Anil Kumar Mehrotra

List of Publications by Year
in descending order

133 papers	4,165 citations	94381 37 h-index	133188 59 g-index
135 all docs	135 docs citations	135 times ranked	2090 citing authors

#	Article	IF	Citations
1	A review of the contributions of <scp>P. Raj Bishnoi</scp> to chemical engineering. Canadian Journal of Chemical Engineering, 2023, 101, 565-582.	0.9	3
2	A perspective on <i>The Canadian Journal of Chemical Engineering</i> commemorating its 100th volume: 1929â€"2021. Canadian Journal of Chemical Engineering, 2022, 100, 1983-2010.	0.9	3
3	Experimental determination of gas diffusivity in liquidsâ€"A review. Canadian Journal of Chemical Engineering, 2021, 99, 1239-1267.	0.9	13
4	A heatâ€transfer model for tube fouling in the radiant section of onceâ€through steam generators. Canadian Journal of Chemical Engineering, 2021, 99, 789-802.	0.9	2
5	Research contributions of Leo A. Behie to chemical and biomedical engineering. Canadian Journal of Chemical Engineering, 2021, 99, 2262.	0.9	1
6	Preface to the special issue honouring <scp>Professor Leo A. Behie</scp>. Canadian Journal of Chemical Engineering, 2021, 99, 2259-2261.	0.9	2
7	Predictions for wax deposition in a pipeline carrying paraffinic or â€˜waxyâ€™ crude oil from the heat-transfer approach. Journal of Pipeline Science and Engineering, 2021, 1, 428-435.	2.4	7
8	Effects of shear rate and time on deposit composition in the cold flow regime under laminar flow conditions. Fuel, 2020, 259, 116238.	3.4	11
9	Investigating the gelling behaviour of â€˜waxy' paraffinic mixtures during flow shutdown. Canadian Journal of Chemical Engineering, 2020, 98, 2618-2631.	0.9	3
10	A review of heatâ€transfer mechanism for solid deposition from â€œwaxyâ€•or paraffinic mixtures. Canadian Journal of Chemical Engineering, 2020, 98, 2463-2488.	0.9	22
11	Deposition from waxy mixtures in a flowâ€loop apparatus under turbulent conditions: Investigating the effect of suspended wax crystals in cold flow regime. Canadian Journal of Chemical Engineering, 2019, 97, 2740-2751.	0.9	9
12	In-Situ Monitoring of Paraffin Wax Crystal Formation and Growth. Crystal Growth and Design, 2019, 19, 2830-2837.	1.4	22
13	Experiments and modeling for investigating the effect of suspended wax crystals on deposition from 'waxy' mixtures under cold flow conditions. Fuel, 2019, 243, 610-621.	3.4	24
14	Validating Heat-Transfer-Based Modeling Approach for Wax Deposition from Paraffinic Mixtures: An Analogy with Ice Deposition. Energy & Fuels, 2019, 33, 1859-1868.	2.5	14
15	Achieving cold flow conditions for â€˜waxyâ€™ mixtures with minimum solid deposition. Fuel, 2019, 235, 1092-1099.	3.4	16
16	Investigation of wax deposit â€˜sloughingâ€™ from paraffinic mixtures in pipe flow. Canadian Journal of Chemical Engineering, 2018, 96, 377-389.	0.9	10
17	A heat-transfer laboratory experiment with shell-and-tube condenser. Education for Chemical Engineers, 2017, 19, 38-47.	2.8	7
18	Metagenomic Sequencing of Microbial Communities from Brackish Water of Pangong Lake of the Northwest Indian Himalayas. Genome Announcements, 2017, 5, .	0.8	24

