Maria Flytzani-Stephanopoulos

List of Publications by Year in Descending Order

89 papers	13,670 citations	54 h-index	91 g-index
91 ext. papers	15,356 ext. citations	13.3 avg, IF	6.93 L-index

#	Paper	IF	Citations
89	Directing reaction pathways via in situ control of active site geometries in PdAu single-atom alloy catalysts. *Nature Communications*, **2021**, 12, 1549	17.4	32
88	First-principles design of a single-atom-alloy propane dehydrogenation catalyst. *Science*, **2021**, 372, 1444-1447	33.5	62
87	Developing single-site Pt catalysts for the preferential oxidation of CO: A surface science and first principles-guided approach. *Applied Catalysis B: Environmental*, **2021**, 284, 119716	21.8	6
86	A stable low-temperature H-production catalyst by crowding Pt on MoC. *Nature*, **2021**, 589, 396-401	50.4	109
85	Mechanistic and Electronic Insights into a Working NiAu Single-Atom Alloy Ethanol Dehydrogenation Catalyst.. *Journal of the American Chemical Society*, **2021**, 143, 21567-21579	16.4	5
84	PdCu Single Atom Alloys for the Selective Oxidation of Methanol to Methyl Formate at Low Temperatures. *Topics in Catalysis*, **2020**, 63, 618-627	2.3	3
83	High-loading single Pt atom sites [Pt-O(OH)] catalyze the CO PROX reaction with high activity and selectivity at mild conditions. *Science Advances*, **2020**, 6, eaba3809	14.3	35
82	Single-Atom Alloy Catalysis. *Chemical Reviews*, **2020**, 120, 12044-12088	68.1	227
81	Atomically Dispersed Pd Supported on Zinc Oxide for Selective Nonoxidative Ethanol Dehydrogenation. *Industrial & Engineering Chemistry Research*, **2020**, 59, 2648-2656	3.9	19
80	Atomically dispersed Pt (II) on WO3 for highly selective sensing and catalytic oxidation of triethylamine. *Applied Catalysis B: Environmental*, **2019**, 256, 117809	21.8	49
79	Low-Coordinated Pd Catalysts Supported on Zn1Zr1Ox Composite Oxides for Selective Methanol Steam Reforming. *Applied Catalysis A: General*, **2019**, 580, 81-92	5.1	17
78	Integrated Catalysis-Surface Science-Theory Approach to Understand Selectivity in the Hydrogenation of 1-Hexyne to 1-Hexene on PdAu Single-Atom Alloy Catalysts. *ACS Catalysis*, **2019**, 9, 8757-8765	13.1	34
77	Surpassing the single-atom catalytic activity limit through paired Pt-O-Pt ensemble built from isolated Pt atoms. *Nature Communications*, **2019**, 10, 3808	17.4	120
76	Dilute Pd/Au Alloy Nanoparticles Embedded in Colloid-Templated Porous SiO2: Stable Au-Based Oxidation Catalysts. *Chemistry of Materials*, **2019**, 31, 5759-5768	9.6	34
75	Single-atom gold oxo-clusters prepared in alkaline solutions catalyse the heterogeneous methanol self-coupling reactions. *Nature Chemistry*, **2019**, 11, 1098-1105	17.6	44
74	Single-Atom Alloys as a Reductionist Approach to the Rational Design of Heterogeneous Catalysts. *Accounts of Chemical Research*, **2019**, 52, 237-247	24.3	192
73	Stable iridium dinuclear heterogeneous catalysts supported on metal-oxide substrate for solar water oxidation. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 2902-2907	11.5	156

