

Paweł, Stelmachowski

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7720335/publications.pdf>

Version: 2024-02-01

90
papers

3,413
citations

101543

36
h-index

161849

54
g-index

92
all docs

92
docs citations

92
times ranked

3176
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of the Co ₃ O ₄ load on the performance of PdO/Co ₃ O ₄ /ZrO ₂ open cell foam catalysts for the lean combustion of methane: Kinetic and mass transfer regimes. <i>Catalysis Today</i> , 2022, 383, 247-258.	4.4	9
2	Combined silicon carbide and zirconia open cell foams for the process intensification of catalytic methane combustion in lean conditions: Impact on heat and mass transfer. <i>Chemical Engineering Journal</i> , 2022, 429, 132448.	12.7	10
3	Engineered biochar derived from pyrolyzed waste tea as a carbon support for Fe-N-C electrocatalysts for the oxygen reduction reaction. <i>Electrochimica Acta</i> , 2022, 412, 140128.	5.2	33
4	Analysis of heat and mass transfer limitations for the combustion of methane emissions on PdO/Co ₃ O ₄ coated on ceramic open cell foams. <i>Chemical Engineering Journal</i> , 2021, 405, 126970.	12.7	18
5	Demonstration of the Influence of Specific Surface Area on Reaction Rate in Heterogeneous Catalysis. <i>Journal of Chemical Education</i> , 2021, 98, 935-940.	2.3	43
6	Production of ultra-dense hydrogen H(0): A novel nuclear fuel. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 18466-18480.	7.1	16
7	Mapping transition metal-“nitrogen”-carbon catalyst performance on the critical descriptor diagram. <i>Current Opinion in Electrochemistry</i> , 2021, 27, 100687.	4.8	34
8	Carbon-Based Composites as Electrocatalysts for Oxygen Evolution Reaction in Alkaline Media. <i>Materials</i> , 2021, 14, 4984.	2.9	23
9	Oxidation of soot over supported RuRe nanoparticles prepared by the microwave-polyol method. <i>Reaction Kinetics, Mechanisms and Catalysis</i> , 2021, 134, 221-242.	1.7	3
10	Performance and Controlling Regimes Analysis of Methane Steam Reforming on Ru/γ-Al ₂ O ₃ Cordierite Monoliths. <i>Green Energy and Technology</i> , 2021, , 91-131.	0.6	2
11	Experimental Insights into the Coupling of Methane Combustion and Steam Reforming in a Catalytic Plate Reactor in Transient Mode. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 196-209.	3.7	15
12	New insights into the role of active copper species in CuO/Cryptomelane catalysts for the CO-PROX reaction. <i>Applied Catalysis B: Environmental</i> , 2020, 267, 118372.	20.2	35
13	Magnesium Effect in K/Co-Mg-Mn-Al Mixed Oxide Catalyst for Direct NO Decomposition. <i>Catalysts</i> , 2020, 10, 931.	3.5	9
14	Influence of Different Birnessite Interlayer Alkali Cations on Catalytic Oxidation of Soot and Light Hydrocarbons. <i>Catalysts</i> , 2020, 10, 507.	3.5	2
15	Bulk, Surface and Interface Promotion of Co ₃ O ₄ for the Low-Temperature N ₂ O Decomposition Catalysis. <i>Catalysts</i> , 2020, 10, 41.	3.5	26
16	Thermal oxygen activation followed by in situ work function measurements over carbon-supported noble metal-based catalysts. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 16648-16656.	7.1	17
17	Ammonia selective sensors based on cobalt spinel prepared by combustion synthesis. <i>Solid State Ionics</i> , 2019, 337, 91-100.	2.7	10
18	Robust Co ₃ O ₄ γ-Al ₂ O ₃ cordierite structured catalyst for N ₂ O abatement – Validation of the SCS method for active phase synthesis and deposition. <i>Chemical Engineering Journal</i> , 2019, 377, 120088.	12.7	23

