Vladimir V Galvita

List of Publications by Year
in descending order

119 papers	5,581 citations	71102 41 h-index	85541 71 g-index
121 all docs	121 docs citations	121 times ranked	4963 citing authors

#	Article	IF	Citations
1	Behaviour of Platinum-Tin during CO2-assisted propane dehydrogenation: Insights from quick X-ray absorption spectroscopy. Journal of Catalysis, 2022, 408, 356-371.	6.2	8
2	Looking inside a Ni-Fe/MgAl2O4 catalyst for methane dry reforming via MÃ¶ssbauer spectroscopy and in situ QXAS. Applied Catalysis B: Environmental, 2022, 300, 120720.	20.2	25
3	Decarbonisation of steel mill gases in an energy-neutral chemical looping process. Energy Conversion and Management, 2022, 254, 115248.	9.2	6
4	Carbon monoxide production using a steel mill gas in a combined chemical looping process. Journal of Energy Chemistry, 2022, 68, 811-825.	12.9	11
5	Aligning time-resolved kinetics (TAP) and surface spectroscopy (AP-XPS) for a more comprehensive understanding of ALD-derived 2D and 3D model catalysts.. Faraday Discussions, 2022, , .	3.2	0
6	TAP analysis of single and double peak responses during CO oxidation over Pt. Catalysis Today, 2022, , .	4.4	0
7	Upcycling the carbon emissions from the steel industry into chemicals using three metal oxide loops. Energy Advances, 2022, 1, 367-384.	3.3	2
8	Shadowing Effect in Catalyst Activity: Experimental Observation. ACS Catalysis, 2022, 12, 5455-5463.	11.2	1
9	Exceeding Equilibrium CO₂ Conversion by Plasma-Assisted Chemical Looping. ACS Energy Letters, 2022, 7, 1896-1902.	17.4	13
10	Intensifying blue hydrogen production by in situ CO2 utilisation. Journal of CO2 Utilization, 2022, 61, 102014.	6.8	9
11	3D-printing of metallic honeycomb monoliths as a doorway to a new generation of catalytic devices: the Ni-based catalysts in methane dry reforming showcase. Catalysis Communications, 2021, 148, 106181.	3.3	28
12	Impact of the Spatial Distribution of Active Material on Bifunctional Hydrocracking. Industrial & Engineering Chemistry Research, 2021, 60, 6357-6378.	3.7	6
13	Intensification of Chemical Looping Processes by Catalyst Assistance and Combination. Catalysts, 2021, 11, 266.	3.5	7
14	Bifunctional Ni-Ca based material for integrated CO2 capture and conversion via calcium-looping dry reforming. Applied Catalysis B: Environmental, 2021, 284, 119734.	20.2	91
15	In Situ XAS/SAXS Study of Al₂O₃-Coated PtGa Catalysts for Propane Dehydrogenation. ACS Catalysis, 2021, 11, 11320-11335.	11.2	15
16	Kinetics of chemical processes: From molecular to industrial scale. Journal of Catalysis, 2021, 404, 745-759.	6.2	28
17	Microstructured ZrO2 coating of iron oxide for enhanced CO2 conversion. Applied Catalysis B: Environmental, 2021, 292, 120194.	20.2	17
18	Coupling CO2 utilization and NO reduction in chemical looping manner by surface carbon. Applied Catalysis B: Environmental, 2021, 297, 120472.	20.2	14

