Mark J Rood

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4660102/publications.pdf

Version: 2024-02-01

131	5,491	76196	95083
papers	citations	40	68
		h-index	g-index

134	134	134	5802
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermal energy storage systems for concentrated solar power plants. Renewable and Sustainable Energy Reviews, 2017, 79, 82-100.	8.2	488
2	Mixtures of pollution, dust, sea salt, and volcanic aerosol during ACE-Asia: Radiative properties as a function of relative humidity. Journal of Geophysical Research, 2003, 108, .	3.3	234
3	Adsorption characteristics of trace volatile organic compounds in gas streams onto activated carbon fibers. Chemistry of Materials, 1992, 4, 1068-1073.	3.2	174
4	Effects of Sulfur Impregnation Temperature on the Properties and Mercury Adsorption Capacities of Activated Carbon Fibers (ACFs). Environmental Science & Technology, 2001, 35, 2785-2791.	4.6	161
5	Adsorption equilibrium of organic vapors on single-walled carbon nanotubes. Carbon, 2005, 43, 2379-2388.	5.4	158
6	Removal of SO2from gas streams using a dielectric barrier discharge and combined plasma photolysis. Journal of Applied Physics, 1991, 69, 4409-4417.	1.1	147
7	NaCl Aerosol Particle Hygroscopicity Dependence on Mixing with Organic Compounds. Journal of Atmospheric Chemistry, 1998, 31, 321-346.	1.4	111
8	Aerosol Optical properties at Sagres, Portugal during ACE-2. Tellus, Series B: Chemical and Physical Meteorology, 2000, 52, 694-715.	0.8	108
9	Aerosol light scattering properties at Cape Grim, Tasmania, during the First Aerosol Characterization Experiment (ACE 1). Journal of Geophysical Research, 1998, 103, 16565-16574.	3.3	105
10	Structural Characterization of Single-Walled Carbon Nanotube Bundles by Experiment and Molecular Simulation. Langmuir, 2005, 21, 896-904.	1.6	104
11	Removal of VOCs from humidified gas streams using activated carbon cloth. Separation and Purification Technology, 1996, 10, 117-121.	0.3	103
12	Sustainable and hierarchical porous Enteromorpha prolifera based carbon for CO2 capture. Journal of Hazardous Materials, 2012, 229-230, 183-191.	6.5	102
13	Mercury Adsorption Properties of Sulfur-Impregnated Adsorbents. Journal of Environmental Engineering, ASCE, 2002, 128, 1080-1089.	0.7	98
14	Theoretical and Experimental Investigation of Morphology and Temperature Effects on Adsorption of Organic Vapors in Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2006, 110, 7640-7647.	1.2	93
15	Electrothermal adsorption and desorption of volatile organic compounds on activated carbon fiber cloth. Journal of Hazardous Materials, 2016, 301, 27-34.	6.5	91
16	Synthesis and characterization of iron-impregnated porous carbon spheres prepared by ultrasonic spray pyrolysis. Carbon, 2011, 49, 587-598.	5.4	86
17	Equilibrium and Heat of Adsorption for Organic Vapors and Activated Carbons. Environmental Science & Technology, 2005, 39, 5864-5871.	4.6	85
18	Adsorption and electrothermal desorption of organic vapors using activated carbon adsorbents with novel morphologies. Carbon, 2006, 44, 2715-2723.	5.4	85