#	ARTICLE	IF	CITATIONS
19	Syngas production by steam and oxy-steam reforming of biogas on monolith-supported CeO ₂ -based catalysts. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 11731-11744.	7.1	41
20	Rh/CeO ₂ Thin Catalytic Layer Deposition on Alumina Foams: Catalytic Performance and Controlling Regimes in Biogas Reforming Processes. <i>Catalysts</i> , 2018, 8, 448.	3.5	20
21	The Effect of Fe, Co, and Ni Structural Promotion of Cryptomelane (KMn ₈ O ₁₆) on the Catalytic Activity in Oxygen Evolution Reaction. <i>Electrocatalysis</i> , 2018, 9, 762-769.	3.0	21
22	Insights into the effect of catalyst loading on methane steam reforming and controlling regime for metallic catalytic monoliths. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 11778-11792.	7.1	31
23	Phase evolution and electronic properties of cryptomelane nanorods. <i>Journal of Alloys and Compounds</i> , 2018, 767, 592-599.	5.5	10
24	Analysis of Ru/La-Al ₂ O ₃ catalyst loading on alumina monoliths and controlling regimes in methane steam reforming. <i>Chemical Engineering Journal</i> , 2018, 334, 1792-1807.	12.7	42
25	The Effect of the Preparation Method of Pd-Doped Cobalt Spinel on the Catalytic Activity in Methane Oxidation Under Lean Fuel Conditions. <i>Topics in Catalysis</i> , 2017, 60, 333-341.	2.8	18
26	Optimization of Pd catalysts supported on Co ₃ O ₄ for low-temperature lean combustion of residual methane. <i>Applied Catalysis B: Environmental</i> , 2017, 206, 712-725.	20.2	107
27	Insights into Structure, Morphology and Reactivity of the Iron Oxide Based Fuel Borne Catalysts. <i>Topics in Catalysis</i> , 2017, 60, 367-373.	2.8	3
28	Catalytic Performance of Pd/Co ₃ O ₄ on SiC and ZrO ₂ Open Cell Foams for Process Intensification of Methane Combustion in Lean Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 6625-6636.	3.7	36
29	Catalytic combustion of residual methane on alumina monoliths and open cell foams coated with Pd/Co ₃ O ₄ . <i>Chemical Engineering Journal</i> , 2017, 326, 339-349.	12.7	37
30	Influence of preparation method on dispersion of cobalt spinel over alumina extrudates and the catalyst deNO _x activity. <i>Applied Catalysis B: Environmental</i> , 2017, 210, 34-44.	20.2	29
31	Benchmark comparison of Co ₃ O ₄ spinel-structured oxides with different morphologies for oxygen evolution reaction under alkaline conditions. <i>Journal of Applied Electrochemistry</i> , 2017, 47, 295-304.	2.9	36
32	Strong Enhancement of deSoot Activity of Transition Metal Oxides by Alkali Doping: Additive Effects of Potassium and Nitric Oxide. <i>Topics in Catalysis</i> , 2017, 60, 162-170.	2.8	37
33	Facile synthesis of ordered CeO ₂ nanorod assemblies: Morphology and reactivity. <i>Materials Chemistry and Physics</i> , 2017, 201, 139-146.	4.0	21
34	Kinetics of Oxygen Electroreduction on Me-Ni-C (Me = Fe, Co, Cu) Catalysts in Acidic Medium: Insights on the Effect of the Transition Metal. <i>Journal of Physical Chemistry C</i> , 2017, 121, 17796-17817.	3.1	128
35	Oxygen evolution catalysis in alkaline conditions over hard templated nickel-cobalt based spinel oxides. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 27910-27918.	7.1	36
36	Innovative carbon-free low content Pt catalyst supported on Mo-doped titanium suboxide (Ti ₃ O ₅ -Mo) for stable and durable oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2017, 201, 419-429.	20.2	66