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19	Spherical coreâ€“shell alumina support particles for model platinum catalysts. Nanoscale, 2021, 13, 4221-4232.	5.6	5
20	Ethanol dehydration pathways in H-ZSM-5: Insights from temporal analysis of products. Catalysis Today, 2020, 355, 822-831.	4.4	20
21	Ethanol dehydrogenation over Cu catalysts promoted with Ni: Stability control. Applied Catalysis A: General, 2020, 591, 117401.	4.3	24
22	FeO controls the sintering of iron-based oxygen carriers in chemical looping CO2 conversion. Journal of CO2 Utilization, 2020, 40, 101216.	6.8	26
23	Designing Nanoparticles and Nanoalloys for Gas-Phase Catalysis with Controlled Surface Reactivity Using Colloidal Synthesis and Atomic Layer Deposition. Molecules, 2020, 25, 3735.	3.8	10
24	Hierarchical Fe-modified MgAl₂O₄ as a Ni-catalyst support for methane dry reforming. Catalysis Science and Technology, 2020, 10, 6987-7001.	4.1	22
25	What Makes Fe-Modified MgAl₂O₄ an Active Catalyst Support? Insight from X-ray Raman Scattering. ACS Catalysis, 2020, 10, 6613-6622.	11.2	21
26	Approaches for Selective Oxidation of Methane to Methanol. Catalysts, 2020, 10, 194.	3.5	38
27	Effect of Rh in Ni-based catalysts on sulfur impurities during methane reforming. Applied Catalysis B: Environmental, 2020, 267, 118691.	20.2	42
28	Effect of Boron Promotion on Coke Formation during Propane Dehydrogenation over Pt/Î^{3}-Al₂O₃ Catalysts. ACS Catalysis, 2020, 10, 5208-5216.	11.2	39
29	<i>110th Anniversary</i>: Carbon Dioxide and Chemical Looping: Current Research Trends. Industrial & Engineering Chemistry Research, 2019, 58, 16235-16257.	3.7	39
30	Carbon capture and utilization in the steel industry: challenges and opportunities for chemical engineering. Current Opinion in Chemical Engineering, 2019, 26, 81-87.	7.8	67
31	CO2 sorption properties of Li4SiO4 with a Li2ZrO3 coating. Journal of CO2 Utilization, 2019, 34, 688-699.	6.8	16
32	Making chemicals with electricity. Science, 2019, 364, 734-735.	12.6	102
33	Fe₂O₃â€“MgAl₂O₄ for CO Production from CO₂: MÃ¶ssbauer Spectroscopy and in Situ X-ray Diffraction. ACS Sustainable Chemistry and Engineering, 2019, 7, 9553-9565.	6.7	17
34	Formation and Functioning of Bimetallic Nanocatalysts: The Power of Xâ€ray Probes. Angewandte Chemie - International Edition, 2019, 58, 13220-13230.	13.8	31
35	Formation and Functioning of Bimetallic Nanocatalysts: The Power of Xâ€ray Probes. Angewandte Chemie, 2019, 131, 13354-13364.	2.0	6
36	Pressure-induced deactivation of core-shell nanomaterials for catalyst-assisted chemical looping. Applied Catalysis B: Environmental, 2019, 247, 86-99.	20.2	21

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37	First-Principles-Based Simulation of an Industrial Ethanol Dehydration Reactor. Catalysts, 2019, 9, 921.	3.5	6
38	Exploring the stability of Fe2O3-MgAl2O4 oxygen storage materials for CO production from CO2. Journal of CO2 Utilization, 2019, 29, 36-45.	6.8	25
39	How Does the Surface Structure of Ni-Fe Nanoalloys Control Carbon Formation During Methane Steam/Dry Reforming?. , 2019, , 177-225.		5
40	Catalyst-assisted chemical looping auto-thermal dry reforming: Spatial structuring effects on process efficiency. Applied Catalysis B: Environmental, 2018, 231, 123-136.	20.2	48
41	PdZn nanoparticle catalyst formation for ethanol dehydrogenation: Active metal impregnation vs incorporation. Applied Catalysis A: General, 2018, 555, 12-19.	4.3	16
42	Upgrading the value of anaerobic digestion <i>via</i> chemical production from grid injected biomethane. Energy and Environmental Science, 2018, 11, 1788-1802.	30.8	88
43	Ni nanoparticles and the Kirkendall effect in dry reforming of methane. Applied Surface Science, 2018, 452, 239-247.	6.1	21
44	Bifunctional Co- and Ni- ferrites for catalyst-assisted chemical looping with alcohols. Applied Catalysis B: Environmental, 2018, 222, 59-72.	20.2	36
45	Insight in kinetics from preâ€edge features using time resolved <i>in situ</i> XAS. AIChE Journal, 2018, 64, 1339-1349.	3.6	13
46	Fe-Containing Magnesium Aluminate Support for Stability and Carbon Control during Methane Reforming. ACS Catalysis, 2018, 8, 5983-5995.	11.2	66
47	Ultrafast and Stable CO₂ Capture Using Alkali Metal Salt-Promoted MgOâ€"CaCO₃ Sorbents. ACS Applied Materials & Interfaces, 2018, 10, 20611-20620.	8.0	57
48	Kinetics of Lifetime Changes in Bimetallic Nanocatalysts Revealed by Quick Xâ€ray Absorption Spectroscopy. Angewandte Chemie - International Edition, 2018, 57, 12430-12434.	13.8	15
49	Advanced Chemical Looping Materials for CO2 Utilization: A Review. Materials, 2018, 11, 1187.	2.9	85
50	Mechanism of carbon deposits removal from supported Ni catalysts. Applied Catalysis B: Environmental, 2018, 239, 502-512.	20.2	39
51	Kinetics of Lifetime Changes in Bimetallic Nanocatalysts Revealed by Quick Xâ€ray Absorption Spectroscopy. Angewandte Chemie, 2018, 130, 12610-12614.	2.0	2
52	Fe-Based Nano-Materials in Catalysis. Materials, 2018, 11, 831.	2.9	36
53	Controlling the stability of a Feâ€"Ni reforming catalyst: Structural organization of the active components. Applied Catalysis B: Environmental, 2017, 209, 405-416.	20.2	89
54	CO production from CO 2 via reverse waterâ€"gas shift reaction performed in a chemical looping mode: Kinetics on modified iron oxide. Journal of CO2 Utilization, 2017, 17, 60-68.	6.8	56

