

Klas Engvall

List of Publications by Year in descending order

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Version: 2024-02-01

54
papers

1,419
citations

279798

23
h-index

345221

36
g-index

55
all docs

55
docs citations

55
times ranked

1513
citing authors

#	ARTICLE	IF	CITATIONS
1	Co-gasification of petroleum coke and biomass. <i>Fuel</i> , 2014, 117, 870-875.	6.4	115
2	Silane-parylene coating for improving corrosion resistance of stainless steel 316L implant material. <i>Corrosion Science</i> , 2011, 53, 296-301.	6.6	111
3	Recent progress on parylene C polymer for biomedical applications: A review. <i>Progress in Organic Coatings</i> , 2020, 140, 105493.	3.9	87
4	Biomass oxygen/steam gasification in a pressurized bubbling fluidized bed: Agglomeration behavior. <i>Applied Energy</i> , 2016, 172, 230-250.	10.1	71
5	Iron-based materials as tar depletion catalysts in biomass gasification: Dependency on oxygen potential. <i>Fuel</i> , 2012, 95, 71-78.	6.4	69
6	Modeling and pilot plant runs of slow biomass pyrolysis in a rotary kiln. <i>Applied Energy</i> , 2017, 207, 123-133.	10.1	49
7	Parylene coatings on stainless steel 316L surface for medical applications Mechanical and protective properties. <i>Materials Science and Engineering C</i> , 2012, 32, 31-35.	7.3	47
8	A Surface Ionization Instrument for On-Line Measurements of Alkali Metal Components in Combustion: Instrument Description and Applications. <i>Energy & Fuels</i> , 2002, 16, 1369-1377.	5.1	46
9	Cluster KN formation by Rydberg collision complex stabilization during scattering of a K beam off zirconia surfaces. <i>Journal of Chemical Physics</i> , 1999, 110, 1212-1220.	3.0	43
10	Mechanism of potassium loss by desorption from an iron oxide catalyst for the styrene process. <i>Catalysis Letters</i> , 1990, 6, 85-93.	2.6	40
11	Angular resolved neutral desorption of potassium promoter from surfaces of iron catalysts. <i>Surface Science</i> , 1995, 342, 327-340.	1.9	40
12	Equilibrium potassium coverage and its effect on a Ni tar reforming catalyst in alkali- and sulfur-laden biomass gasification gases. <i>Applied Catalysis B: Environmental</i> , 2016, 190, 137-146.	20.2	39
13	Metal release and formation of surface precipitate at stainless steel grade 316 and Hanks solution interface Inflammatory response and surface finishing effects. <i>Corrosion Science</i> , 2009, 51, 1157-1162.	6.6	38
14	Emission of excited potassium species from an industrial iron catalyst for ammonia synthesis. <i>Catalysis Letters</i> , 1994, 26, 101-107.	2.6	35
15	Long-Range Diffusion of K Promoter on an Ammonia Synthesis Catalyst Surface Ionization of Excited Potassium Species in the Sample Edge Fields. <i>Journal of Catalysis</i> , 1999, 181, 256-264.	6.2	34
16	Model-free rate expression for thermal decomposition processes: The case of microcrystalline cellulose pyrolysis. <i>Fuel</i> , 2015, 143, 438-447.	6.4	34
17	Biomass pyrolysis gas conditioning over an iron-based catalyst for mild deoxygenation and hydrogen production. <i>Fuel</i> , 2018, 211, 149-158.	6.4	31
18	Comparative loss of alkali promoter by desorption from two catalysts for the dehydrogenation of ethyl benzene to styrene. <i>Applied Catalysis</i> , 1991, 77, 235-241.	0.8	30

