

Hydrogen Spillover. Facts and Fiction

Chemical Reviews

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Citation Report

#	ARTICLE	IF	CITATIONS
3	Selective Hydrogenolysis of Glycerol to 1,3-Propanediol Catalyzed by Pt Nanoparticles@AlO _x /WO ₃ . <i>Chemistry Letters</i> , 2012, 41, 1720-1722.	0.7	56
4	Room-temperature hydrogen gas sensor with ZnO nanorod arrays grown on a quartz substrate. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012, 46, 254-258.	1.3	16
5	Spillover enhancement for hydrogen storage by Pt doped hypercrosslinked polystyrene. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 12402-12410.	3.8	17
6	One-step synthesis of a Pt@Co@SWCNT hybrid material from a Pt@Co@MCM-41 catalyst. <i>Journal of Materials Chemistry</i> , 2012, 22, 25083.	6.7	8
7	Energetic Driving Force of H Spillover between Rhodium and Titania Surfaces: A DFT View. <i>Journal of Physical Chemistry C</i> , 2012, 116, 25362-25367.	1.5	18
8	Hydrogenolysis of glycerol over Cu _{0.4} /Zn _{5.6} ~xMg~xAl ₂ O _{8.6} catalysts: The role of basicity and hydrogen spillover. <i>Journal of Catalysis</i> , 2012, 296, 1-11.	3.1	175
9	Aqueous-phase ketonization of acetic acid over Ru/TiO ₂ /carbon catalysts. <i>Journal of Catalysis</i> , 2012, 295, 169-178.	3.1	122
10	Hydrogen adsorption on and spillover from Au- and Cu-supported Pt ₃ and Pd ₃ clusters: a density functional study. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 16062.	1.3	28
11	Spectroscopic Identification of Hydrogen Spillover Species in Ruthenium-Modified High Surface Area Carbons by Diffuse Reflectance Infrared Fourier Transform Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2012, 116, 26744-26755.	1.5	32
12	New Challenges in Heterogeneous Catalysis for the 21st Century. <i>Catalysis Letters</i> , 2012, 142, 501-516.	1.4	114
14	A hydrogen sorption study on a Pd-doped CMK-3 type ordered mesoporous carbon. <i>Adsorption</i> , 2013, 19, 803-811.	1.4	9
15	Design and Synthesis of Metal Sulfide Catalysts Supported on Zeolite Nanofiber Bundles with Unprecedented Hydrodesulfurization Activities. <i>Journal of the American Chemical Society</i> , 2013, 135, 11437-11440.	6.6	104
16	Effect of surface modification of the support of hydrotreating catalysts with transition metal oxides (sulfides) on their catalytic properties. <i>Petroleum Chemistry</i> , 2013, 53, 245-254.	0.4	15
17	n-Hexadecane hydroisomerization over Pt-HBEA catalysts. Quantification and effect of the intimacy between metal and protonic sites. <i>Journal of Catalysis</i> , 2013, 307, 122-131.	3.1	183
19	Hydrogen spillover effect in the presence of CoS _x /Al ₂ O ₃ and bulk MoS ₂ in hydrodesulfurization, hydrodenitrogenation and hydrodeoxygenation. <i>Russian Journal of Applied Chemistry</i> , 2013, 86, 718-726.	0.1	12
20	Adsorption and Deactivation Characteristics of Cu/ZnO-Based Catalysts for Methanol Synthesis from Carbon Dioxide. <i>Topics in Catalysis</i> , 2013, 56, 1752-1763.	1.3	65
21	Unraveling the Role of Metal@Support Interactions in Heterogeneous Catalysis: Oxygenate Selectivity in Fischer@Tropsch Synthesis. <i>ACS Catalysis</i> , 2013, 3, 2881-2890.	5.5	54
22	Solid-state solvent-free catalyzed hydrogenation: Enhancing reaction efficiency by spillover agents. <i>Journal of Molecular Catalysis A</i> , 2013, 376, 48-52.	4.8	9

