Junling Lu

List of Publications by Year
in descending order

115 papers	12,605 citations	22153 59 h-index	24258 110 g-index
120 all docs	120 docs citations	120 times ranked	13090 citing authors

#	Article	IF	Citations
1	Single-Atom Pd₁/Graphene Catalyst Achieved by Atomic Layer Deposition: Remarkable Performance in Selective Hydrogenation of 1,3-Butadiene. Journal of the American Chemical Society, 2015, 137, 10484-10487.	13.7	905
2	Atomically dispersed platinum supported on curved carbon supports for efficient electrocatalytic hydrogen evolution. Nature Energy, 2019, 4, 512-518.	39.5	756
3	Coking- and Sintering-Resistant Palladium Catalysts Achieved Through Atomic Layer Deposition. Science, 2012, 335, 1205-1208.	12.6	707
4	Singlet Oxygen-Engaged Selective Photo-Oxidation over Pt Nanocrystals/Porphyrinic MOF: The Roles of Photothermal Effect and Pt Electronic State. Journal of the American Chemical Society, 2017, 139, 2035-2044.	13.7	616
5	Bottom-up precise synthesis of stable platinum dimers on graphene. Nature Communications, 2017, 8, 1070.	12.8	466
6	Highly Active and Stable Metal Single-Atom Catalysts Achieved by Strong Electronic Metalâ€“Support Interactions. Journal of the American Chemical Society, 2019, 141, 14515-14519.	13.7	455
7	Atomically dispersed iron hydroxide anchored on Pt for preferential oxidation of CO in H2. Nature, 2019, 565, 631-635.	27.8	423
8	Water-Mediated Marsâ€“Van Krevelen Mechanism for CO Oxidation on Ceria-Supported Single-Atom Pt₁ Catalyst. ACS Catalysis, 2017, 7, 887-891.	11.2	407
9	Uncovering near-free platinum single-atom dynamics during electrochemical hydrogen evolution reaction. Nature Communications, 2020, 11, 1029.	12.8	379
10	Multifunctional PdAg@MIL-101 for One-Pot Cascade Reactions: Combination of Hostâ€“Guest Cooperation and Bimetallic Synergy in Catalysis. ACS Catalysis, 2015, 5, 2062-2069.	11.2	363
11	Synthesis and Stabilization of Supported Metal Catalysts by Atomic Layer Deposition. Accounts of Chemical Research, 2013, 46, 1806-1815.	15.6	271
12	Atomicâ€Level Insight into Optimizing the Hydrogen Evolution Pathway over a Co₁â€N₄ Singleâ€Site Photocatalyst. Angewandte Chemie - International Edition, 2017, 56, 12191-12196.	13.8	269
13	Atomic layer depositionâ€"Sequential self-limiting surface reactions for advanced catalyst â€œbottom-upâ€• synthesis. Surface Science Reports, 2016, 71, 410-472.	7.2	252
14	Enhancing both selectivity and coking-resistance of a single-atom Pd1/C3N4 catalyst for acetylene hydrogenation. Nano Research, 2017, 10, 1302-1312.	10.4	220
15	Polar Group and Defect Engineering in a Metalâ€“Organic Framework: Synergistic Promotion of Carbon Dioxide Sorption and Conversion. ChemSusChem, 2015, 8, 878-885.	6.8	193
16	Conversion of a metalâ€“organic framework to N-doped porous carbon incorporating Co and CoO nanoparticles: direct oxidation of alcohols to esters. Chemical Communications, 2015, 51, 8292-8295.	4.1	191
17	Disentangling the size-dependent geometric and electronic effects of palladium nanocatalysts beyond selectivity. Science Advances, 2019, 5, eaat6413.	10.3	187
18	Covalently Connected Carbon Nanostructures for Current Collectors in Both the Cathode and Anode of Liâ€“S Batteries. Advanced Materials, 2016, 28, 9094-9102.	21.0	184

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19	Toward atomically-precise synthesis of supported bimetallic nanoparticles using atomic layer deposition. Nature Communications, 2014, 5, 3264.	12.8	181
