

Flemming Jappe Frandsen

List of Publications by Year in descending order

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70
papers

4,237
citations

109321

35
h-index

110387

64
g-index

70
all docs

70
docs citations

70
times ranked

2647
citing authors

#	ARTICLE	IF	CITATIONS
1	Ash formation and deposition in coal and biomass fired combustion systems: Progress and challenges in the field of ash particle sticking and rebound behavior. <i>Progress in Energy and Combustion Science</i> , 2018, 68, 65-168.	31.2	322
2	Release of K, Cl, and S during Pyrolysis and Combustion of High-Chlorine Biomass. <i>Energy & Fuels</i> , 2011, 25, 4961-4971.	5.1	312
3	Release to the Gas Phase of Inorganic Elements during Wood Combustion. Part 2: Influence of Fuel Composition. <i>Energy & Fuels</i> , 2008, 22, 1598-1609.	5.1	252
4	Agglomeration in bio-fuel fired fluidized bed combustors. <i>Chemical Engineering Journal</i> , 2003, 96, 171-185.	12.7	239
5	Utilizing biomass and waste for power production—a decade of contributing to the understanding, interpretation and analysis of deposits and corrosion products. <i>Fuel</i> , 2005, 84, 1277-1294.	6.4	194
6	Sulfur Transformations during Thermal Conversion of Herbaceous Biomass. <i>Energy & Fuels</i> , 2004, 18, 810-819.	5.1	189
7	Release to the Gas Phase of Inorganic Elements during Wood Combustion. Part 1: Development and Evaluation of Quantification Methods. <i>Energy & Fuels</i> , 2006, 20, 964-978.	5.1	177
8	Influence of deposit formation on corrosion at a straw-fired boiler. <i>Fuel Processing Technology</i> , 2000, 64, 189-209.	7.2	169
9	The fate of chlorine during MSW incineration: Vaporization, transformation, deposition, corrosion and remedies. <i>Progress in Energy and Combustion Science</i> , 2020, 76, 100789.	31.2	139
10	Heat transfer in ash deposits: A modelling tool-box. <i>Progress in Energy and Combustion Science</i> , 2005, 31, 371-421.	31.2	108
11	Lab-Scale Investigations of High-Temperature Corrosion Phenomena in Straw-Fired Boilers. <i>Energy & Fuels</i> , 1999, 13, 1114-1121.	5.1	94
12	Release of Potassium from the Systems $K^+Ca^{+}Si$ and $K^+Ca^{+}P$. <i>Energy & Fuels</i> , 2009, 23, 3423-3428.	5.1	93
13	SEM Investigation of Superheater Deposits from Biomass-Fired Boilers. <i>Energy & Fuels</i> , 2004, 18, 378-384.	5.1	92
14	Release of K, Cl, and S during combustion and co-combustion with wood of high-chlorine biomass in bench and pilot scale fuel beds. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 2363-2372.	3.9	90
15	Dynamic mechanistic model of superheater deposit growth and shedding in a biomass fired grate boiler. <i>Fuel</i> , 2007, 86, 1519-1533.	6.4	89
16	Changes imposed by pyrolysis, thermal gasification and incineration on composition and phosphorus fertilizer quality of municipal sewage sludge. <i>Journal of Environmental Management</i> , 2017, 198, 308-318.	7.8	84
17	Quantification of the release of inorganic elements from biofuels. <i>Fuel Processing Technology</i> , 2007, 88, 1118-1128.	7.2	81
18	On the fate of heavy metals in municipal solid waste combustion Part I: devolatilisation of heavy metals on the grate. <i>Fuel</i> , 2003, 82, 2273-2283.	6.4	78