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23	<scpd>-Glucose Hydrogenation over Ru Nanoparticles Embedded in Mesoporous Hypercrosslinked Polystyrene. Journal of Physical Chemistry A, 2013, 117, 4073-4083.	1.1	51
24	Carbon-supported Ru catalyst with lithium promoter for ammonia synthesis. Catalysis Communications, 2013, 41, 110-114.	1.6	12
25	A catalytic and efficient route for reduction of graphene oxide by hydrogen spillover. Journal of Materials Chemistry A, 2013, 1, 1070-1077.	5.2	44
26	Changes in the electrical resistance of oriented graphitic carbon films induced by atomic hydrogen. Journal of Materials Chemistry A, 2013, 1, 402-407.	5.2	6
27	Complete degradation of perchlorate using Pd/N-doped activated carbon with adsorption/catalysis bifunctional roles. Carbon, 2013, 65, 315-323.	5.4	27
28	Probing Highly Selective H/D Exchange Processes with a Ruthenium Complex through Neutron Diffraction and Multinuclear NMR Studies.. Inorganic Chemistry, 2013, 52, 7329-7337.	1.9	28
29	High CO ₂ and CO conversion to hydrocarbons using bridged Fe nanoparticles on carbon nanotubes. Catalysis Science and Technology, 2013, 3, 1202.	2.1	42
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31	Controlling a spillover pathway with the molecular cork effect. Nature Materials, 2013, 12, 523-528.	13.3	119
32	Hydrogen adsorption properties of platinum decorated hierarchically structured templated carbons. Microporous and Mesoporous Materials, 2013, 177, 66-74.	2.2	27
33	Aerobic oxidation of primary aliphatic alcohols over bismuth oxide supported platinum catalysts in water. Green Chemistry, 2013, 15, 2215.	4.6	64
34	Highly Selective Hydrogenolysis of Glycerol to 1,3-Propanediol over a Boehmite-Supported Platinum/Tungsten Catalyst. ChemSusChem, 2013, 6, 1345-1347.	3.6	155
35	Zeolite-supported bimetallic catalyst: controlling selectivity of rhodium complexes by nearby iridium complexes. Catalysis Science and Technology, 2013, 3, 2199.	2.1	11
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37	Supercritical CO ₂ Mediated Incorporation of Pd onto Templated Carbons: A Route to Optimizing the Pd Particle Size and Hydrogen Uptake Density. ACS Applied Materials & Interfaces, 2013, 5, 5639-5647.	4.0	24
38	A Voltammetry Study of Ethanol Oxidation on Carbon Supported, Non Alloyed Platinum-Tungsten Catalysts. Journal of the Electrochemical Society, 2013, 160, H185-H191.	1.3	3
39	Composite Carbon Nanotube and Titania Catalyst Supports for Enhanced Activity and Durability. ECS Transactions, 2013, 58, 1809-1821.	0.3	5
41	Harnessing the Selective Catalytic Action of Supported Gold in Hydrogenation Applications. RSC Catalysis Series, 2014, , 424-461.	0.1	1

