

Chang Hwan Kim

List of Publications by Year in descending order

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papers

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147801

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73
times ranked

3298
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#	ARTICLE	IF	CITATIONS
1	Strontium-Doped Perovskites Rival Platinum Catalysts for Treating NO _x in Simulated Diesel Exhaust. <i>Science</i> , 2010, 327, 1624-1627.	12.6	553
2	Thermal durability of Cu-CHA NH ₃ -SCR catalysts for diesel NO reduction. <i>Catalysis Today</i> , 2012, 184, 252-261.	4.4	245
3	Deactivation of Au/CeO _x water gas shift catalysts. <i>Journal of Catalysis</i> , 2005, 230, 66-74.	6.2	212
4	Fully Copper-Exchanged High-Silica LTA Zeolites as Unrivaled Hydrothermally Stable NH ₃ -SCR Catalysts. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 3256-3260.	13.8	145
5	Activation of Pd/SSZ-13 catalyst by hydrothermal aging treatment in passive NO adsorption performance at low temperature for cold start application. <i>Applied Catalysis B: Environmental</i> , 2017, 212, 140-149.	20.2	127
6	Synthesis of High-Silica LTA and UFI Zeolites and NH ₃ -SCR Performance of Their Copper-Exchanged Form. <i>ACS Catalysis</i> , 2016, 6, 2443-2447.	11.2	124
7	Design considerations for low-temperature hydrocarbon oxidation reactions on Pd based catalysts. <i>Applied Catalysis B: Environmental</i> , 2018, 236, 436-444.	20.2	98
8	Investigation of the active sites and optimum Pd/Al of Pd/ZSM-5 passive NO adsorbers for the cold-start application: Evidence of isolated-Pd species obtained after a high-temperature thermal treatment. <i>Applied Catalysis B: Environmental</i> , 2018, 226, 71-82.	20.2	89
9	Deactivation mechanisms of Pt/Pd-based diesel oxidation catalysts. <i>Catalysis Today</i> , 2012, 184, 197-204.	4.4	86
10	Roles of noble metals (M = Ag, Au, Pd, Pt and Rh) on CeO ₂ in enhancing activity toward soot oxidation: Active oxygen species and DFT calculations. <i>Journal of Hazardous Materials</i> , 2021, 403, 124085.	12.4	84
11	Effect of various activation conditions on the low temperature NO adsorption performance of Pd/SSZ-13 passive NO _x adsorber. <i>Catalysis Today</i> , 2019, 320, 175-180.	4.4	81
12	Trapping of Mobile Pt Species by PdO Nanoparticles under Oxidizing Conditions. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 2089-2093.	4.6	77
13	Ag-incorporated macroporous CeO ₂ catalysts for soot oxidation: Effects of Ag amount on the generation of active oxygen species. <i>Applied Catalysis B: Environmental</i> , 2019, 246, 356-366.	20.2	76
14	Relating adatom emission to improved durability of Pt-Pd diesel oxidation catalysts. <i>Journal of Catalysis</i> , 2015, 328, 151-164.	6.2	75
15	Experimental and Computational Investigation of Effect of Sr on NO Oxidation and Oxygen Exchange for La _{1-x} Sr _x CoO ₃ Perovskite Catalysts. <i>ACS Catalysis</i> , 2013, 3, 2719-2728.	11.2	74
16	On the importance of nanocrystalline gold for Au/CeO ₂ water-gas shift catalysts. <i>Journal of Catalysis</i> , 2006, 244, 248-250.	6.2	64
17	Microstructure of Bimetallic Pt _{1-x} Pd Catalysts under Oxidizing Conditions. <i>ChemCatChem</i> , 2013, 5, 2636-2645.	3.7	64
18	Effect of reduction treatments (H ₂ vs. CO) on the NO adsorption ability and the physicochemical properties of Pd/SSZ-13 passive NO _x adsorber for cold start application. <i>Applied Catalysis A: General</i> , 2019, 569, 28-34.	4.3	61

