Murray R Gray

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/8345209/publications.pdf

Version: 2024-02-01

221 papers	8,714 citations	34105 52 h-index	66911 78 g-index
223 all docs	223 docs citations	223 times ranked	5773 citing authors

#	Article	IF	Citations
1	Supramolecular Assembly Model for Aggregation of Petroleum Asphaltenes. Energy & Fuels, 2011, 25, 3125-3134.	5.1	385
2	Selective Sorting of Cargo Proteins into Bacterial Membrane Vesicles. Journal of Biological Chemistry, 2011, 286, 1269-1276.	3.4	280
3	Quantitative Molecular Representation and Sequential Optimization of Athabasca Asphaltenes. Energy & Fuels, 2004, 18, 1377-1384.	5.1	202
4	On water-in-oil emulsions stabilized by fine solids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 193, 97-107.	4.7	201
5	Chemistry and Association of Vanadium Compounds in Heavy Oil and Bitumen, and Implications for Their Selective Removal. Energy & Fuels, 2010, 24, 2795-2808.	5.1	191
6	Stabilization of Oil-Water Emulsions by Hydrophobic Bacteria. Applied and Environmental Microbiology, 2004, 70, 6333-6336.	3.1	166
7	Role of Chain Reactions and Olefin Formation in Cracking, Hydroconversion, and Coking of Petroleum and Bitumen Fractions. Energy & Fuels, 2002, 16, 756-766.	5.1	137
8	Bacterial Adhesion to Soil Contaminants in the Presence of Surfactants. Applied and Environmental Microbiology, 1999, 65, 163-168.	3.1	128
9	Analysis of Asphaltenes and Asphaltene Model Compounds by Laser-Induced Acoustic Desorption/Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Energy & Fuels, 2009, 23, 5564-5570.	5.1	118
10	Molecular Structures of Asphaltenes Based on the Dissociation Reactions of Their Ions in Mass Spectrometry. Energy & Fuels, 2010, 24, 5548-5559.	5.1	115
11	Density Functional Theory Investigation of the Contributions of Ï€â€“Ï€ Stacking and Hydrogen-Bonding Interactions to the Aggregation of Model Asphaltene Compounds. Energy & Fuels, 2012, 26, 2727-2735.	5.1	113
12	Consistency of Asphaltene Chemical Structures with Pyrolysis and Coking Behavior. Energy & Fuels, 2003, 17, 1566-1569.	5.1	110
13	Adaptive multirate state and parameter estimation strategies with application to a bioreactor. AICHE Journal, 1995, 41, 2451-2464.	3.6	108
14	Uptake and Active Efflux of Polycyclic Aromatic Hydrocarbons by Pseudomonas fluorescens LP6a. Applied and Environmental Microbiology, 2000, 66, 5387-5392.	3.1	100
15	Formation of Archipelago Structures during Thermal Cracking Implicates a Chemical Mechanism for the Formation of Petroleum Asphaltenes. Energy & Fuels, 2011, 25, 2130-2136.	5.1	100
16	Separation and Characterization of Vanadyl Porphyrins in Venezuela Orinoco Heavy Crude Oil. Energy & Fuels, 2013, 27, 2874-2882.	5.1	98
17	Analysis of Force Interactions between AFM Tips and Hydrophobic Bacteria Using DLVO Theory. Langmuir, 2009, 25, 6968-6976.	3.5	96
18	Pyrolytic Decarboxylation and Cracking of Stearic Acid. Industrial & Engineering Chemistry Research, 2008, 47, 5328-5336.	3.7	93