#	ARTICLE	IF	CITATIONS
19	Release and Transformation of Inorganic Elements in Combustion of a High-Phosphorus Fuel. <i>Energy & Fuels</i> , 2011, 25, 2874-2886.	5.1	70
20	Quantification of fusion in ashes from solid fuel combustion. <i>Thermochimica Acta</i> , 1999, 326, 105-117.	2.7	68
21	Co-combustion of pulverized coal and solid recovered fuel in an entrained flow reactor – General combustion and ash behaviour. <i>Fuel</i> , 2011, 90, 1980-1991.	6.4	65
22	A Full-scale Study on the Partitioning of Trace Elements in Municipal Solid Waste Incineration – Effects of Firing Different Waste Types. <i>Energy & Fuels</i> , 2009, 23, 3475-3489.	5.1	60
23	Lab-scale Investigation of Deposit-induced Chlorine Corrosion of Superheater Materials under Simulated Biomass-firing Conditions. Part 1: Exposure at 560 Å°C. <i>Energy & Fuels</i> , 2009, 23, 3457-3468.	5.1	60
24	Release to the gas phase of metals, S and Cl during combustion of dedicated waste fractions. <i>Fuel Processing Technology</i> , 2010, 91, 1062-1072.	7.2	59
25	Dust-Firing of Straw and Additives: Ash Chemistry and Deposition Behavior. <i>Energy & Fuels</i> , 2011, 25, 2862-2873.	5.1	59
26	Trace elements in co-combustion of solid recovered fuel and coal. <i>Fuel Processing Technology</i> , 2013, 105, 212-221.	7.2	57
27	Deposit Formation in a 150 MWe Utility PF-Boiler during Co-combustion of Coal and Straw. <i>Energy & Fuels</i> , 2000, 14, 765-780.	5.1	54
28	Partitioning of K, Cl, S and P during combustion of poplar and brassica energy crops. <i>Fuel</i> , 2014, 134, 209-219.	6.4	47
29	Characterization of Ashes and Deposits from High-Temperature Coal-Straw Co-Firing. <i>Energy & Fuels</i> , 1999, 13, 803-816.	5.1	44
30	On the fate of heavy metals in municipal solid waste combustion. Part II. From furnace to filter. <i>Fuel</i> , 2004, 83, 1703-1710.	6.4	42
31	Low temperature circulating fluidized bed gasification and co-gasification of municipal sewage sludge. Part 1: Process performance and gas product characterization. <i>Waste Management</i> , 2017, 66, 123-133.	7.4	41
32	Trace metal emissions from the Estonian oil shale fired power plant. <i>Fuel Processing Technology</i> , 1998, 57, 1-24.	7.2	40
33	High Temperature Corrosion under Laboratory Conditions Simulating Biomass-Firing: A Comprehensive Characterization of Corrosion Products. <i>Energy & Fuels</i> , 2014, 28, 6447-6458.	5.1	39
34	Review: Circulation of Inorganic Elements in Combustion of Alternative Fuels in Cement Plants. <i>Energy & Fuels</i> , 2015, 29, 4076-4099.	5.1	39
35	COMBUSTION AEROSOLS FROM MUNICIPAL WASTE INCINERATION – EFFECT OF FUEL FEEDSTOCK AND PLANT OPERATION. <i>Combustion Science and Technology</i> , 2007, 179, 2171-2198.	2.3	36
36	Potassium Capture by Kaolin, Part 2: K_2CO_3 , KCl, and K_2SO_4 . <i>Energy & Fuels</i> , 2018, 32, 3566-3578.	5.1	36