#	Article	IF	Citations
19	Adsorption site analysis of impurity embedded single-walled carbon nanotube bundles. Carbon, 2006, 44, 2376-2383.	5.4	85
20	Chemically Treated Activated Carbon Cloths for Removal of Volatile Organic Carbons from Gas Streams: Evidence for Enhanced Physical Adsorption. Environmental Science & Technology, 1995, 29, 1876-1880.	4.6	81
21	Gas Phase Adsorption of Volatile Organic Compounds and Water Vapor on Activated Carbon Cloth. Energy & Fuels, 1997, 11, 311-315.	2.5	79
22	Activated Carbon Fiber Cloth Electrothermal Swing Adsorption System. Environmental Science & Technology, 2004, 38, 4865-4877.	4.6	77
23	Role of functional groups on the microwave attenuation and electric resistivity of activated carbon fiber cloth. Carbon, 2009, 47, 1814-1823.	5.4	77
24	Influence of relative humidity on aerosol radiative forcing: An ACE-Asia experiment perspective. Journal of Geophysical Research, 2003, 108, .	3.3	74
25	Preparation and Characterization of Î³-Al₂O₃ with Rich BrÃ¸nsted Acid Sites and Its Application in the Fluid Catalytic Cracking Process. Journal of Physical Chemistry C, 2014, 118, 6226-6234.	1.5	72
26	Nitrogen and Sulfur Co-Doped Graphene Nanosheets to Improve Anode Materials for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 37172-37180.	4.0	69
27	Reprocessing and Reuse of Waste Tire Rubber to Solve Air-Quality Related Problems. Energy & Fuels, 1998, 12, 1095-1099.	2.5	66
28	Removal of SO2 and the simultaneous removal of SO2 and NO from simulated flue gas streams using dielectric barrier discharge plasmas. Plasma Chemistry and Plasma Processing, 1992, 12, 565-580.	1.1	64
29	Microwave-Swing Adsorption To Capture and Recover Vapors from Air Streams with Activated Carbon Fiber Cloth. Environmental Science & Technology, 2005, 39, 6851-6859.	4.6	61
30	Temporal evolution of nitrogen compounds in Swedish precipitation since 1955. Nature, 1986, 321, 762-764.	13.7	60
31	Experimental and modeled results describing the adsorption of acetone and benzene onto activated carbon fibers. Environmental Progress, 1994, 13, 26-30.	0.8	60
32	Water adsorption with hysteresis effect onto microporous activated carbon fabrics. Adsorption, 2007, 13, 173-189.	1.4	60
33	Adsorbed Natural Gas Storage with Activated Carbons Made from Illinois Coals and Scrap Tires. Energy & Fuels, 1997, 11, 316-322.	2.5	58
34	Gas-phase removal of nitric oxide from gas streams via dielectric barrier discharges. Environmental Science & Technology, 1992, 26, 777-781.	4.6	54
35	Preparation and Evaluation of Coal-Derived Activated Carbons for Removal of Mercury Vapor from Simulated Coal Combustion Flue Gases. Energy & Fuels, 1998, 12, 1061-1070.	2.5	54
36	Temporal changes in nitrogen adsorption properties of single-walled carbon nanotubes. Carbon, 2004, 42, 2699-2710.	5.4	50