#	Article	IF	Citations
19	Quantitative Evidence for Bridged Structures in Asphaltenes by Thin Film Pyrolysis. Energy & Fuels, 2011, 25, 3581-3589.	5.1	90
20	Influence of adhesion on aerobic biodegradation and bioremediation of liquid hydrocarbons. Applied Microbiology and Biotechnology, 2011, 92, 653-675.	3.6	90
21	Mechanisms of Asphaltene Aggregation: Puzzles and a New Hypothesis. Energy & Fuels, 2020, 34, 9094-9107.	5.1	90
22	Effectiveness and mobility of catalysts for gasification of bitumen coke. Fuel, 2011, 90, 120-125.	6.4	86
23	Reactions of Polynuclear Aromatic Hydrocarbons on Soil. Environmental Science & Technology, 1996, 30, 1145-1151.	10.0	85
24	Thermal Cracking of Athabasca Bitumen:â€‰ Influence of Steam on Reaction Chemistry. Energy & Fuels, 2000, 14, 671-676.	5.1	80
25	Atomic Force Microscopy Measurement of Heterogeneity in Bacterial Surface Hydrophobicity. Langmuir, 2008, 24, 4944-4951.	3.5	77
26	High-pressure thermal cracking of n-hexadecane. Industrial & Engineering Chemistry Research, 1993, 32, 1853-1863.	3.7	76
27	Application of atomic force microscopy in bacterial research. Scanning, 2010, 32, 74-96.	1.5	73
28	Effect of temperature on hybridoma cell cycle and MAb production. Biotechnology and Bioengineering, 1992, 40, 427-431.	3.3	72
29	Identification and Characterization of the emhABC Efflux System for Polycyclic Aromatic Hydrocarbons in Pseudomonas fluorescens cLP6a. Journal of Bacteriology, 2003, 185, 6233-6240.	2.2	69
30	Phase behavior of Athabasca bitumen+water mixtures at high temperature and pressure. Journal of Supercritical Fluids, 2013, 77, 142-152.	3.2	69
31	Characterization of Asphaltene Building Blocks by Cracking under Favorable Hydrogenation Conditions. Energy & Fuels, 2013, 27, 1817-1829.	5.1	69
32	Prediction of sedimentation and consolidation of fine tails. AICHE Journal, 1996, 42, 960-972.	3.6	68
33	Water Enhances the Aggregation of Model Asphaltenes in Solution via Hydrogen Bonding. Energy & Fuels, 2009, 23, 3687-3693.	5.1	66
34	Kinetics of Solvent Interactions with Asphaltenes during Coke Formation. Energy & Fuels, 2002, 16, 148-154.	5.1	65
35	Solvent screening for nonâ€aqueous extraction of Alberta oil sands. Canadian Journal of Chemical Engineering, 2013, 91, 1153-1160.	1.7	65
36	Initial Coke Deposition on a NiMo/Î³-Al2O3Bitumen Hydroprocessing Catalyst. Industrial & Engineering Chemistry Research, 1996, 35, 3940-3950.	3.7	63

#	Article	IF	Citations
37	Saturable, Energy-Dependent Uptake of Phenanthrene in Aqueous Phase by Mycobacterium sp. Strain RJGII-135. Applied and Environmental Microbiology, 2004, 70, 363-369.	3.1	61
38	Comparing Laser Desorption/Laser Ionization Mass Spectra of Asphaltenes and Model Compounds. Energy & Fuels, 2010, 24, 3589-3594.	5.1	60
39	Measurement of Contact Angles for Fumed Silica Nanospheres Using Enthalpy of Immersion Data. Journal of Colloid and Interface Science, 2000, 228, 1-6.	9.4	58
40	Two different mechanisms for adhesion of Gram-negative bacterium, Pseudomonas fluorescens LP6a, to an oilâ€“water interface. Colloids and Surfaces B: Biointerfaces, 2008, 62, 36-41.	5.0	58
41	Kinetics of catalytic steam gasification of bitumen coke. Fuel, 2011, 90, 1285-1291.	6.4	58
42	Kinetics of Hydrodesulfurization of Thiophenic and Sulfide Sulfur in Athabasca Bitumen. Energy & Fuels, 1995, 9, 500-506.	5.1	57
43	Fundamentals of bitumen coking processes analogous to granulations: A critical review. Canadian Journal of Chemical Engineering, 2002, 80, 393-401.	1.7	57
44	Kinetics and Properties of Asphaltene Adsorption on Surfaces. Energy & Fuels, 2012, 26, 1009-1018.	5.1	57
45	Fundamentals of Partial Upgrading of Bitumen. Energy & Fuels, 2019, 33, 6843-6856.	5.1	57
46	Membrane Diffusion Measurements Do Not Detect Exchange between Asphaltene Aggregates and Solution Phase. Energy & Fuels, 2011, 25, 509-523.	5.1	56
47	Joint Industrial Case Study for Asphaltene Deposition. Energy & Fuels, 2013, 27, 1899-1908.	5.1	56
48	Drag coefficients for air bubbles rising along an inclined surface. Chemical Engineering Science, 1994, 49, 1905-1911.	3.8	55
49	Agglomerate stability in fluidized beds of glass beads and silica sand. Powder Technology, 2006, 165, 115-127.	4.2	55
50	Computational and Experimental Study of the Structure, Binding Preferences, and Spectroscopy of Nickel(II) and Vanadyl Porphyrins in Petroleum. Journal of Physical Chemistry B, 2010, 114, 2180-2188.	2.6	55
51	Lumped kinetics of hydrocracking of bitumen. Fuel, 1997, 76, 1025-1033.	6.4	54
52	Coupling of Mass Transfer and Reaction in Coking of Thin Films of an Athabasca Vacuum Residue. Industrial & Engineering Chemistry Research, 2001, 40, 3317-3324.	3.7	54
53	Quality of Distillates from Repeated Recycle of Residue. Energy & Fuels, 2002, 16, 477-484.	5.1	54
54	Potential Microbial Enhanced Oil Recovery Processes: A Critical Analysis. , 2008, , .		54

