precatalysts [(n-C4H9)4N]5Na3[(1,5-COD)M.cntdot.P2W15Nb3O62] (M = Ir, Rh). *Inorganic Chemistry*, **1995**, 34, 1413-1429	5.1	86
11	A More General Approach to Distinguishing "Homogeneous" from "Heterogeneous" Catalysis: Discovery of Polyoxoanion- and Bu4N+-Stabilized, Isolable and Redissolvable, High-Reactivity Ir.apprx.190-450 Nanocluster Catalysts. *Inorganic Chemistry*, **1994**, 33, 4891-4910	5.1	266
10	Novel Polyoxoanion- and Bu4N+-Stabilized, Isolable, and Redissolvable, 20-30-.ANG. Ir300-900 Nanoclusters: The Kinetically Controlled Synthesis, Characterization, and Mechanism of Formation of Organic Solvent-Soluble, Reproducible Size, and Reproducible Catalytic Activity Metal Nanoclusters. *Journal of the American Chemical Society*, **1994**, 116, 8335-8353	16.4	203
9	Highly oxidation resistant inorganic-porphyrin analog polyoxometalate oxidation catalysts. 1. The synthesis and characterization of aqueous-soluble potassium salts of .alpha.2-P2W17O61(Mn+.cntdot.OH2)(n-10) and organic solvent soluble tetra-n-butylammonium salts of .alpha.2-P2W17O61(Mn+.cntdot.Br)(n-11) (M = Mn3+, Fe3+, Co2+, Ni2+, Cu2+). *Journal of the American Chemical Society*, **1991**, 113, 7209-7221	16.4	288
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