#	Article	IF	Citations
37	Evolution and impact of acidic oxygen functional groups on activated carbon fiber cloth during NO oxidation. Carbon, 2013, 54, 444-453.	5.4	50
38	Nitric oxide oxidation catalyzed by microporous activated carbon fiber cloth: An updated reaction mechanism. Applied Catalysis B: Environmental, 2014, 148-149, 573-581.	10.8	44
39	Environmental snapshots from ACE-Asia. Journal of Geophysical Research, 2004, 109, .	3.3	42
40	Hygroscopic properties of a NaCl aerosol coated with organic compounds. Journal of Aerosol Science, 1992, 23, 437-440.	1.8	41
41	Equilibrium Adsorption of Phenol-, Tire-, and Coal-Derived Activated Carbons for Organic Vapors. Journal of Environmental Engineering, ASCE, 2004, 130, 231-241.	0.7	41
42	Aerosol optical properties along the northeast coast of North America during the New England Air Quality Study-Intercontinental Transport and Chemical Transformation 2004 campaign and the influence of aerosol composition. Journal of Geophysical Research, 2007, 112, .	3.3	41
43	Laboratory-Measured Optical Properties of Inorganic and Organic Aerosols at Relative Humidities up to 95%. Aerosol Science and Technology, 2012, 46, 178-190.	1.5	40
44	Multi-Arch-Structured All-Carbon Aerogels with Superelasticity and High Fatigue Resistance as Wearable Sensors. ACS Applied Materials & Interfaces, 2020, 12, 16822-16830.	4.0	40
45	Physical and chemical properties of PAN-derived electrospun activated carbon nanofibers and their potential for use as an adsorbent for toxic industrial chemicals. Adsorption, 2012, 18, 265-274.	1.4	39
46	Activated carbon cloth adsorption-cryogenic system to recover toxic volatile organic compounds. Separation and Purification Technology, 1996, 10, 123-130.	0.3	38
47	Capture of Organic Vapors Using Adsorption and Electrothermal Regeneration. Journal of Environmental Engineering, ASCE, 2004, 130, 258-267.	0.7	38
48	Equilibrium and Heat of Adsorption for Water Vapor and Activated Carbon. Journal of Environmental Engineering, ASCE, 2000, 126, 267-271.	0.7	37
49	Two-stage glucose-assisted crystallization of ZSM-5 to improve methanol to propylene (MTP). Microporous and Mesoporous Materials, 2018, 270, 57-66.	2.2	37
50	Study of coke deposited on a VO x -K 2 O/Î³-Al 2 O 3 catalyst in the non-oxidative dehydrogenation of isobutane. Applied Catalysis A: General, 2017, 545, 1-9.	2.2	35
51	Measurement of the crystallization humidities of ambient aerosol particles. Atmospheric Environment Part A General Topics, 1990, 24, 1837-1841.	1.3	34
52	Experimental determination of the hygroscopic properties of organically coated aerosol particles. Journal of Aerosol Science, 1990, 21, S241-S244.	1.8	34
53	A high surface area mesoporous Î³-Al2O3 with tailoring texture by glucose template for ethanol dehydration to ethylene. Microporous and Mesoporous Materials, 2017, 241, 89-97.	2.2	34
54	Correlating N2 and CH4 Adsorption on Microporous Carbon Using a New Analytical Model. Energy & Fuels, 1998, 12, 1071-1078.	2.5	32

#	Article	IF	Citations
55	Surface dealumination of micro-sized ZSM-5 for improving propylene selectivity and catalyst lifetime in methanol to propylene (MTP) reaction. Catalysis Communications, 2018, 109, 1-5.	1.6	32
56	Steady-State and Dynamic Desorption of Organic Vapor from Activated Carbon with Electrothermal Swing Adsorption. Environmental Science & Technology, 2007, 41, 5063-5069.	4.6	28
57	Effects of Sulfur, Nitric Acid, and Thermal Treatments on the Properties and Mercury Adsorption of Activated Carbons from Bituminous Coals. Aerosol and Air Quality Research, 2013, 13, 730-738.	0.9	27
58	High performance of H3BO3 modified USY and equilibrium catalyst with tailored acid sites in catalytic cracking. Microporous and Mesoporous Materials, 2017, 243, 319-330.	2.2	27
59	Mercury adsorption and re-emission inhibition from actual WFGD wastewater using sulfur-containing activated carbon. Environmental Research, 2019, 168, 319-328.	3.7	27
60	Modeling Effective Diffusivity of Volatile Organic Compounds in Activated Carbon Fiber. Environmental Science & Technology, 2001, 35, 613-619.	4.6	26
61	Direct Measurements of Volumetric Gas Storage Capacity and Some New Insight into Adsorbed Natural Gas Storage. Energy & Fuels, 2001, 15, 1241-1246.	2.5	26
62	Concomitant Adsorption and Desorption of Organic Vapor in Dry and Humid Air Streams using Microwave and Direct Electrothermal Swing Adsorption. Environmental Science & Technology, 2008, 42, 9317-9322.	4.6	26
63	Organic Vapor Recovery and Energy Efficiency during Electric Regeneration of an Activated Carbon Fiber Cloth Adsorber. Journal of Environmental Engineering, ASCE, 2004, 130, 268-275.	0.7	25
64	Effect of isobutane adsorption on the electrical resistivity of activated carbon fiber cloth with select physical and chemical properties. Carbon, 2014, 76, 435-445.	5.4	25
65	Effects of dissolution alkalinity and self-assembly on ZSM-5-based micro-/mesoporous composites: a study of the relationship between porosity, acidity, and catalytic performance. CrystEngComm, 2015, 17, 3820-3828.	1.3	25
66	Superior performance of freeze-dried Ni/ZnO-Al 2 O 3 adsorbent in the ultra-deep desulfurization of high sulfur model gasoline. Fuel Processing Technology, 2017, 156, 505-514.	3.7	25
67	Removal of SO2 and NO from Gas Streams with Combined Plasma Photolysis. Journal of Environmental Engineering, ASCE, 1993, 119, 414-423.	0.7	24
68	NO oxidation by microporous zeolites: Isolating the impact of pore structure to predict NO conversion. Applied Catalysis B: Environmental, 2015, 163, 573-583.	10.8	24
69	Rapid Response Concentration-Controlled Desorption of Activated Carbon to Dampen Concentration Fluctuations. Environmental Science & Technology, 2007, 41, 1753-1758.	4.6	23
70	Effect of lanthanum species on the physicochemical properties of La/SAPO-11 molecular sieve. Journal of Catalysis, 2017, 347, 170-184.	3.1	23
71	Preparing microporous carbon from solid organic salt precursors using in situ templating and a fixed-bed reactor. Microporous and Mesoporous Materials, 2012, 160, 174-181.	2.2	22
72	Projections of NH3 emissions from manure generated by livestock production in China to 2030 under six mitigation scenarios. Science of the Total Environment, 2017, 607-608, 78-86.	3.9	22