#	Article	IF	Citations
55	Association Behavior of Pyrene Compounds as Models for Asphaltenesâ€. Energy & Fuels, 2005, 19, 1268-1271.	5.1	53
56	Study of Asphaltene Adsorption on Kaolinite by X-ray Photoelectron Spectroscopy and Time-of-Flight Secondary Ion Mass Spectroscopy. Energy & Fuels, 2013, 27, 2465-2473.	5.1	53
57	Pyrene Derivatives of 2,2â€²-Bipyridine as Models for Asphaltenes: Synthesis, Characterization, and Supramolecular Organization. Energy & Fuels, 2008, 22, 715-720.	5.1	52
58	Coking Kinetics of Asphaltenes as a Function of Chemical Structure. Energy & Fuels, 2003, 17, 1048-1056.	5.1	51
59	Dibenzyl Sulfide Metabolism by White Rot Fungi. Applied and Environmental Microbiology, 2003, 69, 1320-1324.	3.1	51
60	Kinetics of Cracking and Devolatilization during Coking of Athabasca Residues. Industrial & Engineering Chemistry Research, 2004, 43, 5438-5445.	3.7	51
61	Selective transport and accumulation of alkanes byRhodococcus erythropolis S+14He. Biotechnology and Bioengineering, 2002, 80, 650-659.	3.3	49
62	Observation of Liquid Crystals in Heavy Petroleum Fractions. Energy & Fuels, 2010, 24, 4327-4332.	5.1	49
63	Hexabenzocoronene Model Compounds for Asphaltene Fractions:â€‰ Synthesis & Characterization. Energy & Fuels, 2006, 20, 2439-2447.	5.1	48
64	Volume of mixing and solubility of water in Athabasca bitumen at high temperature and pressure. Fluid Phase Equilibria, 2013, 358, 203-211.	2.5	48
65	Biological remediation of anthracene-contaminated soil in rotating bioreactors. Applied Microbiology and Biotechnology, 1994, 40, 933-940.	3.6	47
66	Role of Fine Solids in the Coking of Vacuum Residues. Energy & Fuels, 1997, 11, 1040-1043.	5.1	46
67	Kinetics of biodegradation of mixtures of polycyclic aromatic hydrocarbons. Applied Microbiology and Biotechnology, 2002, 60, 361-366.	3.6	46
68	Performance of Solvent Mixtures for Non-aqueous Extraction of Alberta Oil Sands. Energy & Fuels, 2015, 29, 2261-2267.	5.1	46
69	Coking of Hydroprocessing Catalyst by Residue Fractions of Bitumen. Energy & Fuels, 1999, 13, 1037-1045.	5.1	45
70	Molar Kinetics and Selectivity in Cracking of Athabasca Asphaltenes. Energy & Fuels, 2001, 15, 751-755.	5.1	45
71	New Vanadium Compounds in Venezuela Heavy Crude Oil Detected by Positive-ion Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Scientific Reports, 2014, 4, 5373.	3.3	44
72	Particle Capture and Plugging in Packed-Bed Reactors. Industrial & Engineering Chemistry Research, 1997, 36, 4620-4627.	3.7	43

#	Article	IF	Citations
73	Pressure buildup in gasâ€liquid flow through packed beds due to deposition of fine particles. Canadian Journal of Chemical Engineering, 2002, 80, 346-354.	1.7	41
74	Associative Ï€â^'Ï€ Interactions of Condensed Aromatic Compounds with Vanadyl or Nickel Porphyrin Complexes Are Not Observed in the Organic Phase. Energy & Fuels, 2008, 22, 2465-2469.	5.1	41
75	Physics in the oil sands of Alberta. Physics Today, 2009, 62, 31-35.	0.3	40
76	The phase behavior of Athabasca bitumen+toluene+water ternary mixtures. Fluid Phase Equilibria, 2014, 370, 75-84.	2.5	40
77	Adsorption of asphaltenes on kaolinite as an irreversible process. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 504, 280-286.	4.7	40
78	Effect of oxygen fluctuations on recombinantEscherichia coli fermentation. Biotechnology and Bioengineering, 1993, 41, 666-670.	3.3	38
79	Migration of Fine Solids into Product Bitumen from Solvent Extraction of Alberta Oilsands. Energy & Fuels, 2014, 28, 2925-2932.	5.1	37
80	Distributed Properties of Asphaltene Nanoaggregates in Crude Oils: A Review. Energy & Fuels, 2021, 35, 18078-18103.	5.1	37
81	Effect of feed zone in fed-batch fermentations ofSaccharomyces cerevisiae. Biotechnology and Bioengineering, 1992, 40, 235-246.	3.3	36
82	Competitive Adsorption of Toluene and n-Alkanes at Binary Solution/Silica Interfaces. Journal of Physical Chemistry C, 2009, 113, 20355-20359.	3.1	36
83	Elucidation of structural information achievable for asphaltenes via collision-activated dissociation of their molecular ions in MSn experiments: A model compound study. Fuel, 2014, 133, 106-114.	6.4	36
84	High-pressure thermal cracking of n-hexadecane in aromatic solvents. Industrial & Engineering Chemistry Research, 1993, 32, 1864-1876.	3.7	35
85	Enhancement of Residue Hydroprocessing Catalysts by Doping with Alkali Metals. Energy & Fuels, 1997, 11, 1119-1126.	5.1	35
86	Use of a Novel Fluorinated Organosulfur Compound To Isolate Bacteria Capable of Carbon-Sulfur Bond Cleavage. Applied and Environmental Microbiology, 2004, 70, 1487-1493.	3.1	35
87	Effect of agglomerate properties on agglomerate stability in fluidized beds. Chemical Engineering Science, 2008, 63, 4245-4256.	3.8	35
88	Separation of Petroporphyrins from Asphaltenes by Chemical Modification and Selective Affinity Chromatography. Energy & Fuels, 2009, 23, 2600-2605.	5.1	35
89	Use of i.r. spectroscopy and nitrogen titration data in structural group analysis of bitumen. Fuel, 1987, 66, 749-752.	6.4	34
90	Lumped kinetics of structural groups: hydrotreating of heavy distillate. Industrial & Engineering Chemistry Research, 1990, 29, 505-512.	3.7	34