72	NiCu single atom alloys catalyze the C H bond activation in the selective non- oxidative ethanol dehydrogenation reaction. *Applied Catalysis B: Environmental*, **2018**, 226, 534-543	21.8	83
71	Pt/Cu single-atom alloys as coke-resistant catalysts for efficient C-H activation. *Nature Chemistry*, **2018**, 10, 325-332	17.6	308
70	NiAu Single Atom Alloys for the Non-oxidative Dehydrogenation of Ethanol to Acetaldehyde and Hydrogen. *Topics in Catalysis*, **2018**, 61, 475-486	2.3	50
69	End-On Bound Iridium Dinuclear Heterogeneous Catalysts on WO for Solar Water Oxidation. *ACS Central Science*, **2018**, 4, 1166-1172	16.8	54
68	Selective non-oxidative dehydrogenation of ethanol to acetaldehyde and hydrogen on highly dilute NiCu alloys. *Applied Catalysis B: Environmental*, **2017**, 205, 541-550	21.8	91
67	Design of single-atom metal catalysts on various supports for the low-temperature water-gas shift reaction. *Catalysis Today*, **2017**, 298, 216-225	5.3	44
66	Selective Formic Acid Dehydrogenation on Pt-Cu Single-Atom Alloys. *ACS Catalysis*, **2017**, 7, 413-420	13.1	108
65	Sample Preparation and Analysis of Aggregated Single Atom Alloy Nanoparticles by Atom Probe Tomography. *Microscopy and Microanalysis*, **2017**, 23, 1906-1907	0.5	1
64	Palladium gold single atom alloy catalysts for liquid phase selective hydrogenation of 1-hexyne. *Catalysis Science and Technology*, **2017**, 7, 4276-4284	5.5	77
63	Atomically dispersed supported metal catalysts: perspectives and suggestions for future research. *Catalysis Science and Technology*, **2017**, 7, 4259-4275	5.5	175
62	Supported metal catalysts at the single-atom limit A viewpoint. *Chinese Journal of Catalysis*, **2017**, 38, 1432-1442	11.3	32
61	Mild oxidation of methane to methanol or acetic acid on supported isolated rhodium catalysts. *Nature*, **2017**, 551, 605-608	50.4	363
60	Single gold atoms stabilized on nanoscale metal oxide supports are catalytic active centers for various reactions. *AICHE Journal*, **2016**, 62, 429-439	3.6	58
59	Water co-catalyzed selective dehydrogenation of methanol to formaldehyde and hydrogen. *Surface Science*, **2016**, 650, 121-129	1.8	60
58	Low-Temperature Dehydrogenation of Ethanol on Atomically Dispersed Gold Supported on ZnZrOx. *ACS Catalysis*, **2016**, 6, 210-218	13.1	68
57	Atomically Dispersed Precious Metal Species on Various Oxide Supports for Catalytic Hydrogen Upgrading and Emission Control. *Microscopy and Microanalysis*, **2016**, 22, 858-859	0.5	
56	Tackling CO Poisoning with Single-Atom Alloy Catalysts. *Journal of the American Chemical Society*, **2016**, 138, 6396-9	16.4	272
55	Gold/Ceria: The Making of a Robust Catalyst for Fuel Processing and Hydrogen Production **2015**, 133-158		2

54	A common single-site Pt(II)-O(OH)x- species stabilized by sodium on "active" and "inert" supports catalyzes the water-gas shift reaction. *Journal of the American Chemical Society*, **2015**, 137, 3470-3	16.4	280
53	Selective hydrogenation of 1,3-butadiene on platinum-copper alloys at the single-atom limit. *Nature Communications*, **2015**, 6, 8550	17.4	369
52	Reactions of Deuterated Methanol (CD3OD) on Fe3O4(111). *Journal of Physical Chemistry C*, **2015**, 119, 1113-1120	3.8	11
51	ZnO-modified zirconia as gold catalyst support for the low-temperature methanol steam reforming reaction. *Applied Catalysis B: Environmental*, **2014**, 154-155, 142-152	21.8	42
50	Gold atoms stabilized on various supports catalyze the water-gas shift reaction. *Accounts of Chemical Research*, **2014**, 47, 783-92	24.3	268
49	Probing the low-temperature water-gas shift activity of alkali-promoted platinum catalysts stabilized on carbon supports. *Journal of the American Chemical Society*, **2014**, 136, 3238-45	16.4	95
48	Activation of carbon-supported platinum catalysts by sodium for the low-temperature water-gas shift reaction. *Applied Catalysis B: Environmental*, **2014**, 144, 243-251	21.8	50
47	Catalytically active Au-O(OH)x-species stabilized by alkali ions on zeolites and mesoporous oxides. *Science*, **2014**, 346, 1498-501	33.3	437
46	Atomically dispersed Au-(OH)x species bound on titania catalyze the low-temperature water-gas shift reaction. *Journal of the American Chemical Society*, **2013**, 135, 3768-71	16.4	293
45	Hydrogen production by dehydrogenation of formic acid on atomically dispersed gold on ceria. *ChemSusChem*, **2013**, 6, 816-9	8.3	73
44	Scanning tunneling microscopy and theoretical study of water adsorption on Fe3O4: implications for catalysis. *Journal of the American Chemical Society*, **2012**, 134, 18979-85	16.4	66
43	Alkali-Metal-Promoted Pt/TiO2 Opens a More Efficient Pathway to Formaldehyde Oxidation at Ambient Temperatures. *Angewandte Chemie*, **2012**, 124, 9766-9770	3.6	34
42	Silica-encapsulated platinum catalysts for the low-temperature water-gas shift reaction. *Applied Catalysis B: Environmental*, **2012**, 127, 342-350	21.8	37
41	Novel Au/La2O3 and Au/La2O2SO4 catalysts for the water-gas shift reaction prepared via an anion adsorption method. *Chemical Communications*, **2012**, 48, 4857-9	5.8	59
40	Atomically dispersed supported metal catalysts. *Annual Review of Chemical and Biomolecular Engineering*, **2012**, 3, 545-74	8.9	431
39	Structure sensitivity of the low-temperature water-gas shift reaction on Cu□eO2 catalysts. *Catalysis Today*, **2012**, 180, 68-80	5.3	154
38	Decoration with ceria nanoparticles activates inert gold island/film surfaces for the CO oxidation reaction. *Journal of Catalysis*, **2011**, 280, 255-263	7.3	29
37	'Shape effects' in metal oxide supported nanoscale gold catalysts. *Physical Chemistry Chemical Physics*, **2011**, 13, 2517-27	3.6	106