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55	Precise non-steady-state characterization of solid active materials with no preliminary mechanistic assumptions. Catalysis Today, 2017, 298, 203-208.	4.4	11
56	Size- and composition-controlled Ptâ€“Sn bimetallic nanoparticles prepared by atomic layer deposition. RSC Advances, 2017, 7, 20201-20205.	3.6	12
57	Study of butanol conversion to butenes over H-ZSM-5: Effect of chemical structure on activity, selectivity and reaction pathways. Applied Catalysis A: General, 2017, 539, 1-12.	4.3	37
58	Role of intermediates in reaction pathways from ethene to hydrocarbons over H-ZSM-5. Applied Catalysis A: General, 2017, 538, 207-220.	4.3	24
59	(Invited) Atomic Layer Deposition of Nanoalloys of Noble and Non-Noble Metals. ECS Transactions, 2017, 80, 97-106.	0.5	1
60	The Positive Role of Hydrogen on the Dehydrogenation of Propane on Pt(111). ACS Catalysis, 2017, 7, 7495-7508.	11.2	95
61	Formation and stability of an active PdZn nanoparticle catalyst on a hydrotalcite-based support for ethanol dehydrogenation. Catalysis Science and Technology, 2017, 7, 3715-3727.	4.1	12
62	A core-shell structured Fe 2 O 3 /ZrO 2 @ZrO 2 nanomaterial with enhanced redox activity and stability for CO 2 conversion. Journal of CO2 Utilization, 2017, 17, 20-31.	6.8	41
63	Combined Chemical Looping: New Possibilities for Energy Storage and Conversion. Energy & Fuels, 2017, 31, 11509-11514.	5.1	10
64	Hydrogen and Carbon Monoxide Production by Chemical Looping over Ironâ€Aluminium Oxides. Energy Technology, 2016, 4, 304-313.	3.8	45
65	Deactivation Study of Fe₂O₃â€“CeO₂ during Redox Cycles for CO Production from CO₂. Industrial & Engineering Chemistry Research, 2016, 55, 5911-5922.	3.7	56
66	DFT-based microkinetic modeling of ethanol dehydration in H-ZSM-5. Journal of Catalysis, 2016, 339, 173-185.	6.2	69
67	Atomic Layer Deposition Route To Tailor Nanoalloys of Noble and Non-noble Metals. ACS Nano, 2016, 10, 8770-8777.	14.6	44
68	Super-dry reforming of methane intensifies CO ₂ utilization via Le Chatelierâ€™s principle. Science, 2016, 354, 449-452.	12.6	348
69	Insights into the Reaction Mechanism of Ethanol Conversion into Hydrocarbons on Hâ€ZSMâ€5. Angewandte Chemie, 2016, 128, 13009-13013.	2.0	10
70	Insights into the Reaction Mechanism of Ethanol Conversion into Hydrocarbons on Hâ€ZSMâ€5. Angewandte Chemie - International Edition, 2016, 55, 12817-12821.	13.8	52
71	Early stages in the formation and burning of graphene on a Pt/Mg(Al)O dehydrogenation catalyst: A temperature- and time-resolved study. Journal of Catalysis, 2016, 344, 482-495.	6.2	27
72	Kinetics of Multiâ€Step Redox Processes by Timeâ€Resolved In Situ Xâ€ray Diffraction. Chemie-Ingenieur-Technik, 2016, 88, 1684-1692.	0.8	8