#	Article	IF	Citations
91	Mechanical properties of hexadecaneâ€“water interfaces with adsorbed hydrophobic bacteria. Colloids and Surfaces B: Biointerfaces, 2008, 62, 273-279.	5.0	34
92	Effect of Chemical Structure on the Cracking and Coking of Archipelago Model Compounds Representative of Asphaltenes. Energy & Fuels, 2012, 26, 1828-1843.	5.1	34
93	Evidence for methane reactivity during coal pyrolysis and liquefaction. Fuel, 1990, 69, 1276-1282.	6.4	33
94	Surfactant inhibition of bacterial growth on solid anthracene. Biodegradation, 2000, 11, 341-347.	3.0	33
95	Mutations in the Central Cavity and Periplasmic Domain Affect Efflux Activity of the Resistance-Nodulation-Division Pump EmhB from Pseudomonas fluorescens cLP6a. Journal of Bacteriology, 2006, 188, 115-123.	2.2	33
96	Hydrophobic bacteria at the hexadecaneâ€“water interface: Examination of micrometre-scale interfacial properties. Colloids and Surfaces B: Biointerfaces, 2008, 67, 59-66.	5.0	32
97	Molecular- and cultivation-based analyses of microbial communities in oil field water and in microcosms amended with nitrate to control H2S production. Applied Microbiology and Biotechnology, 2011, 89, 2027-2038.	3.6	32
98	Suppression of Addition Reactions during Thermal Cracking Using Hydrogen and Sulfided Iron Catalyst. Energy & Fuels, 2013, 27, 6637-6645.	5.1	32
99	Occlusion of Polyaromatic Compounds in Asphaltene Precipitates Suggests Porous Nanoaggregates. Energy & Fuels, 2013, 27, 1748-1751.	5.1	32
100	Deposition of Fine Particles in Packed Beds at Hydrotreating Conditions:Â Role of Surface Chemistry. Industrial & Engineering Chemistry Research, 1999, 38, 4878-4888.	3.7	31
101	Liquid-Phase Behavior during the Cracking of Asphaltenes. Industrial & Engineering Chemistry Research, 2003, 42, 4101-4108.	3.7	31
102	Inhibition and Deactivation of Hydrodenitrogenation (HDN) Catalysts by Narrow-Boiling Fractions of Athabasca Coker Gas Oil. Energy & Fuels, 2004, 18, 539-546.	5.1	31
103	Determination of Hansen Solubility Parameters of Asphaltene Model Compounds. Energy & Fuels, 2018, 32, 11296-11303.	5.1	31
104	Hydroprocessing of narrow-boiling gas oil fractions: dependence of reaction kinetics on molecular weight. Industrial & Engineering Chemistry Research, 1990, 29, 725-730.	3.7	30
105	Experimental simulation of largeâ€scale bioreaetor environments using a Monte Carlo method. Canadian Journal of Chemical Engineering, 1991, 69, 513-519.	1.7	29
106	High-pressure thermal cracking of n-hexadecane in Tetralin. Energy & Fuels, 1993, 7, 960-967.	5.1	29
107	Adhesion to the hydrocarbon phase increases phenanthrene degradation by Pseudomonas fluorescens LP6a. Biodegradation, 2011, 22, 485-496.	3.0	29
108	Carbon disulfide reagent allows the characterization of nonpolar analytes by atmospheric pressure chemical ionization mass spectrometry. Rapid Communications in Mass Spectrometry, 2011, 25, 1924-1928.	1.5	29