36	Hydrogen Production from Methanol over Gold Supported on ZnO and CeO2 Nanoshapes. *Journal of Physical Chemistry C*, **2011**, 115, 1261-1268	3.8	42
35	Raman analysis of mode softening in nanoparticle CeO(2-x) and Au-CeO(2-x) during CO oxidation. *Journal of the American Chemical Society*, **2011**, 133, 12952-5	16.4	294
34	Sulfur-tolerant lanthanide oxysulfide catalysts for the high-temperature water-gas shift reaction. *Applied Catalysis B: Environmental*, **2011**, 106, 255-255	21.8	14
33	CO Oxidation on Unsupported Dendrimer-Encapsulated Gold Nanoparticles. *Journal of Physical Chemistry C*, **2010**, 114, 16401-16407	3.8	13
32	Alkali-stabilized Pt-OHx species catalyze low-temperature water-gas shift reactions. *Science*, **2010**, 329, 1633-6	33.3	535
31	Active gold species on cerium oxide nanoshapes for methanol steam reforming and the water gas shift reactions. *Energy and Environmental Science*, **2010**, 3, 831	35.4	129
30	Behavior of Au species in Au/Fe2O3 catalysts characterized by novel in situ heating techniques and aberration-corrected STEM imaging. *Microscopy and Microanalysis*, **2010**, 16, 375-85	0.5	17
29	Stability of lanthanum oxide-based H2S sorbents in realistic fuel processor/fuel cell operation. *Journal of Power Sources*, **2010**, 195, 2815-2822	8.9	15
28	Steam reforming of methanol over ceria and gold-ceria nanoshapes. *Applied Catalysis B: Environmental*, **2010**, 95, 87-92	21.8	110
27	Evolution of gold structure during thermal treatment of Au/FeOx catalysts revealed by aberration-corrected electron microscopy. *Journal of Electron Microscopy*, **2009**, 58, 199-212		62
26	Charging and Chemical Reactivity of Gold Nanoparticles and Adatoms on the (111) Surface of Single-Crystal Magnetite: A Scanning Tunneling Microscopy/Spectroscopy Study. *Journal of Physical Chemistry C*, **2009**, 113, 10198-10205	3.8	72
25	Reaction-Relevant Gold Structures in the Low Temperature Water-Gas Shift Reaction on Au-CeO2. *Journal of Physical Chemistry C*, **2008**, 112, 12834-12840	3.8	122
24	Shape and crystal-plane effects of nanoscale ceria on the activity of Au-CeO2 catalysts for the water-gas shift reaction. *Angewandte Chemie - International Edition*, **2008**, 47, 2884-7	16.4	615
23	The Role of the Interface in CO Oxidation on Au/CeO2 Multilayer Nanotowers. *Advanced Functional Materials*, **2008**, 18, 2801-2807	15.6	83
22	Shape and Crystal-Plane Effects of Nanoscale Ceria on the Activity of Au-CeO2 Catalysts for the Water-Gas Shift Reaction. *Angewandte Chemie*, **2008**, 120, 2926-2929	3.6	161
21	Comparison of the activity of Au/CeO2 and Au/Fe2O3 catalysts for the CO oxidation and the water-gas shift reactions. *Topics in Catalysis*, **2007**, 44, 199-208	2.3	150
20	The Importance of Strongly Bound Pt-CeO x Species for the Water-gas Shift Reaction: Catalyst Activity and Stability Evaluation. *Topics in Catalysis*, **2007**, 46, 363-373	2.3	88
19	On the issue of the deactivation of Au-ceria and Pt-ceria water-gas shift catalysts in practical fuel-cell applications. *Angewandte Chemie - International Edition*, **2006**, 45, 2285-9	16.4	163