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42	Water-Mediated Cooperative Migration of Chemisorbed Hydrogen on Graphene. <i>Physical Review Letters</i> , 2014, 112, 076101.	2.9	16
43	Carbon Allotropes Accelerate Hydrogenation via Spillover Mechanism. <i>Journal of Physical Chemistry C</i> , 2014, 118, 27164-27169.	1.5	21
44	Kinetics of D-glucose hydrogenation over a Ru-containing heterogeneous catalyst. <i>Kinetics and Catalysis</i> , 2014, 55, 695-704.	0.3	2
45	Noble Metals Can Have Different Effects on Photocatalysis Over Metal-Organic Frameworks (MOFs): A Case Study on M/NH ₂ -MIL-125(Ti) (M=Pt and Au). <i>Chemistry - A European Journal</i> , 2014, 20, 4780-4788.	1.7	247
46	Kinetic investigation of the effect of H ₂ S in the hydrodesulfurization of FCC gasoline. <i>Fuel</i> , 2014, 123, 43-51.	3.4	18
47	Energy storage applications of activated carbons: supercapacitors and hydrogen storage. <i>Energy and Environmental Science</i> , 2014, 7, 1250-1280.	15.6	1,229
48	Probing hydrogen spillover in Pd@MIL-101(Cr) with a focus on hydrogen chemisorption. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 5803.	1.3	33
49	Hydrogenation of o-chloronitrobenzene to o-chloroaniline over a Pt/Fe ₂ O ₃ catalyst under ambient conditions. <i>RSC Advances</i> , 2014, 4, 11788.	1.7	11
50	The role of rhodium in the mechanism of the water-gas shift over zirconia supported iron oxide. <i>Journal of Catalysis</i> , 2014, 313, 34-45.	3.1	30
51	Direct evidence of hydrogen spillover from Ni to Cu on Ni-Cu bimetallic catalysts. <i>Journal of Molecular Catalysis A</i> , 2014, 383-384, 239-242.	4.8	65
52	Oxide-modified Raney copper as catalysts for selective hydrogenolysis of glycerol. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2014, 9, 581-590.	0.8	5
53	Promotion of atomic hydrogen recombination as an alternative to electron trapping for the role of metals in the photocatalytic production of H ₂ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 7942-7947.	3.3	109
54	Efficient synthesis of ethylene glycol from cellulose over Ni-WO ₃ /SBA-15 catalysts. <i>Journal of Molecular Catalysis A</i> , 2014, 381, 46-53.	4.8	84
55	Mechanism of Hydrogen Spillover on WO ₃ (001) and Formation of H _x WO ₃ (x = 0.125, 0.25, 0.375, and 0.5). <i>Journal of Physical Chemistry C</i> , 2014, 118, 494-501.	1.5	89
56	Selective conversion of microcrystalline cellulose into hexitols over a Ru/[Bmim]3PW12O ₄₀ catalyst under mild conditions. <i>Catalysis Today</i> , 2014, 233, 70-76.	2.2	33
57	Selective Dissociation of Dihydrogen over Dioxygen on a Hindered Platinum Surface for the Direct Synthesis of Hydrogen Peroxide. <i>ChemCatChem</i> , 2014, 6, 2836-2842.	1.8	23
58	Maximizing the catalytic function of hydrogen spillover in platinum-encapsulated aluminosilicates with controlled nanostructures. <i>Nature Communications</i> , 2014, 5, 3370.	5.8	181
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61	Hydrogen Dissociation, Spillover, and Desorption from Cu-Supported Co Nanoparticles. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3380-3385.	2.1	34
62	Understanding the role of TiO ₂ crystal structure on the enhanced activity and stability of Ru/TiO ₂ catalysts for the conversion of lignin-derived oxygenates. <i>Green Chemistry</i> , 2014, 16, 645-652.	4.6	98
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64	Targeted Manipulation of Metal-Organic Frameworks To Direct Sorption Properties. <i>ChemPhysChem</i> , 2014, 15, 823-839.	1.0	46
65	A Nanoscale Demonstration of Hydrogen Atom Spillover and Surface Diffusion Across Silica Using the Kinetics of CO ₂ Methanation Catalyzed on Spatially Separate Pt and Co Nanoparticles.. <i>Nano Letters</i> , 2014, 14, 4792-4796.	4.5	100
67	Experimental and Theoretical Studies of Hydrogen/Deuterium Spillover on Pt-Loaded Zeolite-Templated Carbon. <i>Journal of Physical Chemistry C</i> , 2014, 118, 9551-9559.	1.5	32
68	Dihydrogen Catalysis: A Remarkable Avenue in the Reactivity of Molecular Hydrogen. <i>Catalysis Reviews - Science and Engineering</i> , 2014, 56, 403-475.	5.7	20
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72	Diffusion-controlled H ₂ sensors composed of Pd-coated highly porous WO ₃ nanocluster films. <i>Sensors and Actuators B: Chemical</i> , 2014, 191, 711-718.	4.0	36
73	Stability and hydrogen adsorption of metal-organic frameworks prepared via different catalyst doping methods. <i>Journal of Catalysis</i> , 2014, 318, 128-142.	3.1	29
74	Morphology-dependent nanocatalysts: Rod-shaped oxides. <i>Chemical Society Reviews</i> , 2014, 43, 1543-1574.	18.7	445
75	Template removal from AFI aluminophosphate molecular sieve by Pd/SiO ₂ catalytic hydrocracking at mild temperature. <i>Microporous and Mesoporous Materials</i> , 2014, 193, 127-133.	2.2	15
76	Hydrogen sorption properties of Pd-doped carbon molecular sieves. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 9830-9836.	3.8	16
77	The effect of the absence of Ni, Co, and Ni-Co catalyst pretreatment on catalytic activity for hydrogen production via oxidative steam reforming of ethanol. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 10074-10089.	3.8	39
78	Effect of titanium content on dibenzothiophene HDS performance over Ni ₂ P/Ti-MCM-41 catalyst. <i>Journal of Catalysis</i> , 2014, 311, 257-265.	3.1	131