20	Synergizing metalâ€“support interactions and spatial confinement boosts dynamics of atomic nickel for hydrogenations. Nature Nanotechnology, 2021, 16, 1141-1149.	31.5	165
21	Stabilization of Copper Catalysts for Liquidâ€Phase Reactions by Atomic Layer Deposition. Angewandte Chemie - International Edition, 2013, 52, 13808-13812.	13.8	162
22	Morphology and defect structure of the CeO2(111) films grown on Ru(0001) as studied by scanning tunneling microscopy. Surface Science, 2006, 600, 5004-5010.	1.9	159
23	Alumina Over-coating on Pd Nanoparticle Catalysts by Atomic Layer Deposition: Enhanced Stability and Reactivity. Catalysis Letters, 2011, 141, 512-517.	2.6	159
24	Hollow Metalâ€“Organic Framework Nanospheres via Emulsion-Based Interfacial Synthesis and Their Application in Size-Selective Catalysis. ACS Applied Materials & Interfaces, 2014, 6, 18163-18171.	8.0	159
25	Integration of Pd nanoparticles with engineered pore walls in MOFs for enhanced catalysis. CheM, 2021, 7, 686-698.	11.7	146
26	Precisely-controlled synthesis of Au@Pd coreâ€“shell bimetallic catalyst via atomic layer deposition for selective oxidation of benzyl alcohol. Journal of Catalysis, 2015, 324, 59-68.	6.2	133
27	Size-dependent catalytic activity over carbon-supported palladium nanoparticles in dehydrogenation of formic acid. Journal of Catalysis, 2017, 352, 371-381.	6.2	132
28	Boosting Photocatalytic Water Splitting: Interfacial Charge Polarization in Atomically Controlled Coreâ€“Shell Cocatalysts. Angewandte Chemie - International Edition, 2015, 54, 14810-14814.	13.8	131
29	Insight of the stability and activity of platinum single atoms on ceria. Nano Research, 2019, 12, 1401-1409.	10.4	121
30	Copper Catalysts in Semihydrogenation of Acetylene: From Single Atoms to Nanoparticles. ACS Catalysis, 2020, 10, 3495-3504.	11.2	115
31	Porous Alumina Protective Coatings on Palladium Nanoparticles by Self-Poisoned Atomic Layer Deposition. Chemistry of Materials, 2012, 24, 2047-2055.	6.7	110
32	Shape-selective sieving layers on an oxide catalyst surface. Nature Chemistry, 2012, 4, 1030-1036.	13.6	110
33	Gold supported on well-ordered ceria films: nucleation, growth and morphology in CO oxidation reaction. Catalysis Letters, 2007, 114, 8-16.	2.6	106
34	Single-Atom Catalysts Designed and Prepared by the Atomic Layer Deposition Technique. ACS Catalysis, 2021, 11, 7018-7059.	11.2	106
35	Synthesis of Ptâ€“Pd Coreâ€“Shell Nanostructures by Atomic Layer Deposition: Application in Propane Oxidative Dehydrogenation to Propylene. Chemistry of Materials, 2012, 24, 3525-3533.	6.7	104
36	Sulfur stabilizing metal nanoclusters on carbon at high temperatures. Nature Communications, 2021, 12, 3135.	12.8	104

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37	Bimetallic monolayer catalyst breaks the activityâ€“selectivity trade-off on metal particle size for efficient chemoselective hydrogenations. Nature Catalysis, 2021, 4, 840-849.	34.4	102
38	Activating Edge Sites on Pd Catalysts for Selective Hydrogenation of Acetylene via Selective Ga₂O₃ Decoration. ACS Catalysis, 2016, 6, 3700-3707.	11.2	97
39	Tailoring of the Proximity of Platinum Single Atoms on CeO₂ Using Phosphorus Boosts the Hydrogenation Activity. ACS Catalysis, 2019, 9, 8404-8412.	11.2	95