18	On the Issue of the Deactivation of Au–ceria and Pt–ceria Water–Gas Shift Catalysts in Practical Fuel-Cell Applications. *Angewandte Chemie*, **2006**, 118, 2343-2347	3.6	41
17	Regenerative adsorption and removal of H2S from hot fuel gas streams by rare earth oxides. *Science*, **2006**, 312, 1508-10	33.3	209
16	Cerium Oxide-Based Sorbents for Regenerative Hot Reformate Gas Desulfurization. *Energy & Fuels*, **2005**, 19, 2089-2097	4.1	50
15	Low-content gold-ceria catalysts for the water–gas shift and preferential CO oxidation reactions. *Applied Catalysis A: General*, **2005**, 291, 126-135	5.1	197
14	Activity and stability of low-content gold–cerium oxide catalysts for the water–gas shift reaction. *Applied Catalysis B: Environmental*, **2005**, 56, 57-68	21.8	352
13	Activity and Stability of Cu–CeO2 Catalysts in High-Temperature Water–Gas Shift for Fuel-Cell Applications. *Industrial & Engineering Chemistry Research*, **2004**, 43, 3055-3062	3.9	132
12	Active nonmetallic Au and Pt species on ceria-based water-gas shift catalysts. *Science*, **2003**, 301, 935-8	33.3	2416
11	Gold–ceria catalysts for low-temperature water-gas shift reaction. *Chemical Engineering Journal*, **2003**, 93, 41-53	14.7	253
10	Reduction and Sulfidation Kinetics of Cerium Oxide and Cu-Modified Cerium Oxide. *Industrial & Engineering Chemistry Research*, **2002**, 41, 3115-3123	3.9	77
9	Nanostructured Au–CeO2 Catalysts for Low-Temperature Water–Gas Shift. *Catalysis Letters*, **2001**, 77, 87-95	2.8	461
8	Nanostructured Cerium Oxide Ecocatalysts. *MRS Bulletin*, **2001**, 26, 885-889	3.2	41
7	Low-temperature water-gas shift reaction over Cu- and Ni-loaded cerium oxide catalysts. *Applied Catalysis B: Environmental*, **2000**, 27, 179-191	21.8	645
6	Catalytic Recovery of Elemental Sulfur from Sulfur Dioxide-Laden Gas Streams. *ACS Symposium Series*, **2000**, 174-191	0.4	1
5	Redox chemistry over CeO2-based catalysts: SO2 reduction by CO or CH4. *Catalysis Today*, **1999**, 50, 381-397	5.3	85
4	Cu–Cr–O and Cu–Ce–O Regenerable Oxide Sorbents for Hot Gas Desulfurization. *Industrial & Engineering Chemistry Research*, **1997**, 36, 187-196	3.9	104
3	Decomposition of NO over Metal-Modified Cu-ZSM-5 Catalysts. *ACS Symposium Series*, **1995**, 133-146	0.4	6
2	Transition Metal-Promoted Oxygen Ion Conductors as Oxidation Catalyst. *Materials Research Society Symposia Proceedings*, **1994**, 344, 145		
1	Sulfidation of zinc titanate and zinc oxide solids. *Industrial & Engineering Chemistry Research*, **1992**, 31, 1890-1899	3.9	90