#	Article	IF	Citations
73	Isotherm Equation for Water Vapor Adsorption onto Activated Carbon. Journal of Environmental Engineering, ASCE, 1998, 124, 1130-1134.	0.7	21
74	Reconsidering emissions of ammonia from chemical fertilizer usage in Midwest USA. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6232-6246.	1.2	21
75	Environmental and Economic Assessment of Electrothermal Swing Adsorption of Air Emissions from Sheet-Foam Production Compared to Conventional Abatement Techniques. Environmental Science & Technology, 2016, 50, 1465-1472.	4.6	21
76	Evaluation of DeNitrification DeComposition model for estimating ammonia fluxes from chemical fertilizer application. Agricultural and Forest Meteorology, 2017, 237-238, 123-134.	1.9	21
77	Season-long ammonia flux measurements above fertilized corn in central Illinois, USA, using relaxed eddy accumulation. Agricultural and Forest Meteorology, 2017, 239, 202-212.	1.9	21
78	Isobutane adsorption with carrier gas recirculation at different relative humidities using activated carbon fiber cloth and electrothermal regeneration. Chemical Engineering Journal, 2019, 360, 1011-1019.	6.6	21
79	Temperature and Humidity Controlled Nephelometry: Improvements and Calibration. Aerosol Science and Technology, 1987, 7, 57-65.	1.5	20
80	Water Vapor Adsorption on Chemically Treated Activated Carbon Cloths. Chemistry of Materials, 1995, 7, 2269-2272.	3.2	20
81	Modeling of aerosol properties related to direct climate forcing. Journal of Geophysical Research, 1998, 103, 17009-17032.	3.3	20
82	Quantification of Plume Opacity by Digital Photography. Environmental Science & Technology, 2007, 41, 928-935.	4.6	20
83	Capture and Recovery of Isobutane by Electrothermal Swing Adsorption with Post-Desorption Liquefaction. Environmental Science & Technology, 2010, 44, 7070-7075.	4.6	20
84	Control of Electrothermal Heating during Regeneration of Activated Carbon Fiber Cloth. Environmental Science & Technology, 2011, 45, 738-743.	4.6	20
85	Porous materials for steady-state NO conversion: Comparisons of activated carbon fiber cloths, zeolites and metal-organic frameworks. Chemical Engineering Journal, 2019, 360, 89-96.	6.6	19
86	Technical data for concentrated solar power plants in operation, under construction and in project. Data in Brief, 2017, 13, 597-599.	0.5	18
87	Sorption and Modeling of Mass Transfer of Toxic Chemical Vapors in Activated-Carbon Fiber-Cloth Adsorbers. Energy & Fuels, 1998, 12, 1079-1088.	2.5	17
88	Engineering parameter selection for design optimization during preliminary design. Journal of Engineering Design, 2006, 17, 291-310.	1.1	17
89	Measurements of Aerosol Particle Size: Improved Precision by Simultaneous Use of Optical Particle Counter and Nephelometer. Aerosol Science and Technology, 1991, 14, 289-301.	1.5	16
90	Optical Remote Sensing To Quantify Fugitive Particulate Mass Emissions from Stationary Short-Term and Mobile Continuous Sources: Part I. Method and Examples. Environmental Science & Technology, 2011, 45, 658-665.	4.6	14