40	Core-shell Si@TiO2 nanosphere anode by atomic layer deposition for Li-ion batteries. Journal of Power Sources, 2016, 308, 75-82.	7.8	93
41	Boosting Activity and Stability of Metal Single-Atom Catalysts via Regulation of Coordination Number and Local Composition. Journal of the American Chemical Society, 2021, 143, 18854-18858.	13.7	93
42	Metalâ€“Organic Frameworkâ€Templated Catalyst: Synergy in Multiple Sites for Catalytic CO₂ Fixation. ChemSusChem, 2017, 10, 1898-1903.	6.8	91
43	Quasi Pd1Ni single-atom surface alloy catalyst enables hydrogenation of nitriles to secondary amines. Nature Communications, 2019, 10, 4998.	12.8	90
44	Lowâ€Temperature ABCâ€Type Atomic Layer Deposition: Synthesis of Highly Uniform Ultrafine Supported Metal Nanoparticles. Angewandte Chemie - International Edition, 2010, 49, 2547-2551.	13.8	85
45	Surface Acidity and Properties of TiO₂/SiO₂ Catalysts Prepared by Atomic Layer Deposition: UVâˆ’visible Diffuse Reflectance, DRIFTS, and Visible Raman Spectroscopy Studies. Journal of Physical Chemistry C, 2009, 113, 12412-12418.	3.1	82
46	Vanadium oxide surfaces and supported vanadium oxide nanoparticles. Topics in Catalysis, 2006, 38, 117-125.	2.8	80
47	Accelerating Chemo- and Regioselective Hydrogenation of Alkynes over Bimetallic Nanoparticles in a Metalâ€“Organic Framework. ACS Catalysis, 2020, 10, 7753-7762.	11.2	80
48	Precisely Controlled Porous Alumina Overcoating on Pd Catalyst by Atomic Layer Deposition: Enhanced Selectivity and Durability in Hydrogenation of 1,3-Butadiene. ACS Catalysis, 2015, 5, 2735-2739.	11.2	79
49	Revisiting the Au Particle Size Effect on TiO₂-Coated Au/TiO₂ Catalysts in CO Oxidation Reaction. Journal of Physical Chemistry C, 2016, 120, 9174-9183.	3.1	76
50	Nano/Subnanometer Pd Nanoparticles on Oxide Supports Synthesized by AB-type and Low-Temperature ABC-type Atomic Layer Deposition: Growth and Morphology. Langmuir, 2010, 26, 16486-16495.	3.5	73
51	Boosting selective oxidation of cyclohexane over a metalâ€“organic framework by hydrophobicity engineering of pore walls. Chemical Communications, 2017, 53, 10026-10029.	4.1	71
52	Understanding the underlying mechanism of improved selectivity in pd1 single-atom catalyzed hydrogenation reaction. Journal of Catalysis, 2018, 366, 70-79.	6.2	70
53	Adsorbate-Induced Structural Changes in 1â€“3 nm Platinum Nanoparticles. Journal of the American Chemical Society, 2014, 136, 9320-9326.	13.7	69
54	A Review on Particle Size Effect in <scp>Metalâ€Catalyzed</scp> Heterogeneous Reactions. Chinese Journal of Chemistry, 2020, 38, 1422-1444.	4.9	69

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55	First-Principles Predictions and <i>in Situ</i> Experimental Validation of Alumina Atomic Layer Deposition on Metal Surfaces. Chemistry of Materials, 2014, 26, 6752-6761.	6.7	68
56	Precisely Applying TiO₂ Overcoat on Supported Au Catalysts Using Atomic Layer Deposition for Understanding the Reaction Mechanism and Improved Activity in CO Oxidation. Journal of Physical Chemistry C, 2016, 120, 478-486.	3.1	66
57	Synthesis of Na-Stabilized Nonporous t-ZrO₂ Supports and Pt/t-ZrO₂ Catalysts and Application to Water-Gas-Shift Reaction. ACS Catalysis, 2013, 3, 61-73.	11.2	63
58	Toward Understanding of the Support Effect on Pd₁ Single-Atom-Catalyzed Hydrogenation Reactions. Journal of Physical Chemistry C, 2019, 123, 7922-7930.	3.1	63