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37	Potassium Capture by Kaolin, Part 1: KOH. Energy & Fuels, 2018, 32, 1851-1862.	5.1	34
38	Sulfation of Condensed Potassium Chloride by SO ₂ . Energy & Fuels, 2013, 27, 3283-3289.	5.1	32
39	Potassium capture by coal fly ash: K ₂ CO ₃ , KCl and K ₂ SO ₄ . Fuel Processing Technology, 2019, 194, 106115.	7.2	31
40	Ash Deposition Trials at Three Power Stations in Denmark. Energy & Fuels, 1998, 12, 429-442.	5.1	30
41	Experimental Investigation of Ash Deposit Shedding in a Straw-Fired Boiler. Energy & Fuels, 2006, 20, 512-519.	5.1	30
42	Ash Research from Palm Coast, Florida to Banff, Canada: Entry of Biomass in Modern Power Boilers. Energy & Fuels, 2009, 23, 3347-3378.	5.1	29
43	Effect of Water Vapor on High-Temperature Corrosion under Conditions Mimicking Biomass Firing. Energy & Fuels, 2015, 29, 5802-5815.	5.1	28
44	Modeling the Use of Sulfate Additives for Potassium Chloride Destruction in Biomass Combustion. Energy & Fuels, 2014, 28, 199-207.	5.1	25
45	Impact of Coal Fly Ash Addition on Combustion Aerosols (PM _{2.5}) from Full-Scale Suspension-Firing of Pulverized Wood. Energy & Fuels, 2014, 28, 3217-3223.	5.1	25
46	Fly Ash Formation during Suspension Firing of Biomass: Effects of Residence Time and Fuel Type. Energy & Fuels, 2017, 31, 555-570.	5.1	25
47	KOH capture by coal fly ash. Fuel, 2019, 242, 828-836.	6.4	25
48	Deposit Probe Measurements in Large Biomass-Fired Grate Boilers and Pulverized-Fuel Boilers. Energy & Fuels, 2014, 28, 3539-3555.	5.1	23
49	Time and Temperature Effects on Alkali Chloride Induced High Temperature Corrosion of Superheaters during Biomass Firing. Energy & Fuels, 2018, 32, 7991-7999.	5.1	20
50	Tensile Adhesion Strength of Biomass Ash Deposits: Effect of the Temperature Gradient and Ash Chemistry. Energy & Fuels, 2018, 32, 4432-4441.	5.1	19
51	Biomass fly ash deposition in an entrained flow reactor. Proceedings of the Combustion Institute, 2019, 37, 2689-2696.	3.9	19
52	Mechanistic Model for Ash Deposit Formation in Biomass Suspension Firing. Part 1: Model Verification by Use of Entrained Flow Reactor Experiments. Energy & Fuels, 2017, 31, 2771-2789.	5.1	18
53	Deposit Shedding in Biomass-Fired Boilers: Shear Adhesion Strength Measurements. Energy & Fuels, 2017, 31, 8733-8741.	5.1	17
54	Pilot-scale investigation and CFD modeling of particle deposition in low-dust monolithic SCR DeNO _x catalysts. AIChE Journal, 2013, 59, 1919-1933.	3.6	14

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55	Deposit Formation in the FASAN WtE Boiler as a Function of Feedstock Composition and Boiler Operation. Energy & Fuels, 2009, 23, 3490-3496.	5.1	11
56	Influence of kaolin and coal fly ash addition on biomass ash deposition in an entrained flow reactor. Fuel, 2022, 313, 123041.	6.4	10
57	Modeling of ferric sulfate decomposition and sulfation of potassium chloride during grate firing of biomass. AIChE Journal, 2013, 59, 4314-4324.	3.6	9
58	Iron-sulfide crystals in probe deposits. Fuel Processing Technology, 1998, 58, 45-59.	7.2	6
59	Mechanistic Model for Ash Deposit Formation in Biomass Suspension Firing. Part 2: Model Verification by Use of Full-Scale Tests. Energy & Fuels, 2017, 31, 2790-2802.	5.1	6
60	Influence of Preoxidation on High-Temperature Corrosion of a FeCrAl Alloy Under Conditions Relevant to Biomass Firing. Oxidation of Metals, 2018, 89, 99-122.	2.1	6
61	Modeling Potassium Capture by Aluminosilicate, Part 1: Kaolin. Energy & Fuels, 2021, 35, 13984-13998.	5.1	6
62	Classification System for Ash Deposits Based on Sem analyses. , 2002, , 205-216.		5
63	Co-firing of Coal with Biomass and Waste in Full-Scale Suspension-Fired Boilers. , 2013, , 781-800.		4
64	Modeling Potassium Capture by Aluminosilicate, Part 2: Coal Fly Ash. Energy & Fuels, 2021, 35, 19725-19736.	5.1	4
65	Influence of preoxidation on high temperature corrosion of a Ni-based alloy under conditions relevant to biomass firing. Surface and Coatings Technology, 2017, 319, 76-87.	4.8	3
66	Complementary Methods for the Characterization of Corrosion Products on a Plant-Exposed Superheater Tube. Metallography, Microstructure, and Analysis, 2017, 6, 22-35.	1.0	3
67	Influence of Metal Surface Temperature and Coal Quality on Ash Deposition in PC-Fired Boilers. , 2002, , 357-366.		1
68	Impacts of Fuel Quality on Power Production and the Environment. Energy & Fuels, 2013, 27, 5593-5594.	5.1	1
69	Ash Fusion Quantification by Means of Thermal Analysis. , 2002, , 181-193.		0
70	Ash Fusion and Deposit Formation at Straw Fired Boilers. , 2002, , 341-356.		0