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19	Comparative study of the mobility of Pd species in SSZ-13 and ZSM-5, and its implication for their activity as passive NO _x adsorbers (PNAs) after hydro-thermal aging. Catalysis Science and Technology, 2019, 9, 163-173.	4.1	58
20	Low temperature NO adsorption over hydrothermally aged Pd/CeO ₂ for cold start application. Catalysis Today, 2018, 307, 93-101.	4.4	55
21	The Effect of Pt-Pd Ratio on Oxidation Catalysts Under Simulated Diesel Exhaust. , 0, , .		53
22	Palladium doped perovskite-based NO oxidation catalysts: The role of Pd and B-sites for NO _x adsorption behavior via in-situ spectroscopy. Applied Catalysis B: Environmental, 2014, 154-155, 51-61.	20.2	53
23	Detailed reaction kinetics for double-layered Pd/Rh bimetallic TWC monolith catalyst. Chemical Engineering Journal, 2014, 241, 273-287.	12.7	52
24	Synthesis of zeolite UZM-35 and catalytic properties of copper-exchanged UZM-35 for ammonia selective catalytic reduction. Applied Catalysis B: Environmental, 2017, 200, 428-438.	20.2	50
25	Effect of Aging Atmosphere on Thermal Sintering of Modern Commercial TWCs. Topics in Catalysis, 2013, 56, 298-305.	2.8	47
26	Improving NO _x storage and CO oxidation abilities of Pd/SSZ-13 by increasing its hydrophobicity. Applied Catalysis B: Environmental, 2020, 277, 119190.	20.2	43
27	Passive Ammonia SCR System for Lean-burn SIDI Engines. SAE International Journal of Fuels and Lubricants, 0, 3, 99-106.	0.2	40
28	DFT Analysis of NO Oxidation Intermediates on Undoped and Doped LaCoO ₃ Perovskite. Journal of Physical Chemistry C, 2015, 119, 20488-20494.	3.1	39
29	Ostwald-ripening sintering kinetics of Pd-based three-way catalyst: Importance of initial particle size of Pd. Chemical Engineering Journal, 2017, 316, 631-644.	12.7	39
30	Urealess NO _x Reduction by Carbon Monoxide in Simulated Lean-Burn Exhausts. Environmental Science & Technology, 2020, 54, 8344-8351.	10.0	37
31	Effect of speciated HCs on the performance of modern commercial TWCs. Catalysis Today, 2014, 231, 3-14.	4.4	36
32	Effect of sulfur aging and regeneration on low temperature NO adsorption over hydrothermally treated Pd/CeO ₂ and Pd/Ce _{0.58} Zr _{0.42} O ₂ catalysts. Catalysis Today, 2017, 297, 53-59.	4.4	35
33	CeO ₂ promoted Ag/TiO ₂ catalyst for soot oxidation with improved active oxygen generation and delivery abilities. Journal of Hazardous Materials, 2020, 384, 121341.	12.4	35
34	Fully Copper-Exchanged High-Silica LTA Zeolites as Unrivaled Hydrothermally Stable NH ₃ -SCR Catalysts. Angewandte Chemie, 2017, 129, 3304-3308.	2.0	33
35	Effect of Ag doping on Pd/Ag-CeO ₂ catalysts for CO and C ₃ H ₆ oxidation. Journal of Hazardous Materials, 2021, 415, 125373.	12.4	33
36	Effects of La incorporation in catalytic activity of Ag/La-CeO ₂ catalysts for soot oxidation. Journal of Hazardous Materials, 2021, 414, 125523.	12.4	31

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37	Lean NO _x trap catalysts with high low-temperature activity and hydrothermal stability. Applied Catalysis B: Environmental, 2020, 270, 118871.	20.2	29
38	Comparison of NO _x Adsorption/Desorption Behaviors over Pd/CeO ₂ and Pd/SSZ-13 as Passive NO _x Adsorbers for Cold Start Application. Emission Control Science and Technology, 2019, 5, 172-182.	1.5	28
39	Deactivation mechanism of Cu/Zeolite SCR catalyst under high-temperature rich operation condition. Applied Catalysis A: General, 2019, 569, 175-180.	4.3	28
40	Electrically Heated Catalysts for Cold-Start Emissions in Diesel Aftertreatment. , 0, , .		27
41	Activity function describing the effect of Pd loading on the catalytic performance of modern commercial TWC. Chemical Engineering Journal, 2012, 207-208, 117-121.	12.7	26
42	Preparation of alumina-supported gold-ruthenium bimetallic catalysts by redox reactions and their activity in preferential CO oxidation. Applied Catalysis B: Environmental, 2013, 134-135, 123-129.	20.2	26
43	Synergistic Effect of Cu/CeO ₂ and Pt-BaO/CeO ₂ Catalysts for a Low-Temperature Lean NO _x Trap. Environmental Science & Technology, 2019, 53, 2900-2907.	10.0	26
44	Ultra low temperature CO and HC oxidation over Cu-based mixed oxides for future automotive applications. Applied Catalysis B: Environmental, 2014, 160-161, 365-373.	20.2	25
45	Synergistic effect of Cu on a Ag-loaded CeO ₂ catalyst for soot oxidation with improved generation of active oxygen species and reducibility. Fuel, 2020, 275, 117930.	6.4	24
46	Three-Way Catalyst Design for Urealess Passive Ammonia SCR: Lean-Burn SIDI Aftertreatment System. , 0, , .		23
47	LDA+U evaluation of the stability of low-index facets of LaCoO ₃ perovskite. Surface Science, 2014, 619, 71-76.	1.9	23
48	Interplay of ligand and strain effects in CO adsorption on bimetallic Cu/M (M = Ni, Ir, Pd, and Pt) catalysts from first-principles: Effect of different facets on catalysis. Catalysis Today, 2021, 359, 57-64.	4.4	23
49	Universal activity function for predicting performance of Pd-based TWC as function of Pd loading and catalyst mileage. Chemical Engineering Journal, 2015, 259, 519-533.	12.7	21
50	Deactivation of Pd/Zeolites passive NO _x adsorber induced by NO and H ₂ O: Comparative study of Pd/ZSM-5 and Pd/SSZ-13. Catalysis Today, 2021, 360, 350-355.	4.4	21
51	Improved thermal stability of a copper-containing ceria-based catalyst for low temperature CO oxidation under simulated diesel exhaust conditions. Catalysis Science and Technology, 2018, 8, 1383-1394.	4.1	20
52	A copper-impregnated BEA zeolite for adsorption and oxidation of aromatic species during vehicle cold starts. Applied Catalysis B: Environmental, 2021, 287, 119951.	20.2	20
53	Ce-Pr Mixed Oxide Catalysts with a Fibrous Morphology for Low-temperature PM Oxidation. ChemCatChem, 2019, 11, 2131-2141.	3.7	18
54	Kinetic model for modern double-layered Pd/Rh TWC as a function of metal loadings and mileage. Chemical Engineering Journal, 2015, 278, 328-338.	12.7	17