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19	65thCanadian Chemical Engineering Conference: Preface. Canadian Journal of Chemical Engineering, 2016, 94, 2037-2037.	0.9	1
20	Modeling The Onset Of Asphaltene Precipitation In Solvent-Diluted Bitumens Using Cubic-Plus-Association Equation Of State. , 2016, , .		2
21	Solids Deposition from Waxâ€"Solventâ€"Water â€œWaxyâ€•Mixtures Using a Cold Finger Apparatus. Energy & Fuels, 2015, 29, 501-511.	2.5	33
22	A steady-state heat-transfer model for solids deposition from waxy mixtures in a pipeline. Fuel, 2014, 137, 346-359.	3.4	42
23	Effect of cooling rate on the wax precipitation temperature of â€œwaxyâ€•mixtures. Fuel, 2013, 103, 1144-1147.	3.4	41
24	Solids Deposition from Two-Phase Waxâ€"Solventâ€"Water â€œWaxyâ€•Mixtures under Turbulent Flow. Energy & Fuels, 2013, 27, 1914-1925.	2.5	34
25	Modeling of Solids Deposition from â€œWaxyâ€•Mixtures in â€œHot Flowâ€•and â€œCold Flowâ€•Regimes in a Pipeline Operating under Turbulent Flow. Energy & Fuels, 2013, 27, 6477-6490.	2.5	27
26	Modeling the Static Cooling of Waxâ€"Solvent Mixtures in a Cylindrical Vessel. , 2012, , .		3
27	A novel laboratory experiment for demonstrating boiling heat transfer. Education for Chemical Engineers, 2012, 7, e210-e218.	2.8	8
28	Comments on â€œThe Effect of Operating Temperatures on Wax Depositionâ€•by Huang et al.. Energy & Fuels, 2012, 26, 3963-3966.	2.5	9
29	Direct formation of gasoline hydrocarbons from cellulose by hydrothermal conversion with in situ hydrogen. Biomass and Bioenergy, 2012, 47, 228-239.	2.9	12
30	Design of a laboratory experiment on heat transfer in an agitated vessel. Education for Chemical Engineers, 2011, 6, e83-e89.	2.8	15
31	Field-scale operation of methane biofiltration systems to mitigate point source methane emissions. Environmental Pollution, 2011, 159, 1715-1720.	3.7	19
32	Alkaline hydrothermal conversion of cellulose to bio-oil: Influence of alkalinity on reaction pathway change. Bioresource Technology, 2011, 102, 6605-6610.	4.8	64
33	Comment on: â€œRapid simultaneous evaluation of four parameters of single-component gases in nonvolatile liquids from a single data setâ€, by F. Civan and M.L. Rasmussen, Chemical Engineering Science 64, 5084â€"5092 (2009). Chemical Engineering Science, 2010, 65, 3362.	1.9	0
34	Deposition from â€œWaxyâ€•Mixtures under Turbulent Flow in Pipelines: Inclusion of a Viscoplastic Deformation Model for Deposit Aging. Energy & Fuels, 2010, 24, 2240-2248.	2.5	30
35	Deposition from Waxâ^'Solvent Mixtures under Turbulent Flow: Effects of Shear Rate and Time on Deposit Properties. Energy & Fuels, 2009, 23, 1299-1310.	2.5	46
36	Exergy Analysis of Direct and Indirect Combustion of Methanol by Utilizing Solar Energy or Waste Heat. Energy & Fuels, 2009, 23, 1723-1733.	2.5	13