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19	Field ionisation of excited alkali atoms emitted from catalyst surfaces. <i>Applied Surface Science</i> , 1992, 55, 303-308.	6.1	30
20	Biomass gasification in an atmospheric fluidised bed: Tar reduction with experimental iron-based granules from HÄngÄ AB, Sweden. <i>Catalysis Today</i> , 2011, 176, 253-257.	4.4	29
21	Engineering of bone fixation metal implants biointerface" Application of parylene C as versatile protective coating. <i>Materials Science and Engineering C</i> , 2012, 32, 2431-2435.	7.3	28
22	Effect of gas phase alkali species on tar reforming catalyst performance: Initial characterization and method development. <i>Fuel</i> , 2015, 154, 95-106.	6.4	28
23	Defluidisation of fluidised beds during gasification of biomass. <i>Biomass and Bioenergy</i> , 2011, 35, S63-S70.	5.7	26
24	Upgrading of Raw Gas from Biomass and Waste Gasification: Challenges and Opportunities. <i>Topics in Catalysis</i> , 2011, 54, 949-959.	2.8	25
25	Desorption Kinetics at Atmospheric Pressure: Alkali Metal Ion Emission from Hot Platinum Surfaces. <i>Journal of Physical Chemistry B</i> , 2000, 104, 4457-4462.	2.6	21
26	Selection of dolomite bed material for pressurized biomass gasification in BFB. <i>Fuel Processing Technology</i> , 2017, 159, 460-473.	7.2	21
27	Fragmentation of dolomite bed material at elevated temperature in the presence of H ₂ O & CO ₂ : Implications for fluidized bed gasification. <i>Fuel</i> , 2020, 260, 116340.	6.4	21
28	Development of a PID based on-line tar measurement method " Proof of concept. <i>Fuel</i> , 2013, 113, 113-121.	6.4	19
29	Loss of alkali promoter by desorption from promoted vanadium oxide catalysts. <i>Catalysis Letters</i> , 1991, 11, 41-48.	2.6	18
30	Surface treatments of metal supports for photocatalysis applications. <i>Applied Surface Science</i> , 2017, 401, 283-296.	6.1	18
31	Development of an on-line tar measurement method based on photo ionization technique. <i>Catalysis Today</i> , 2011, 176, 250-252.	4.4	15
32	Naphthalene on Ni(111): Experimental and Theoretical Insights into Adsorption, Dehydrogenation, and Carbon Passivation. <i>Journal of Physical Chemistry C</i> , 2017, 121, 22199-22207.	3.1	13
33	Experimental and modelling studies on condensation of inorganic species during cooling of product gas from pressurized biomass fluidized bed gasification. <i>Energy</i> , 2018, 153, 35-44.	8.8	13
34	A Medium-Scale 50 MW _{fuel} Biomass Gasification Based Bio-SNG Plant: A Developed Gas Cleaning Process. <i>Energies</i> , 2015, 8, 5287-5302.	3.1	12
35	Reaction mechanisms for H ₂ O-enhanced dolomite calcination at high pressure. <i>Fuel Processing Technology</i> , 2021, 217, 106830.	7.2	12
36	Review and numerical investigation of the mean flow features of a round turbulent jet in counterflow. <i>Physics of Fluids</i> , 2020, 32, .	4.0	11

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37	Real-time monitoring of alkali release during CO ₂ gasification of different types of biochar. <i>Fuel</i> , 2022, 327, 125102.	6.4	11
38	Pyrolysis of Wood in a Rotary Kiln Pyrolyzer: Modeling and Pilot Plant Trials. <i>Energy Procedia</i> , 2017, 105, 908-913.	1.8	10
39	Novel Model for the Release and Condensation of Inorganics for a Pressurized Fluidized-Bed Gasification Process: Effects of Gasification Temperature. <i>ACS Omega</i> , 2018, 3, 6321-6329.	3.5	9
40	CO ₂ Gasification Reactivity of Char from High-Ash Biomass. <i>ACS Omega</i> , 2021, 6, 34115-34128.	3.5	8
41	In situ characterization of an iron catalyst by potassium ion desorption and electron emission measurements. <i>Reaction Kinetics and Catalysis Letters</i> , 1998, 63, 219-224.	0.6	7
42	Effects of Porous Structure Development and Ash on the Steam Gasification Reactivity of Biochar Residues from a Commercial Gasifier at Different Temperatures. <i>Energies</i> , 2020, 13, 5004.	3.1	7
43	Fragmentation of dolomite bed material at pressurized conditions in the presence of H ₂ O and CO ₂ : Implications for pressurized fluidized bed gasification. <i>Fuel</i> , 2021, 285, 119061.	6.4	7
44	High Pressure Desorption of K ⁺ from Iron Ammonia Catalyst – Migration of the Promoter Towards Fe Active Planes. <i>Catalysis Letters</i> , 2004, 95, 93-97.	2.6	6
45	Application of Solid-Phase Microextraction (SPME) as a Tar Sampling Method. <i>Energy & Fuels</i> , 2013, 27, 3853-3860.	5.1	6
46	Tar Variability in the Producer Gas in a Bubbling Fluidized Bed Gasification System. <i>Energy & Fuels</i> , 2014, 28, 7494-7500.	5.1	6
47	Modelling and Optimization of a Small Diesel Burner for Mobile Applications. <i>Energies</i> , 2018, 11, 2904.	3.1	6
48	Gas-Phase Potassium Effects and the Role of the Support on the Tar Reforming of Biomass-Derived Producer Gas Over Sulfur-Equilibrated Ni/MgAl ₂ O ₄ . <i>Energy & Fuels</i> , 2020, 34, 11103-11111.	5.1	6
49	Investigation of the surface species during temperature dependent dehydrogenation of naphthalene on Ni(111). <i>Journal of Chemical Physics</i> , 2019, 150, 244704.	3.0	3
50	Detailed numerical simulations of low-temperature oxidation of NO by ozone. <i>Fuel</i> , 2021, 303, 121238.	6.4	3
51	Modeling, Design, and Verification of a Burner for Partial Oxidation of Biomass Product Gas in an Autothermal Reformer. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 9687-9697.	3.7	2
52	Modelling and Simulation of Biomass Conversion Processes. , 2013, , .		1
53	Corrigendum to “Reaction mechanisms for H ₂ O-enhanced dolomite calcination at high pressure” [Fuel Processing Technology 217 (2021) 106830]. <i>Fuel Processing Technology</i> , 2021, 218, 106865.	7.2	0
54	Experimental and Numerical Investigation of Flow Field and Soot Particle Size Distribution of Methane-Containing Gas Mixtures in a Swirling Burner. <i>ACS Omega</i> , 2022, 7, 469-479.	3.5	0