#	ARTICLE	IF	CITATIONS
37	Reactivity of Mixed Iron–Cobalt Spinel in the Lean Methane Combustion. <i>Topics in Catalysis</i> , 2017, 60, 1370-1379.	2.8	19
38	Role of chain length of the capping agents of iron oxide based fuel borne catalysts in the enhancement of soot combustion activity. <i>Applied Catalysis B: Environmental</i> , 2016, 199, 485-493.	20.2	13
39	How to Efficiently Promote Transition Metal Oxides by Alkali Towards Catalytic Soot Oxidation. <i>Topics in Catalysis</i> , 2016, 59, 1083-1089.	2.8	31
40	Morphology-dependent reactivity of cobalt oxide nanoparticles in N ₂ O decomposition. <i>Catalysis Science and Technology</i> , 2016, 6, 5554-5560.	4.1	25
41	Strong dispersion effect of cobalt spinel active phase spread over ceria for catalytic N ₂ O decomposition: The role of the interface periphery. <i>Applied Catalysis B: Environmental</i> , 2016, 180, 622-629.	20.2	101
42	Syngas production by methane oxy-steam reforming on Me/CeO ₂ (Me = Rh, Pt, Ni) catalyst lined on cordierite monoliths. <i>Applied Catalysis B: Environmental</i> , 2015, 162, 551-563.	20.2	93
43	Activity of Co–N multi walled carbon nanotubes electrocatalysts for oxygen reduction reaction in acid conditions. <i>Journal of Power Sources</i> , 2015, 278, 296-307.	7.8	73
44	Surface chemistry and reactivity of Pd/BaCeO ₃ –ZrO ₂ catalyst upon sulphur hydrothermal treatment for the total oxidation of methane. <i>Applied Catalysis A: General</i> , 2015, 505, 183-192.	4.3	18
45	Influence of the preparation method on Pt ₃ Cu/C electrocatalysts for the oxygen reduction reaction. <i>Electrochimica Acta</i> , 2015, 177, 51-56.	5.2	14
46	Insights into the twofold role of Cs doping on deN ₂ O activity of cobalt spinel catalyst towards rational optimization of the precursor and loading. <i>Applied Catalysis B: Environmental</i> , 2015, 168-169, 509-514.	20.2	51
47	Pd/Co ₃ O ₄ -based catalysts prepared by solution combustion synthesis for residual methane oxidation in lean conditions. <i>Catalysis Today</i> , 2015, 257, 66-71.	4.4	53
48	Density Functional Theory Modeling and Time-of-Flight Secondary Ion Mass Spectrometric and X-ray Photoelectron Spectroscopic Investigations into Mechanistic Key Events of Coronene Oxidation: Toward Molecular Understanding of Soot Combustion. <i>Journal of Physical Chemistry C</i> , 2015, 119, 6568-6580.	3.1	11
49	The role of crystallite size of iron oxide catalyst for soot combustion. <i>Catalysis Today</i> , 2015, 257, 111-116.	4.4	26
50	Cobalt–zinc spinel dispersed over cordierite monoliths for catalytic N ₂ O abatement from nitric acid plants. <i>Catalysis Today</i> , 2015, 257, 93-97.	4.4	28
51	Surface versus bulk alkali promotion of cobalt-oxide catalyst in soot oxidation. <i>Catalysis Communications</i> , 2015, 71, 37-41.	3.3	42
52	Emission of highly excited electronic states of potassium from cryptomelane nanorods. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 26289-26294.	2.8	15
53	Soot oxidation over K-doped manganese and iron spinels – How potassium precursor nature and doping level change the catalyst activity. <i>Catalysis Communications</i> , 2014, 43, 34-37.	3.3	65
54	Influence of the surface potassium species in Fe–K/Al ₂ O ₃ catalysts on the soot oxidation activity in the presence of NO _x . <i>Applied Catalysis B: Environmental</i> , 2014, 152-153, 88-98.	20.2	82

#	ARTICLE	IF	CITATIONS
55	Mg and Al substituted cobalt spinels as catalysts for low temperature deN ₂ O—Evidence for octahedral cobalt active sites. <i>Applied Catalysis B: Environmental</i> , 2014, 146, 105-111.	20.2	99
56	Methane oxy-steam reforming reaction: Performances of Ru/Al ₂ O ₃ catalysts loaded on structured cordierite monoliths. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 18592-18603.	7.1	38
57	Examination of acid–base properties of solid catalysts for gas phase dehydration of glycerol: FTIR and adsorption microcalorimetry studies. <i>Catalysis Today</i> , 2014, 226, 167-175.	4.4	36
58	Boosting the catalytic activity of magnetite in soot oxidation by surface alkali promotion. <i>Catalysis Communications</i> , 2014, 56, 139-142.	3.3	42
59	Cobalt Spinel Catalyst for N ₂ O Abatement in the Pilot Plant Operation—Long-Term Activity and Stability in Tail Gases. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 10335-10342.	3.7	41
60	Influence of Potassium and NO Addition on Catalytic Activity in Soot Combustion and Surface Properties of Iron and Manganese Spinels. <i>Topics in Catalysis</i> , 2013, 56, 745-749.	2.8	26
61	Role of Electronic Factor in Soot Oxidation Process Over Tunnelled and Layered Potassium Iron Oxide Catalysts. <i>Topics in Catalysis</i> , 2013, 56, 489-492.	2.8	42
62	DFT Modeling of Reaction Mechanism and Ab Initio Microkinetics of Catalytic N ₂ O Decomposition over Alkaline Earth Oxides: From Molecular Orbital Picture Account to Simulation of Transient and Stationary Rate Profiles. <i>Journal of Physical Chemistry C</i> , 2013, 117, 18488-18501.	3.1	33
63	Speciation of adsorbed CO ₂ on metal oxides by a new 2-dimensional approach: 2D infrared inversion spectroscopy (2D IRIS). <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 9335.	2.8	20
64	Rationales for the selection of the best precursor for potassium doping of cobalt spinel based deN ₂ O catalyst. <i>Applied Catalysis B: Environmental</i> , 2013, 136-137, 302-307.	20.2	78
65	Comparative Study on Steam and Oxidative Steam Reforming of Methane with Noble Metal Catalysts. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 15428-15436.	3.7	65
66	Periodic DFT and HR-STEM Studies of Surface Structure and Morphology of Cobalt Spinel Nanocrystals. Retrieving 3D Shapes from 2D Images. <i>Journal of Physical Chemistry C</i> , 2011, 115, 6423-6432.	3.1	70
67	Computational and Experimental Investigations into N ₂ O Decomposition over MgO Nanocrystals from Thorough Molecular Mechanism to ab initio Microkinetics. <i>Journal of Physical Chemistry C</i> , 2011, 115, 22451-22460.	3.1	41
68	Catalytic properties in N ₂ O decomposition of mixed cobalt–iron spinels. <i>Catalysis Communications</i> , 2011, 15, 127-131.	3.3	45
69	Guidelines for optimization of catalytic activity of 3d transition metal oxide catalysts in N ₂ O decomposition by potassium promotion. <i>Catalysis Today</i> , 2011, 176, 369-372.	4.4	50
70	Laboratory and pilot scale synthesis, characterization and reactivity of multicomponent cobalt spinel catalyst for low temperature removal of N ₂ O from nitric acid plant tail gases. <i>Catalysis Today</i> , 2011, 176, 365-368.	4.4	26
71	Alumina-supported nickel catalysts for catalytic partial oxidation of methane in short-contact time reactors. <i>Catalysis Today</i> , 2011, 176, 340-346.	4.4	20
72	CO Methanation Over Ru–Al ₂ O ₃ Catalysts: Effects of Chloride Doping on Reaction Activity and Selectivity. <i>Topics in Catalysis</i> , 2011, 54, 1042-1053.	2.8	34