#	Article	IF	Citations
109	Role of catalyst in hydrocracking of residues from Alberta bitumens. Energy & Fuels, 1992, 6, 478-485.	5.1	28
110	Melting and Fluid Behavior of Asphaltene Films at 200â^'500 Â°C. Energy & Fuels, 2004, 18, 1419-1423.	5.1	28
111	Models of Hepatic Drug Elimination. Drug Metabolism Reviews, 1992, 24, 49-88.	3.6	27
112	Role of hydrotreating products in deposition of fine particles in reactors. Fuel, 2001, 80, 1079-1085.	6.4	27
113	Resistant nitrogen compounds in hydrotreated gas oil from Athabasca bitumen. Energy & Fuels, 1991, 5, 791-795.	5.1	26
114	In Situ Observation of Mesophase Formation and Coalescence in Catalytic Hydroconversion of Vacuum Residue Using a Stirred Hot-Stage Reactor. Energy & Fuels, 2012, 26, 3167-3178.	5.1	26
115	Interactions between thermal and catalytic reactions in mild hydrocracking of gas oil. Energy & Fuels, 1989, 3, 716-722.	5.1	25
116	Modeling of mass transfer and thermal cracking during the coking of Athabasca residues. Chemical Engineering Science, 2008, 63, 1683-1691.	3.8	25
117	Dispersion of Asphaltene Nanoaggregates and the Role of Rayleigh Scattering in the Absorption of Visible Electromagnetic Radiation by These Nanoaggregates. Energy & Fuels, 2013, 27, 680-693.	5.1	25
118	Characterization of Contaminated Soils Using Confocal Laser Scanning Microscopy and Cryogenic-Scanning Electron Microscopy. Environmental Science & Technology, 2000, 34, 3408-3414.	10.0	24
119	Depolarized Light Scattering for Study of Heavy Oil and Mesophase Formation Mechanisms. Energy & Fuels, 2012, 26, 5408-5420.	5.1	24
120	Fluid Properties at Coking Process Conditions. Industrial & Engineering Chemistry Research, 2004, 43, 2929-2935.	3.7	23
121	Spatially resolved organic coating on clay minerals in bitumen froth revealed by atomic force microscopy adhesion mapping. Fuel, 2017, 191, 283-289.	6.4	23
122	Sulfide persistence in oil field waters amended with nitrate and acetate. Journal of Industrial Microbiology and Biotechnology, 2009, 36, 1499-1511.	3.0	22
123	Stability of agglomerates made from fluid coke at ambient temperature. Powder Technology, 2011, 209, 53-64.	4.2	22
124	Pyrolysis of 1,3â€butanediol as a model reaction for wood liquefaction in supercritical water. Canadian Journal of Chemical Engineering, 1987, 65, 645-650.	1.7	21
125	Toluene-insoluble fraction from thermal cracking of Athabasca gas oil: formation of a liquid-in-oil emulsion that wets hydrophobic dispersed solids. Fuel, 1998, 77, 1647-1653.	6.4	21
126	Sulfur from benzothiophene and alkylbenzothiophenes supports growth of Rhodococcus sp. strain JVH1. Biodegradation, 2007, 18, 541-549.	3.0	21

#	Article	IF	Citations
127	Flocculation of Silica Particles from a Model Oil Solution: Effect of Adsorbed Asphaltenes. Energy & Fuels, 2010, 24, 3616-3623.	5.1	21
128	Density functional theory investigation of the effect of axial coordination and annelation on the absorption spectroscopy of nickel(II) and vanadyl porphyrins relevant to bitumen and crude oils. Canadian Journal of Chemistry, 2013, 91, 872-878.	1.1	21
129	Lessons Learned from a Decade-Long Assessment of Asphaltenes by Ultrahigh-Resolution Mass Spectrometry and Implications for Complex Mixture Analysis. Energy & Fuels, 2021, 35, 16335-16376.	5.1	21
130	Physical modeling of animal cell damage by hydrodynamic forces in suspension cultures. Biotechnology and Bioengineering, 1992, 40, 1277-1281.	3.3	20
131	Kinetics of Hydrocracking and Hydrotreating of Coker and Oilsands Gas Oils. Petroleum Science and Technology, 2003, 21, 997-1015.	1.5	20
132	Thermal Cracking of Substituted Cholestaneâ€“Benzoquinoline Asphaltene Model Compounds. Energy & Fuels, 2012, 26, 3592-3603.	5.1	20
133	Evidence for Lidocaine-Induced Enzyme Inactivation. Journal of Pharmaceutical Sciences, 1989, 78, 1003-1008.	3.3	19
134	Measurement of Cracking Kinetics of Pure Model Compounds by Thermogravimetric Analysis. Energy & Fuels, 2010, 24, 3998-4004.	5.1	19
135	Regular Solution Theories Are Not Appropriate for Model Compounds for Petroleum Asphaltenes. Energy & Fuels, 2011, 25, 737-746.	5.1	19
136	Corrosion-Fouling of 316 Stainless Steel and Pure Iron by Hot Oil. Energy & Fuels, 2011, 25, 4540-4551.	5.1	19
137	Evaluating steady-state and time-resolved fluorescence as a tool to study the behavior of asphaltene in toluene. Photochemical and Photobiological Sciences, 2014, 13, 917-928.	2.9	19
138	On correlating water solubility in ill-defined hydrocarbons. Fuel, 2014, 134, 644-658.	6.4	18
139	Addition Reactions of Olefins to Asphaltene Model Compounds. Energy & Fuels, 2015, 29, 1494-1502.	5.1	18
140	Influence of hydrothermal treatment on filterability of fine solids in bitumen froth. Fuel, 2016, 180, 314-323.	6.4	18
141	Structureâ€“Reactivity Relationships for Petroleum Asphaltenes. Energy & Fuels, 2022, 36, 4370-4380.	5.1	18
142	Kinetics of High-Conversion Hydrocracking of Bitumen. Energy & Fuels, 1997, 11, 402-410.	5.1	17
143	Adaptive multirate estimation and control of nutrient levels in a fedâ€batch fermentation using offâ€line and onâ€line measurements. Canadian Journal of Chemical Engineering, 1997, 75, 562-573.	1.7	17
144	Protocols To Enhance Biodegradation of Hydrocarbon Contaminants in Soil. Bioremediation Journal, 2000, 4, 249-257.	2.0	17