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73	CO2 conversion to CO by auto-thermal catalyst-assisted chemical looping. Journal of CO2 Utilization, 2016, 16, 8-16.	6.8	60
74	The role of CO2 in the dehydrogenation of propane over WO â€"VO /SiO2. Journal of Catalysis, 2016, 335, 1-10.	6.2	77
75	Carbon gasification from Feâ€"Ni catalysts after methane dry reforming. Applied Catalysis B: Environmental, 2016, 185, 42-55.	20.2	173
76	The role of hydrogen during Ptâ€"Ga nanocatalyst formation. Physical Chemistry Chemical Physics, 2016, 18, 3234-3243.	2.8	27
77	One-pot synthesis of Pt catalysts based on layered double hydroxides: an application in propane dehydrogenation. Catalysis Science and Technology, 2016, 6, 1863-1869.	4.1	19
78	Information-Driven Catalyst Design Based on High-Throughput Intrinsic Kinetics. Catalysts, 2015, 5, 1948-1968.	3.5	37
79	Ethanol to higher hydrocarbons over Ni, Ga, Fe-modified ZSM-5: Effect of metal content. Applied Catalysis A: General, 2015, 492, 117-126.	4.3	88
80	Local environment of Fe dopants in nanoscale Feâ€‰:â€‰CeO_{2â^'x}oxygen storage material. Nanoscale, 2015, 7, 3196-3204.	5.6	26
81	Advanced Elemental Characterization during Ptâ€"In Catalyst Formation by Wavelet Transformed X-ray Absorption Spectroscopy. Analytical Chemistry, 2015, 87, 3520-3526.	6.5	28
82	Mgâ€"Feâ€"Alâ€"O for advanced CO₂to CO conversion: carbon monoxide yield vs. oxygen storage capacity. Journal of Materials Chemistry A, 2015, 3, 16251-16262.	10.3	70
83	Combined chemical looping for energy storage and conversion. Journal of Power Sources, 2015, 286, 362-370.	7.8	41
84	Enhanced Carbon-Resistant Dry Reforming Fe-Ni Catalyst: RoleÂofÂFe. ACS Catalysis, 2015, 5, 3028-3039.	11.2	383
85	Microkinetics for toluene total oxidation over CuOâ€"CeO2/Al2O3. Catalysis Today, 2015, 258, 214-224.	4.4	15
86	Reprint of â€œEthanol to higher hydrocarbons over Ni, Ga, Fe-modified ZSM-5: Effect of metal contentâ€• Applied Catalysis A: General, 2015, 504, 621-630.	4.3	17
87	Catalyst-assisted chemical looping for CO2 conversion to CO. Applied Catalysis B: Environmental, 2015, 164, 184-191.	20.2	110
88	The Role of Different Types of CuO in CuOâ€"CeO2/Al2O3 for Total Oxidation. Catalysis Letters, 2014, 144, 32-43.	2.6	29
89	TAP study of toluene total oxidation over a Co₃O₄/La-CeO₂ catalyst with an application as a washcoat of cordierite honeycomb monoliths. Physical Chemistry Chemical Physics, 2014, 16, 11447-11455.	2.8	40
90	Unravelling the Formation of Ptâ€"Ga Alloyed Nanoparticles on Calcined Ga-Modified Hydrotalcites by <i>in Situ</i> XAS. Chemistry of Materials, 2014, 26, 5936-5949.	6.7	28