#	ARTICLE	IF	CITATIONS
73	Facing the catalytic combustion of CH ₄ /H ₂ mixtures into monoliths. <i>Chemical Engineering Journal</i> , 2011, 167, 622-633.	12.7	20
74	Catalytic combustion of CH ₄ and H ₂ into micro-monoliths. <i>Catalysis Today</i> , 2010, 157, 440-445.	4.4	16
75	Ageing mechanisms on PdOx-based catalysts for natural gas combustion in premixed burners. <i>Chemical Engineering Science</i> , 2010, 65, 186-192.	3.8	10
76	Kinetic Studies on Pd/CexZr1xO ₂ Catalyst for Methane Combustion. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 11101-11111.	3.7	56
77	Solution Combustion Synthesis as intriguing technique to quickly produce performing catalysts for specific applications. <i>Studies in Surface Science and Catalysis</i> , 2010, 175, 59-67.	1.5	56
78	Surface chemistry and reactivity of ceria/zirconia-supported palladium oxide catalysts for natural gas combustion. <i>Journal of Catalysis</i> , 2009, 263, 134-145.	6.2	86
79	Combustion of CH ₄ /H ₂ /Air Mixtures in Catalytic Microreactors. <i>ChemPhysChem</i> , 2009, 10, 783-786.	2.1	7
80	Potassium Promotion of Cobalt Spinel Catalyst for N ₂ O Decomposition Accounted by Work Function Measurements and DFT Modelling. <i>Catalysis Letters</i> , 2009, 127, 126-131.	2.6	83
81	Optimization of Multicomponent Cobalt Spinel Catalyst for N ₂ O Abatement from Nitric Acid Plant Tail Gases: Laboratory and Pilot Plant Studies. <i>Catalysis Letters</i> , 2009, 130, 637-641.	2.6	34
82	The modifications of copper work function by layer-by-layer deposition of [W(CN) ₈] ⁴⁻ Co ²⁺ bimetallic nanolayers. <i>Polyhedron</i> , 2009, 28, 473-478.	2.2	2
83	Strong electronic promotion of Co ₃ O ₄ towards N ₂ O decomposition by surface alkali dopants. <i>Catalysis Communications</i> , 2009, 10, 1062-1065.	3.3	125
84	Experimental and DFT studies of N ₂ O decomposition over bare and Co-doped magnesium oxide insights into the role of active sites topology in dry and wet conditions. <i>Catalysis Today</i> , 2008, 137, 423-428.	4.4	33
85	Decomposition of N ₂ O over the surface of cobalt spinel: A DFT account of reactivity experiments. <i>Catalysis Today</i> , 2008, 137, 418-422.	4.4	92
86	Palladium/perovskite/zirconia catalytic premixed fiber burners for efficient and clean natural gas combustion. <i>Catalysis Today</i> , 2006, 117, 427-432.	4.4	29
87	In situ combustion synthesis of perovskite catalysts for efficient and clean methane premixed metal burners. <i>Chemical Engineering Science</i> , 2004, 59, 5091-5098.	3.8	59
88	Optimal Microstructural Design of a Catalytic Premixed FeCrAlloy Fiber Burner for Methane Combustion. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 1990-1998.	3.7	39
89	Catalytically modified fly-ash filters for NO _x reduction with NH ₃ . <i>Chemical Engineering Science</i> , 1996, 51, 5289-5297.	3.8	39
90	TiO ₂ Supported RuRe Nanocatalysts for Soot Oxidation: Effect of Re and the Support Nature. <i>Catalysis Letters</i> , 0, , .	2.6	0