59	Effect of Reactor Materials on the Properties of Titanium Oxide Nanotubes. ACS Catalysis, 2012, 2, 45-49.	11.2	62
60	Zeroâ€Valent Palladium Singleâ€Atoms Catalysts Confined in Black Phosphorus for Efficient Semiâ€Hydrogenation. Advanced Materials, 2021, 33, e2008471.	21.0	55
61	Integration of Bimetallic Electronic Synergy with Oxide Site Isolation Improves the Selective Hydrogenation of Acetylene. Angewandte Chemie - International Edition, 2021, 60, 19324-19330.	13.8	50
62	Selective Analysis of Molecular States by Functionalized Scanning Tunneling Microscopy Tips. Physical Review Letters, 2006, 96, 156102.	7.8	44
63	Palladium Nanoparticle Formation on TiO₂(110) by Thermal Decomposition of Palladium(II) Hexafluoroacetylacetonate. ACS Applied Materials & Interfaces, 2014, 6, 14702-14711.	8.0	42
64	Atomicâ€Level Insight into Optimizing the Hydrogen Evolution Pathway over a Co₁â€N₄ Singleâ€Site Photocatalyst. Angewandte Chemie, 2017, 129, 12359-12364.	2.0	36
65	Displacement of Hexanol by the Hexanoic Acid Overoxidation Product in Alcohol Oxidation on a Model Supported Palladium Nanoparticle Catalyst. Journal of the American Chemical Society, 2011, 133, 17816-17823.	13.7	35
66	In Situ Spectroscopic Characterization and Theoretical Calculations Identify Partially Reduced ZnO_{1â^'<i>x</i>}/Cu Interfaces for Methanol Synthesis from CO₂. Angewandte Chemie - International Edition, 2022, 61, .	13.8	34
67	Low Temperature ABC-Type Ru Atomic Layer Deposition through Consecutive Dissociative Chemisorption, Combustion, and Reduction Steps. Chemistry of Materials, 2015, 27, 4950-4956.	6.7	32
68	Support-Induced unusual size dependence of Pd catalysts in chemoselective hydrogenation of para-chloronitrobenzene. Journal of Catalysis, 2021, 400, 173-183.	6.2	32
69	Resolving Precursor Deligation, Surface Species Evolution, and Nanoparticle Nucleation during Palladium Atomic Layer Deposition. Journal of Physical Chemistry C, 2013, 117, 11141-11148.	3.1	30
70	A Perspective on New Opportunities in Atom-by-Atom Synthesis of Heterogeneous Catalysts Using Atomic Layer Deposition. Catalysis Letters, 2021, 151, 1535-1545.	2.6	30
71	Tuning the Photoresponse of Nanoâ€Heterojunction: Pressureâ€Induced Inverse Photoconductance in Functionalized WO₃ Nanocuboids. Advanced Science, 2019, 6, 1901132.	11.2	28
72	Atomic Lego Catalysts Synthesized by Atomic Layer Deposition. Accounts of Materials Research, 2022, 3, 358-368.	11.7	28

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73	Four-probe scanning tunnelling microscope with atomic resolution for electrical and electro-optical property measurements of nanosystems. Chinese Physics B, 2005, 14, 1536-1543.	1.3	27
74	Interplay between theory and experiment in the quest for silica with reduced dimensionality grown on a Mo(112) surface. Chemical Physics Letters, 2006, 424, 115-119.	2.6	27
75	Using Pd as a Cocatalyst on GaNâ€“ZnO Solid Solution for Visible-Light-Driven Overall Water Splitting. Catalysis Letters, 2018, 148, 933-939.	2.6	26
76	Atomic Layer Deposition: A Gas Phase Route to Bottom-up Precise Synthesis of Heterogeneous Catalyst. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2018, 34, 1334-1357.	4.9	26
77	Oxidative dehydrogenation of ethane over alumina-supported Pd catalysts. Effect of alumina overlayer. Journal of Catalysis, 2013, 297, 289-295.	6.2	25