#	Article	IF	Citations
91	The (NH4)2SO4-Na2SO4-H2O system: comparison of deliquescence humidities measured in the field and estimated from laboratory measurements and thermodynamic modeling. Tellus, Series B: Chemical and Physical Meteorology, 1994, 46, 1-15.	0.8	12
92	Capture and Recovery of Methyl Ethyl Ketone with Electrothermal-Swing Adsorption Systems. Journal of Environmental Engineering, ASCE, 2011, 137, 826-832.	0.7	12
93	Temperature Control during Regeneration of Activated Carbon Fiber Cloth with Resistance-Feedback. Environmental Science & Technology, 2012, 46, 11305-11312.	4.6	12
94	Observational study of formation mechanism, vertical structure, and dust emission of dust devils over the Taklimakan Desert, China. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3608-3618.	1.2	12
95	Ammonia flux measurements above a corn canopy using relaxed eddy accumulation and a flux gradient system. Agricultural and Forest Meteorology, 2019, 264, 104-113.	1.9	12
96	Measured and Modeled Light Scattering Values for Dry and Hydrated Laboratory Aerosols*. Journal of Atmospheric and Oceanic Technology, 2004, 21, 981-994.	0.5	12
97	Carbon Fiber Adsorption Using Quantitative Structure-Activity Relationship. Journal of Environmental Engineering, ASCE, 2000, 126, 865-868.	0.7	10
98	Field Evaluation of Digital Optical Method to Quantify the Visual Opacity of Plumes. Journal of the Air and Waste Management Association, 2007, 57, 836-844.	0.9	10
99	Monitoring and Control of an Adsorption System Using Electrical Properties of the Adsorbent for Organic Compound Abatement. Environmental Science & Technology, 2017, 51, 7581-7589.	4.6	10
100	Simulating aerosol chamber experiments with the particle-resolved aerosol model PartMC. Aerosol Science and Technology, 2017, 51, 856-867.	1.5	10
101	Identifying low-PM2.5 exposure commuting routes for cyclists through modeling with the random forest algorithm based on low-cost sensor measurements in three Asian cities. Environmental Pollution, 2022, 294, 118597.	3.7	10
102	Real refractive index: Dependence on relative humidity and solute composition with relevancy to atmospheric aerosol particles. Journal of Geophysical Research, 2008, 113, .	3.3	9
103	Digital Optical Method to quantify the visual opacity of fugitive plumes. Atmospheric Environment, 2013, 77, 983-989.	1.9	9
104	SO2 abatement over nanocrystalline MgAl2O4 spinel-supported catalysts. Journal of Porous Materials, 2013, 20, 571-577.	1.3	8
105	Implementation of the effect of urease inhibitor on ammonia emissions following urea-based fertilizer application at a Zea mays field in central Illinois: A study with SURFATM-NH3 model. Agricultural and Forest Meteorology, 2019, 269-270, 78-87.	1.9	8
106	A Novel Method to Quantify Fugitive Dust Emissions Using Optical Remote Sensing. , 2008, , 143-154.		8
107	The (NH4)2SO4-Na2SO4-H2O system: comparison of deliquescence humidities measured in the field and estimated from laboratory measurements and thermodynamic modeling. Tellus, Series B: Chemical and Physical Meteorology, 1994, 46, 1-15.	0.8	7
108	Optical Remote Sensing to Quantify Fugitive Particulate Mass Emissions from Stationary Short-Term and Mobile Continuous Sources: Part II. Field Applications. Environmental Science & Technology, 2011, 45, 666-672.	4.6	7