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55	Promoting effect of Rh-impregnation on Ag/CeO ₂ catalyst for soot oxidation. Applied Surface Science, 2022, 572, 151504.	6.1	17
56	Global Kinetics for Ammonia Formation and Oxidation Reactions in a Commercial Three-Way Catalyst. Industrial & Engineering Chemistry Research, 2012, 51, 1198-1208.	3.7	16
57	On the synthesis of a hierarchically-structured ZSM-5 zeolite and the effect of its physicochemical properties with Cu impregnation on cold-start hydrocarbon trap performance. Catalysis Today, 2018, 314, 78-93.	4.4	15
58	Ag-doped manganese oxide catalyst for gasoline particulate filters: Effect of crystal phase on soot oxidation activity. Applied Surface Science, 2021, 569, 151041.	6.1	15
59	Hybrid Nonlinear Model Predictive Control of LNT and Urealess SCR Aftertreatment System. IEEE Transactions on Control Systems Technology, 2019, 27, 2305-2313.	5.2	13
60	Oxidation of Carbon Monoxide over MLaO _x Perovskites Supported on Mesoporous Zirconia. ChemCatChem, 2014, 6, 1990-1997.	3.7	12
61	NO _x -assisted soot oxidation based on Ag/MnO _x -CeO ₂ mixed oxides. Applied Catalysis A: General, 2021, 627, 118396.	4.3	12
62	An Investigative Study of Sudden Pressure Increase Phenomenon Across the DPF. , 2014, , .		11
63	Promoting effect of H ₂ O over macroporous Ce-Zr catalysts in soot oxidation. Molecular Catalysis, 2019, 474, 110416.	2.0	9
64	Promoting effect of CO on low-temperature NO _x adsorption over Pd/CeO ₂ catalyst. Catalysis Today, 2022, 384-386, 88-96.	4.4	8
65	A Cu-impregnated ZSM-5 zeolite for active cold start hydrocarbon removal: Cation-type-dependent Cu species and their synergetic HC adsorption/oxidation functions. Chemical Engineering Journal, 2022, 430, 132552.	12.7	8
66	Development of Etched SiO ₂ @Pt@ZrO ₂ Core-Shell Catalyst for CO and C ₃ H ₆ Oxidation at Low Temperature. Applied Surface Science, 2021, , 151582.	6.1	8
67	Sulfur Poisoning and Regeneration Behavior of Perovskite-Based NO Oxidation Catalysts. Topics in Catalysis, 2017, 60, 40-51.	2.8	7
68	SiO ₂ @Pd@CeO catalyst with improved thermal stability: Effect of interaction between Pd and CeO on activity for CO oxidation. Molecular Catalysis, 2020, 492, 111014.	2.0	7
69	Status of Emission Control Science and Technology in South Korea. Emission Control Science and Technology, 2018, 4, 1-3.	1.5	5
70	Dynamic modelling and sensitivity analysis integrated LNT-pSCR system. IFAC-PapersOnLine, 2016, 49, 326-331.	0.9	4
71	Where Does the Sulphur Go? Deactivation of a Low Temperature CO Oxidation Catalyst by Sulphur Poisoning. Catalysis Letters, 2018, 148, 1445-1450.	2.6	3
72	Multiobjective Optimal Design of a Lean NO _x Trap and Urealess Selective Catalytic Reduction Aftertreatment System under a Control Algorithm. Industrial & Engineering Chemistry Research, 2018, 57, 16772-16781.	3.7	2