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91	Delivering a Modifying Element to Metal Nanoparticles via Support: Ptâ€“Ga Alloying during the Reduction of Pt/Mg(Al,Ga)O_{<i>x</i>} Catalysts and Its Effects on Propane Dehydrogenation. ACS Catalysis, 2014, 4, 1812-1824.	11.2	100
92	CeO₂-Modified Fe₂O₃ for CO₂ Utilization via Chemical Looping. Industrial & Engineering Chemistry Research, 2013, 52, 8416-8426.	3.7	149
93	Mechanism of CH4 Dry Reforming on Nanocrystalline Doped Ceria-Zirconia with Supported Pt, Ru, Ni, and Niâ€“Ru. Topics in Catalysis, 2013, 56, 958-968.	2.8	69
94	Momentary Equilibrium in Transient Kinetics and Its Application for Estimating the Concentration of Catalytic Sites. Industrial & Engineering Chemistry Research, 2013, 52, 15417-15427.	3.7	16
95	Structural and Kinetic Study of the Reduction of CuOâ€“CeO2/Al2O3 by Time-Resolved X-ray Diffraction. Catalysis Letters, 2012, 142, 959-968.	2.6	12
96	Nature of the active sites for the total oxidation of toluene by CuOCeO2/Al2O3. Journal of Catalysis, 2012, 295, 91-103.	6.2	78
97	Reciprocal relations between kinetic curves. Europhysics Letters, 2011, 93, 20004.	2.0	36
98	Reaction network for the total oxidation of toluene over CuOâ€“CeO2/Al2O3. Journal of Catalysis, 2011, 283, 1-9.	6.2	84
99	Thermodynamic time-invariances: Theory of TAP pulse-response experiments. Chemical Engineering Science, 2011, 66, 4683-4689.	3.8	20
100	Hydrogen Production from Methane and Carbon Dioxide by Catalyst-Assisted Chemical Looping. Topics in Catalysis, 2011, 54, 907-913.	2.8	34
101	Ethane dehydrogenation on Pt/Mg(Al)O and PtSn/Mg(Al)O catalysts. Journal of Catalysis, 2010, 271, 209-219.	6.2	199
102	Catalyst performance of novel Pt/Mg(Ga)(Al)O catalysts for alkane dehydrogenation. Journal of Catalysis, 2010, 274, 200-206.	6.2	184
103	Steam reforming of glycerol: The experimental activity of La1âˆ’Ce NiO3 catalyst in comparison to the thermodynamic reaction equilibrium. Applied Catalysis B: Environmental, 2009, 90, 29-37.	20.2	104
104	The CO adsorption on a Fe2O3â€“Ce0.5Zr0.5O2 catalyst studied by TPD, isotope exchange and FTIR spectroscopy. Journal of Molecular Catalysis A, 2008, 283, 43-51.	4.8	12
105	An alternative method for parameter identification from temperature programmed reduction (TPR) data. Chemical Engineering Science, 2008, 63, 4776-4788.	3.8	22
106	Production of hydrogen with low COx-content for PEM fuel cells by cyclic water gas shift reactor. International Journal of Hydrogen Energy, 2008, 33, 1354-1360.	7.1	33
107	Deactivation of Modified Iron Oxide Materials in the Cyclic Water Gas Shift Process for CO-Free Hydrogen Production. Industrial & Engineering Chemistry Research, 2008, 47, 303-310.	3.7	65
108	Cyclic water gas shift reactor (CWGS) for carbon monoxide removal from hydrogen feed gas for PEM fuel cells. Chemical Engineering Journal, 2007, 134, 168-174.	12.7	63

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109	Redox behavior and reduction mechanism of Fe2O3â€“CeZrO2 as oxygen storage material. Journal of Materials Science, 2007, 42, 9300-9307.	3.7	46
110	Hydrogen production by coal plasma gasification for fuel cell technology. International Journal of Hydrogen Energy, 2007, 32, 3899-3906.	7.1	58
111	Solid electrolyte membrane reactors: Status and trends. Catalysis Today, 2005, 104, 185-199.	4.4	96
112	Hydrogen production from methane by steam reforming in a periodically operated two-layer catalytic reactor. Applied Catalysis A: General, 2005, 289, 121-127.	4.3	61
113	Performance of a SOFC fed by ethanol reforming products. Solid State Ionics, 2002, 152-153, 551-554.	2.7	8
114	Ethanol decomposition over Pd-based catalyst in the presence of steam. Reaction Kinetics and Catalysis Letters, 2002, 76, 343-351.	0.6	31
115	Production of hydrogen from dimethyl ether. Applied Catalysis A: General, 2001, 216, 85-90.	4.3	171
116	Synthesis gas production by steam reforming of ethanol. Applied Catalysis A: General, 2001, 220, 123-127.	4.3	122
117	Trimetallic Catalyst Configuration for Syngas Production. ChemCatChem, 0, , .	3.7	1
118	Separate H ₂ and CO production from CH ₄ â€CO ₂ cycling of Feâ€Ni. AIChE Journal, 0, , .	3.6	3
119	Preferential Oxidation of H₂ in CO-Rich Streams over a Ni/Î³-Al₂O₃ Catalyst: An Experimental and First-Principles Microkinetic Study. ACS Catalysis, 0, , 9011-9022.	11.2	3