#	Article	IF	Citations
109	Performance of an Electrothermal Swing Adsorption System with Postdesorption Liquefaction for Organic Gas Capture and Recovery. Environmental Science & Technology, 2013, 47, 7373-7379.	4.6	7
110	Novel activated carbon fiber cloth filter with functionalized silica nanoparticles for adsorption of toxic industrial chemicals. Adsorption, 2015, 21, 265-272.	1.4	7
111	Evaluation of Digital Optical Method To Determine Plume Opacity during Nighttime. Environmental Science & Technology, 2009, 43, 783-789.	4.6	6
112	Dust opacities inside the dust devil column in the Taklimakan Desert. Atmospheric Measurement Techniques, 2017, 10, 273-279.	1.2	6
113	Effect of grid resolution and spatial representation of NH₃ emissions from fertilizer application on predictions of NH₃ and PM_{2.5} concentrations in the United States Corn Belt. Environmental Research Communications, 2020, 2, 025001.	0.9	6
114	Promoter effect of heteroatom substituted AlPO-11 molecular sieves in hydrocarbons cracking reaction. Journal of Colloid and Interface Science, 2018, 528, 330-335.	5.0	5
115	Development of an Air Quality Program at the University of Illinois at Urbana-Champaign. Journal of Engineering Education, 1993, 82, 101-108.	1.9	4
116	Bench-Scale Aerosol Filtration Test System and Evaluation of an Acoustic Bioaerosol Removal Device for Indoor Air Streams. Aerosol Science and Technology, 2013, 47, 1285-1292.	1.5	4
117	Lidar equation inversion methods and uncertainties in measuring fugitive particulate matter emission factors. Applied Optics, 2017, 56, 7691.	0.9	4
118	Direct Synthesis of Nanosheetâ€Stacked Hierarchical â€œHoney Stickâ€likeâ€•MFI Zeolites by an Aromatic Heterocyclic Dualâ€Functional Organic Structureâ€Directing Agent. Chemistry - A European Journal, 2021, 27, 8694-8697.	1.7	4
119	An Advanced Test Method forMeasuring Fugitive Dust Emissions Using a Hybrid System of Optical Remote Sensing and PointMonitor Techniques. , 2009, , 73-81.		4
120	14.P.10 Heterogeneous nucleation of organics to salt particles. Journal of Aerosol Science, 1994, 25, 129-130.	1.8	3
121	An Open-path Laser Transmissometer for Atmospheric Extinction Measurements. , 2011, , .		3
122	Open burning and open detonation PM10 mass emission factor measurements with optical remote sensing. Journal of the Air and Waste Management Association, 2014, 64, 227-234.	0.9	3
123	Closure study on measured and modeled optical properties for dry and hydrated laboratory inorganic aerosols with mixtures of dicarboxylic acids. Atmospheric Environment, 2013, 81, 177-187.	1.9	2
124	Fugitive Particulate Matter Emissions to the Atmosphere from Tracked and Wheeled Vehicles in a Desert Region by Hybrid-Optical Remote Sensing. Aerosol and Air Quality Research, 2015, 15, 1613-1626.	0.9	2
125	Performance and Uncertainty in Measuring Atmospheric Plume Opacity Using Compact and Smartphone Digital Still Cameras. Aerosol and Air Quality Research, 2017, 17, 1281-1293.	0.9	2
126	Daytime atmospheric plume opacity measurement using a camcorder. Environmental Technology and Innovation, 2018, 12, 43-54.	3.0	1

#	Article	IF	Citations
127	Co-assembly route to facile synthesis of hierarchical core-shell nano-CuMOR@SBA-15 composite for one-step conversion of DME to ethanol with enhanced catalytic performance. Journal of Porous Materials, 2020, 27, 855-862.	1.3	1
128	Digital Photographic Technique to Quantify Plume Opacity During Daytime and Nighttime. , 2009, , 39-50.		1
129	Generation of monodisperse aerosol particles that consist of sparingly soluble and non-volatile compounds. Science of the Total Environment, 1989, 79, 105-110.	3.9	0
130	Aerosol Particle and Organic Vapor Concentrations at Industrial Work Sites in Malaysia. Asia-Pacific Journal of Public Health, 2001, 13, 24-29.	0.4	0
131	Capture and Recovery or Destruction of Trace Vapors from Gas Streams. Journal of Environmental Engineering, ASCE, 2004, 130, 209-210.	0.7	0