78	Atomic-scale engineering of metalâ€“oxide interfaces for advanced catalysis using atomic layer deposition. Catalysis Science and Technology, 2020, 10, 2695-2710.	4.1	25
79	Effects of Chlorine in Titanium Oxide on Palladium Atomic Layer Deposition. Journal of Physical Chemistry C, 2014, 118, 22611-22619.	3.1	24
80	Effects of the morphology and heteroatom doping of CeO₂ support on the hydrogenation activity of Pt single-atoms. Catalysis Science and Technology, 2021, 11, 2844-2851.	4.1	23
81	Atomic-scale cation dynamics in a monolayer VO_X/Î±-Fe₂O₃ catalyst. RSC Advances, 2015, 5, 103834-103840.	3.6	22
82	Tuning the Interaction between Ruthenium Single Atoms and the Second Coordination Sphere for Efficient Nitrogen Photofixation. Advanced Functional Materials, 2022, 32, .	14.9	22
83	Pressure-induced structural evaluation and insulator-metal transition in the mixed spinel ferrite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">Z</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mrow><mml:mn>0.2</mml:mn></mml:mrow></mml:msub><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">g</mml:mi><mml:mrow><mml:mn>0.8</mml:mn></mml:mrow></mml:msub><mml:mi	3.2	21
84	Epitaxial Stabilization of Face Selective Catalysts. Topics in Catalysis, 2013, 56, 1829-1834.	2.8	20
85	Pressure-induced structural and semiconductor-semiconductor transitions in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">o</mml:mi><mml:mrow><mml:mn>0.5</mml:mn></mml:mrow></mml:msub><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">g</mml:mi><mml:mrow><mml:mn>0.5</mml:mn></mml:mrow></mml:msub><mml:mi	3.2	20
86	Formation of one-dimensional crystalline silica on a metal substrate. Surface Science, 2006, 600, L164-L168.	1.9	19
87	Catalysts Transform While Molecules React: An Atomic-Scale View. Journal of Physical Chemistry Letters, 2013, 4, 285-291.	4.6	19
88	Size-dependent strong metalâ€“support interaction in Pd/ZnO catalysts for hydrogenation of CO₂to methanol. Catalysis Science and Technology, 2021, 11, 4398-4405.	4.1	19
89	Low temperature CO induced growth of Pd supported on a monolayer silica film. Surface Science, 2006, 600, L153-L157.	1.9	18
90	Atomic layer deposition on Pd nanocrystals for forming Pd-TiO 2 interface toward enhanced CO oxidation. Progress in Natural Science: Materials International, 2016, 26, 289-294.	4.4	18

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91	Acidic alumina overcoating on platinum nanoparticles: Close metalâ€"acid proximity enhances bifunctionality for glycerol hydrogenolysis. Chinese Journal of Catalysis, 2017, 38, 1237-1244.	14.0	18
92	Precise Tailoring of Ir-FeO_{<i>x</i>} Interfaces for Improved Catalytic Performance in Preferential Oxidation of Carbon Monoxide in Hydrogen. Journal of Physical Chemistry C, 2019, 123, 29262-29270.	3.1	17
93	In situ XANES study of methanol decomposition and partial oxidation to syn-gas over supported Pt catalyst on SrTiO3 nanocubes. Catalysis Today, 2014, 237, 71-79.	4.4	16
94	Coating Pd/Al 2 O 3 catalysts with FeO x enhances both activity and selectivity in 1,3-butadiene hydrogenation. Chinese Journal of Catalysis, 2017, 38, 1581-1587.	14.0	16
95	Exploring the phase transformation in ZnO/Cu(111) model catalysts in CO2 hydrogenation. Journal of Energy Chemistry, 2021, 60, 150-155.	12.9	16
96	Synergistic construction of bifunctional and stable Pt/HZSM-5-based catalysts for efficient catalytic cracking of <i>n</i>-butane. Nanoscale, 2021, 13, 5103-5114.	5.6	14