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37	Solids Deposition during â€œCold Flowâ€•of Waxâˆ'Solvent Mixtures in a Flow-loop Apparatus with Heat Transfer. Energy & Fuels, 2009, 23, 3184-3194.	2.5	70
38	Study of thin biocovers (TBC) for oxidizing uncaptured methane emissions in bioreactor landfills. Waste Management, 2008, 28, 1364-1374.	3.7	38
39	Measurement of the Liquidâˆ'Deposit Interface Temperature during Solids Deposition from Waxâˆ'Solvent Mixtures under Static Cooling Conditions. Energy & Fuels, 2008, 22, 1174-1182.	2.5	30
40	Modeling the Effect of Shear Stress on the Composition and Growth of the Deposit Layer from â€œWaxyâ€•Mixtures under Laminar Flow in a Pipeline. Energy & Fuels, 2008, 22, 3237-3248.	2.5	27
41	Measurement of the Liquidâˆ'Deposit Interface Temperature during Solids Deposition from Waxâˆ'Solvent Mixtures under Sheared Cooling. Energy & Fuels, 2008, 22, 4039-4048.	2.5	28
42	Modeling the Effect of Shear Stress on Deposition from â€œWaxyâ€•Mixtures under Laminar Flow with Heat Transferâ€. Energy & Fuels, 2007, 21, 1277-1286.	2.5	46
43	Deposition under Turbulent Flow of Waxâˆ'Solvent Mixtures in a Bench-Scale Flow-Loop Apparatus with Heat Transferâ€. Energy & Fuels, 2007, 21, 1263-1276.	2.5	50
44	Modeling of Deposition from â€œWaxyâ€•Mixtures in a Pipeline under Laminar Flow Conditions via Moving Boundary Formulation. Industrial & Engineering Chemistry Research, 2006, 45, 8728-8737.	1.8	26
45	An Inverse Solution Methodology for Estimating Diffusivity Coefficient of Gases in Bitumen from Pressure-Decay Data. , 2006, , .		3
46	An inverse solution methodology for estimating the diffusion coefficient of gases in Athabasca bitumen from pressure-decay data. Journal of Petroleum Science and Engineering, 2006, 53, 189-202.	2.1	75
47	Thermal Decomposition Of Carbonyl Sulfide At Temperatures Encountered In The Front End Of Modified Claus Plants. Chemical Engineering Communications, 2005, 192, 370-385.	1.5	11
48	Solids Deposition from Multicomponent Waxâˆ'Solvent Mixtures in a Benchscale Flow-Loop Apparatus with Heat Transferâ€. Energy & Fuels, 2005, 19, 1387-1398.	2.5	47
49	Modeling of Deposit Formation from â€œWaxyâ€•Mixtures via Moving Boundary Formulation:â€‰ Radial Heat Transfer under Static and Laminar Flow Conditions. Industrial & Engineering Chemistry Research, 2005, 44, 6948-6962.	1.8	45
50	Development of Graphical Methods for Estimating the Diffusivity Coefficient of Gases in Bitumen from Pressure-Decay Data. Energy & Fuels, 2005, 19, 2041-2049.	2.5	124
51	Measurement and Prediction of the Phase Behavior of Waxâˆ'Solvent Mixtures:Â Significance of the WaxDisappearance Temperature. Industrial & Engineering Chemistry Research, 2004, 43, 3451-3461.	1.8	56
52	Heat-Transfer Analogy for Wax Deposition from Paraffinic Mixtures. Industrial & Engineering Chemistry Research, 2004, 43, 791-803.	1.8	78
53	Phase Transformation and Rheological Behaviour of Highly Paraffinic â€œWaxyâ€•Mixtures. Canadian Journal of Chemical Engineering, 2004, 82, 162-174.	0.9	32
54	Axial dispersion in the three-dimensional mixing of particles in a rotating drum reactor. Chemical Engineering Science, 2003, 58, 401-415.	1.9	125