#	Article	IF	Citations
145	Use of13C Tracers to Determine Mass-Transfer Limitations on Thermal Cracking of Thin Films of Bitumen. Energy & Fuels, 2001, 15, 1087-1093.	5.1	17
146	Agglomeration and Deposition of Coke during Cracking of Petroleum Vacuum Residueâ€. Energy & Fuels, 2007, 21, 1205-1211.	5.1	17
147	Selectivity among organic sulfur compounds in one- and two-liquid-phase cultures of Rhodococcus sp. strain JVH1. Biodegradation, 2007, 18, 473-480.	3.0	17
148	A viscosity-conversion model for thermal cracking of heavy oils. Fuel, 2017, 197, 82-90.	6.4	17
149	Irreversible Adsorption of Asphaltenes on Kaolinite: Influence of Dehydroxylation. Energy & Fuels, 2017, 31, 9328-9336.	5.1	17
150	Transport and Reaction Processes in Bioremediation of Organic Contaminants. 1. Review of Bacterial Degradation and Transport. International Journal of Chemical Reactor Engineering, 2003, 1, .	1.1	16
151	Evaluation of co-volume mixing rules for bitumen liquid density and bubble pressure estimation. Fluid Phase Equilibria, 2010, 293, 87-100.	2.5	16
152	Solvent removal from cyclohexaneâ€extracted oil sands gangue. Canadian Journal of Chemical Engineering, 2016, 94, 408-414.	1.7	16
153	Quantification of three lidocaine metabolites and their conjugates. Pharmaceutical Research, 1990, 07, 504-507.	3.5	15
154	Gasâ€solid mass transfer in a rotating drum. Canadian Journal of Chemical Engineering, 1998, 76, 224-232.	1.7	15
155	Measurement of Efficiency of Distribution of Liquid Feed in a Gas-Solid Fluidized Bed Reactor. International Journal of Chemical Reactor Engineering, 2003, 1, .	1.1	15
156	Structures of Water Molecules at Solvent/Silica Interfaces. Langmuir, 2010, 26, 16397-16400.	3.5	15
157	Influence of Depressurization and Cooling on the Formation and Development of Mesophase. Energy & Fuels, 2011, 25, 5541-5548.	5.1	15
158	Minimization of Coke in Thermal Cracking of Athabasca Vacuum Residue in a High-Temperature Short-Residence Time Continuous Flow Aerosol Reactor. Energy & Fuels, 2012, 26, 6292-6299.	5.1	15
159	Incorporation of steroidal biomarkers into petroleum model compounds. Journal of Physical Organic Chemistry, 2012, 25, 597-606.	1.9	15
160	Thiophene mitigates high temperature fouling of metal surfaces in oil refining. Fuel, 2015, 139, 411-424.	6.4	15
161	Substrate inactivation of enzymes in vitro and in vivo. Biotechnology Advances, 1989, 7, 527-575.	11.7	14
162	Hydrotreating Chemistry of Model Products from Bioprocessing of Carbazoles. Energy & Fuels, 2002, 16, 1076-1086.	5.1	14