97	Manipulation and four-probe analysis of nanowires in UHV by application of four tunneling microscope tips: a new method for the investigation of electrical transport through nanowires. Surface and Interface Analysis, 2006, 38, 1096-1102.	1.8	11
98	Synthesis of Quasiâ€Bilayer Subnano Metalâ€Oxide Interfacial Cluster Catalysts for Advanced Catalysis. Small, 2020, 16, e2005571.	10.0	10
99	Well-Defined Nanostructures for Catalysis by Atomic Layer Deposition. Studies in Surface Science and Catalysis, 2017, 177, 643-676.	1.5	9
100	Inverse single-site Fe1(OH)X/Pt(111) model catalyst for preferential oxidation of CO in H2. Nano Research, 2022, 15, 709-715.	10.4	9
101	Waterproof surface passivation of K₂GeF₆:Mn⁴⁺ by a dense Al₂O₃ layer <i>via</i> atomic layer deposition. Journal of Materials Chemistry C, 2022, 10, 9867-9874.	5.5	8
102	STRUCTURE, THERMAL STABILITY, AND CO ADSORPTION PROPERTIES OF PD NANOPARTICLES SUPPORTED ON AN ULTRA-THIN SiO₂ FILM. Surface Review and Letters, 2007, 14, 927-934.	1.1	7
103	Redox-driven atomic-scale changes in mixed catalysts: VOX/WOX/Î±-TiO2 (110). RSC Advances, 2014, 4, 64608-64616.	3.6	7
104	Synthesis of palladium nanoparticles on TiO₂(110) using a beta-diketonate precursor. Physical Chemistry Chemical Physics, 2015, 17, 6470-6477.	2.8	7
105	In Situ Spectroscopic Characterization and Theoretical Calculations Identify Partially Reduced ZnO_{1âˆ'<i>x</i>}/Cu Interfaces for Methanol Synthesis from CO₂. Angewandte Chemie, 2022, 134, .	2.0	6
106	Carbon Nanostructures: Covalently Connected Carbon Nanostructures for Current Collectors in Both the Cathode and Anode of Liâ€"S Batteries (Adv. Mater. 41/2016). Advanced Materials, 2016, 28, 9016-9016.	21.0	5
107	The mechanistic effect over the substrate in a square type atomic layer deposition reactor. International Journal of Modern Physics B, 2019, 33, 1940018.	2.0	5
108	Atomic Layer Deposition of Noble Metals â€" New Developments in Nanostructured Catalysts. , 2012, , .		4

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109	Interfacial Proton Transfer for Hydrogen Evolution at the Sub-Nanometric Platinum/Electrolyte Interface. ACS Applied Materials & Interfaces, 2021, 13, 47252-47261.	8.0	4
110	FeOx Coating on Pd/C Catalyst by Atomic Layer Deposition Enhances the Catalytic Activity in Dehydrogenation of Formic Acid. Chinese Journal of Chemical Physics, 2017, 30, 319-324.	1.3	3
111	Integration of Bimetallic Electronic Synergy with Oxide Site Isolation Improves the Selective Hydrogenation of Acetylene. Angewandte Chemie, 2021, 133, 19473-19479.	2.0	3
112	Ultra-thin nickel oxide overcoating of noble metal catalysts for directing selective hydrogenation of nitriles to secondary amines. Catalysis Today, 2023, 410, 253-263.	4.4	3
113	Sub-nanometer-thick Al2O3 Overcoat Remarkably Enhancing Thermal Stability of Supported Gold Catalysts. Chinese Journal of Chemical Physics, 2016, 29, 571-577.	1.3	2
114	RÃ¼cktitelbild: Stabilization of Copper Catalysts for Liquid-Phase Reactions by Atomic Layer Deposition (Angew. Chem. 51/2013). Angewandte Chemie, 2013, 125, 14068-14068.	2.0	1
115	Tuning the Interaction between Ruthenium Single Atoms and the Second Coordination Sphere for Efficient Nitrogen Photofixation (Adv. Funct. Mater. 12/2022). Advanced Functional Materials, 2022, 32, .	14.9	0