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80	Synthesis and multi-technique characterization of nickel loaded MCM-41 as potential hydrogen-storage materials. <i>Microporous and Mesoporous Materials</i> , 2014, 191, 103-111.	2.2	29
81	In pursuit of light intermetallic hydrides. <i>Journal of Alloys and Compounds</i> , 2015, 645, S524-S528.	2.8	2
82	Multiply Confined Nickel Nanocatalysts Produced by Atomic Layer Deposition for Hydrogenation Reactions. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 9006-9010.	7.2	96
83	PtZn-ETS-2: A novel catalyst for ethane dehydrogenation. <i>AIChE Journal</i> , 2015, 61, 4367-4376.	1.8	26
84	Towards Carbon-Neutral CO ₂ Conversion to Hydrocarbons. <i>ChemSusChem</i> , 2015, 8, 4064-4072.	3.6	48
86	Ultrafine Nanoparticle-Supported Ru Nanoclusters with Ultrahigh Catalytic Activity. <i>Small</i> , 2015, 11, 4385-4393.	5.2	80
87	Hydrogen-Induced Rupture of Strained Si-O Bonds in Amorphous Silicon Dioxide. <i>Physical Review Letters</i> , 2015, 114, 115503.	2.9	82
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89	Hydrogen storage over metal-doped activated carbon. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 7609-7616.	3.8	44
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91	Hydrogen spillover effect between Ni ₂ P and MoS ₂ catalysts in hydrodesulfurization of dibenzothiophene. <i>Journal of Fuel Chemistry and Technology</i> , 2015, 43, 708-713.	0.9	4
92	Hydrogen Spillover Enhanced Hydroxyl Formation and Catalytic Activity Toward CO Oxidation at the Metal/Oxide Interface. <i>Chemistry - A European Journal</i> , 2015, 21, 4252-4256.	1.7	17
93	Conversion of Dimethyl Ether to 2,2,3-Trimethylbutane over a Cu/BEA Catalyst: Role of Cu Sites in Hydrogen Incorporation. <i>ACS Catalysis</i> , 2015, 5, 1794-1803.	5.5	37
94	Decoupling the electronic, geometric and interfacial contributions to support effects in heterogeneous catalysis. <i>Molecular Simulation</i> , 2015, 41, 123-133.	0.9	16
95	Quantitative depth profiling of Ce ³⁺ in Pt/CeO ₂ by in situ high-energy XPS in a hydrogen atmosphere. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 5078-5083.	1.3	77
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105	Carbon supported gold and silver: Application in the gas phase hydrogenation of m-dinitrobenzene. <i>Journal of Molecular Catalysis A</i> , 2015, 408, 138-146.	4.8	14
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111	Methanation of carbon monoxide over promoted flame-synthesized cobalt clusters stabilized in zirconia matrix. <i>Journal of Catalysis</i> , 2015, 326, 182-193.	3.1	23
112	Active, selective and robust Pd and/or Cr catalysts supported on Ti-, Zr- or [Ti,Zr]-pillared montmorillonites for destruction of chlorinated volatile organic compounds. <i>Applied Catalysis B: Environmental</i> , 2015, 174-175, 293-307.	10.8	49
113	Decoration of Co/Co ₃ O ₄ nanoparticles with Ru nanoclusters: a new strategy for design of highly active hydrogenation. <i>Journal of Materials Chemistry A</i> , 2015, 3, 11716-11719.	5.2	52
114	Hydrogen Storage Materials. <i>Neutron Scattering Applications and Techniques</i> , 2015, , 205-239.	0.2	5
115	Job-Sharing Storage of Hydrogen in Ru/Li ₂ O Nanocomposites. <i>Nano Letters</i> , 2015, 15, 4170-4175.	4.5	36

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133	The Origin of the Catalytic Activity of a Metal Hydride in CO ₂ Reduction. Angewandte Chemie - International Edition, 2016, 55, 6028-6032.	7.2	50

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145	A new form of chemisorbed photo- and electro-active atomic H species on the TiO ₂ (110) surface. <i>Surface Science</i> , 2016, 652, 195-199.	0.8	11
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382	Principles of photothermal gas-phase heterogeneous CO ₂ catalysis. <i>Energy and Environmental Science</i> , 2019, 12, 1122-1142.	15.6	300
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