#	Article	IF	Citations
163	Agglomerate behavior in a recirculating fluidized bed with sheds: Effect of agglomerate properties. Powder Technology, 2015, 275, 263-272.	4.2	14
164	Influence of hydrophobicity distribution of particle mixtures on emulsion stabilization. Journal of Colloid and Interface Science, 2017, 491, 179-189.	9.4	14
165	Predicting agglomerate fragmentation and agglomerate material survival in fluidized beds. Powder Technology, 2011, 210, 87-102.	4.2	13
166	Heterogeneity of Asphaltene Deposits on Gold Surfaces in Organic Phase Using Atomic Force Microscopy. Energy & Fuels, 2012, 26, 2891-2898.	5.1	13
167	Electrocatalytic hydrogenation of aromatic compounds in ionic liquid solutions over WS2-on-glassy carbon and Raney nickel cathodes. Fuel, 2012, 93, 415-422.	6.4	13
168	Effect of Asphaltene Stability on Fouling at Delayed Coking Process Furnace Conditions. Energy & Fuels, 2013, 27, 1856-1864.	5.1	13
169	Steroid-Derived Naphthoquinoline Asphaltene Model Compounds: Hydriodic Acid Is the Active Catalyst in I₂-Promoted Multicomponent Cyclocondensation Reactions. Organic Letters, 2015, 17, 5930-5933.	4.6	13
170	Role of water and fine solids in onset of coke formation during bitumen cracking. Fuel, 2016, 166, 152-156.	6.4	13
171	Characterization of Fine Solids in Athabasca Bitumen Froth before and after Hydrothermal Treatment. Energy & Fuels, 2016, 30, 1965-1971.	5.1	13
172	Pharmacokinetics of Drugs That Inactivate Metabolic Enzymes. Journal of Pharmaceutical Sciences, 1991, 80, 121-127.	3.3	12
173	Nitrogen bases resistant to hydrodenitrogenation: evidence against using quinoline as a model compound. Industrial & Engineering Chemistry Research, 1992, 31, 1445-1449.	3.7	12
174	Liquid-side mass transfer coefficients for liquids and slurries in a rotating drum. Chemical Engineering Science, 1993, 48, 3442-3446.	3.8	12
175	Study of Cyclohexane Diffusion in Athabasca Asphaltenes. Energy & Fuels, 2014, 28, 1004-1011.	5.1	12
176	Quantitative Modeling of Formation of Asphaltene Nanoaggregates. Energy & Fuels, 2019, 33, 8566-8575.	5.1	12
177	13C-NMR OF SOLID ORGANIC DEPOSITS ON SPENT HYDROPROCESSING CATALYSTS. Chemical Engineering Communications, 1989, 77, 125-133.	2.6	11
178	Unconventional Oil and Gas. , 2014, , 95-116.		11
179	Sorption equilibrium and kinetics for cyclohexane, toluene, and water on Athabasca oil sands solids. Canadian Journal of Chemical Engineering, 2016, 94, 220-230.	1.7	11
180	Structural analysis of extracts from spent hydroprocessing catalysts. Industrial & Engineering Chemistry Research, 1988, 27, 1587-1595.	3.7	10

#	Article	IF	Citations
181	Cell and surfactant separation by column flotation. Canadian Journal of Chemical Engineering, 1994, 72, 840-847.	1.7	10
182	Pyridine adsorption and reaction on Mo(110) and C/Nâ€“Mo(110): experiment and modeling. Surface Science, 2004, 569, 193-206.	1.9	10
183	Fluid Properties of Asphaltenes at 310â^'530 Â°C. Energy & Fuels, 2005, 19, 2026-2033.	5.1	10
184	Coke yield and heat transfer in reaction of liquidâ€“solid agglomerates of Athabasca vacuum residue. Canadian Journal of Chemical Engineering, 2010, 88, 48-54.	1.7	10
185	Electrocatalytic hydrogenation of 2-cyclohexen-1-one in a high sulfur environment using a carbon-supported nanostructured tungsten sulfide catalyst. Catalysis Communications, 2010, 12, 314-317.	3.3	10
186	The EmhABC efflux pump decreases the efficiency of phenanthrene biodegradation by Pseudomonas fluorescens strain LP6a. Applied Microbiology and Biotechnology, 2012, 95, 757-766.	3.6	10
187	STRUCTURAL CHARACTERIZATION AND THERMODYANAMIC PROPERTY ESTIMATION FOR WOOD TARS: A FUNCTIONAL GROUP APPROACH. Liquid Fuels Technology, 1984, 2, 327-353.	0.6	9
188	Cultivation of hybridoma cells in an inclined bioreactor. Biotechnology and Bioengineering, 1995, 45, 176-186.	3.3	9
189	Role of Pressure in Coking of Thin Films of Bitumen. Canadian Journal of Chemical Engineering, 2008, 85, 773-780.	1.7	9
190	Scalable, Chromatography-Free Synthesis of Alkyl-Tethered Pyrene-Based Materials. Application to First-Generation â€œArchipelago Modelâ€•Asphaltene Compounds. Journal of Organic Chemistry, 2015, 80, 1719-1726.	3.2	9
191	Agglomerate behavior in a recirculating fluidized bed with sheds: Effect of sheds. Advanced Powder Technology, 2018, 29, 1758-1770.	4.1	8
192	Aerobic biotransformation of decalin (decahydronaphthalene) by Rhodococcus spp.. Biodegradation, 2008, 19, 785-794.	3.0	7
193	Binary Solvents with Ethanol for Effective Bitumen Displacement at Solvent/Mineral Interfaces. Energy & Fuels, 2015, 29, 4222-4226.	5.1	7
194	Catalytic Hydrodenitrogenation of Asphaltene Model Compounds. Energy & Fuels, 2015, 29, 6724-6733.	5.1	7
195	Measurement of Vacuum Residue and Asphaltene Fluid Properties at Process Conditions. Journal of the Japan Petroleum Institute, 2005, 48, 181-188.	0.6	6
196	Rejuvenation of Residue Hydroconversion Catalysts by H-donor Solvents. Catalysis Letters, 2008, 125, 69-75.	2.6	6
197	Monte Carlo Simulation of Asphaltenes and Products from Thermal Cracking. Energy & Fuels, 2014, 28, 2352-2364.	5.1	6
198	Effects of glucose fluctuations on synchrony in fed-batch fermentation of Saccharomyces cerevisiae. Biotechnology Progress, 1992, 8, 501-507.	2.6	5

#	Article	IF	Citations
199	Liquid circulation and mixing in an inclined bubble column. Canadian Journal of Chemical Engineering, 1997, 75, 290-298.	1.7	5
200	Measurement of Adhesive Forces during Coking of Athabasca Vacuum Residue. Industrial & Engineering Chemistry Research, 2003, 42, 3549-3554.	3.7	5
201	Kinetics of Vapor-Phase Cracking of Bitumen-Derived Heavy Gas Oil. Energy & Fuels, 2013, 27, 2999-3005.	5.1	5
202	Binary Interactions in Coke Formation from Model Compounds and Asphaltenes. Energy & Fuels, 2014, 28, 1692-1700.	5.1	5
203	Dependence of onset time for mesophase formation on operating parameters during catalytic hydroconversion of Athabasca vacuum residue. Fuel Processing Technology, 2015, 130, 165-171.	7.2	5
204	Transport and removal of a solvent in porous media in the presence of bitumen, a highly viscous solute. Chemical Engineering Science, 2017, 165, 229-239.	3.8	5
205	Agglomerate behavior in a recirculating fluidized bed with sheds: Effect of ring baffles. Particuology, 2018, 38, 143-151.	3.6	5
206	Observation of Heavy Oil Vaporization under Rapid Heating. Energy & Fuels, 1998, 12, 1174-1180.	5.1	4
207	Growth of Rhizobium leguminosarum on peat in rotating bioreactors. Canadian Journal of Chemical Engineering, 1999, 77, 911-916.	1.7	4
208	Selective Biocatalysis in Bacteria Controlled by Active Membrane Transport. Industrial & Engineering Chemistry Research, 2001, 40, 5126-5131.	3.7	4
209	Whatsoever things are true: Hypothesis, artefact, and bias in chemical engineering research. Canadian Journal of Chemical Engineering, 2021, 99, 2055-2068.	1.7	4
210	Structural changes in catalytic hydroprocessing of syncrude coker gas oil. Canadian Journal of Chemical Engineering, 1987, 65, 166-170.	1.7	3
211	Through a glass, darkly: Kinetics and reactors for complex mixtures syncrude innovation award lecture. Canadian Journal of Chemical Engineering, 1997, 75, 481-493.	1.7	3
212	Role of Liquid Concentration in Coke Yield from Model Vacuum Residueâ€“Coke Agglomerates. Industrial & Engineering Chemistry Research, 2015, 54, 9089-9096.	3.7	3
213	Vacuum drying of cyclohexane from solventâ€extracted oil sands gangue. Canadian Journal of Chemical Engineering, 2017, 95, 459-466.	1.7	3
214	Agglomerate behavior in a recirculating fluidized bed with sheds: Effect of bed properties. Powder Technology, 2018, 325, 31-41.	4.2	3
215	Tracking Changes in Asphaltene Nanoaggregate Size Distributions as a Function of Silver Complexation via Gel Permeation Chromatography Inductively Coupled Plasma Mass Spectrometry. Energy & Fuels, 0, , .	5.1	3
216	Solidâ€liquid mass transfer in a rotary drum. Canadian Journal of Chemical Engineering, 2001, 79, 726-731.	1.7	2

#	Article	IF	Citations
217	Trapping of Aromatic Compounds during Coking of Athabasca Vacuum Residue. Energy & Fuels, 2003, 17, 282-284.	5.1	2
218	Thermal Hydrocracking of n-Hexadecane in Benzene. Energy & Fuels, 1994, 8, 507-512.	5.1	1
219	Correlation of reactivity with chemical structure: Thermal hydrogenation of gas oils. Canadian Journal of Chemical Engineering, 1989, 67, 628-634.	1.7	0
220	Methods for prediction of KovÃ¡ts retention indices of hydrocarbons. Journal of Separation Science, 1989, 1, 174-181.	1.0	0
221	Use of a Microstructured Mixer for Reaction Kinetics of Thermal Cracking. Industrial & Engineering Chemistry Research, 2013, 52, 4011-4016.	3.7	0