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55	Diffusivity of CO₂, CH₄, C₂H₆ and N₂ in athabasca bitumen. Canadian Journal of Chemical Engineering, 2002, 80, 116-125.	0.9	161
56	Measurement of intrinsic rates for homogeneous gasâ€phase reactions at high temperatures. Canadian Journal of Chemical Engineering, 2002, 80, 513-517.	0.9	1
57	Petroleum and Coal. Analytical Chemistry, 2001, 73, 2791-2804.	3.2	35
58	The fate of methane in a claus plant reaction furnace. Canadian Journal of Chemical Engineering, 2001, 79, 482-490.	0.9	38
59	Liquidâ€“solid phase transformation of C16H34, C28H58 and C41H84 and their binary and ternary mixtures. Thermochimica Acta, 2000, 356, 27-38.	1.2	36
60	Experimental Measurement of Gas Diffusivity in Bitumen:Â Results for Carbon Dioxide. Industrial & Engineering Chemistry Research, 2000, 39, 1080-1087.	1.8	146
61	A high-temperature experimental and modeling study of homogeneous gas-phase COS reactions applied to Claus plants. Chemical Engineering Science, 1999, 54, 2999-3006.	1.9	53
62	Use of new reaction kinetics for COS formation to achieve reduced sulfur emissions from claus plants. Canadian Journal of Chemical Engineering, 1999, 77, 392-398.	0.9	10
63	On reaction kinetics for the thermal decomposition of hydrogen sulfide. AIChE Journal, 1999, 45, 383-389.	1.8	51
64	Petroleum and Coal. Analytical Chemistry, 1999, 71, 81-108.	3.2	34
65	Viscosity Prediction of Nonpolar, Polar, and Associating Fluids over a WidePÏ†Range from a Modified Square Well Intermolecular Potential Model. Industrial & Engineering Chemistry Research, 1998, 37, 652-659.	1.8	10
66	COS-Forming Reaction between CO and Sulfur:Â A High-Temperature Intrinsic Kinetics Study. Industrial & Engineering Chemistry Research, 1998, 37, 4609-4616.	1.8	34
67	Viscosity prediction from a modified square well intermolecular potential model: polar and associating compounds. Fluid Phase Equilibria, 1997, 137, 275-287.	1.4	9
68	Modelling a circulating fluidized bed riser reactor with gasâ€"solids downflow at the wall. Canadian Journal of Chemical Engineering, 1997, 75, 317-326.	0.9	14
69	Comment on â€œcorrelation and prediction of the viscosity of pure hydrocarbonsâ€, A. K. Mehrotra, Can. J. Chem. Eng. 72, 554â€“557 (1994). Canadian Journal of Chemical Engineering, 1996, 74, 558-559.	0.9	0
70	Viscosity prediction from a modified square well intermolecular potential model. Fluid Phase Equilibria, 1996, 117, 378-385.	1.4	16
71	Non-isothermal crystallization kinetics of binary mixtures of n-alkanes: ideal eutectic and isomorphous systems. Fuel, 1996, 75, 500-508.	3.4	15
72	A review of practical calculation methods for the viscosity of liquid hydrocarbons and their mixtures. Fluid Phase Equilibria, 1996, 117, 344-355.	1.4	117

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73	Hydrodynamic and kinetic modelling of circulating fluidized bed reactors applied to a modified Claus plant. Chemical Engineering Science, 1996, 51, 5251-5262.	1.9	12
74	Model for In Situ Air Stripping of Contaminated Soils: Effects of Hydrocarbon Adsorption. Energy Sources Part A Recovery, Utilization, and Environmental Effects, 1996, 18, 21-36.	0.5	2
75	Thermal behaviour of polymorphic n-alkanes: effect of cooling rate on the major transition temperatures. Fuel, 1995, 74, 96-101.	3.4	42
76	Re-examination of a proposed model for nonisothermal crystallization kinetics. Polymer Engineering and Science, 1995, 35, 170-172.	1.5	11
77	Liquid-solid-solid thermal behaviour of n-C44H90 + n-C50H102 and n-C25H52 + n-C28H58 paraffinic binary mixtures. Fluid Phase Equilibria, 1995, 111, 253-272.	1.4	38
78	Viscosity: A critical review of practical predictive and correlative methods. Canadian Journal of Chemical Engineering, 1995, 73, 3-40.	0.9	176
79	Air stripping of hydrocarbonâ€contaminated soils: Investigation of mass transfer effects. Canadian Journal of Chemical Engineering, 1995, 73, 196-203.	0.9	8
80	A study of interactions between soil fractions and PAH compounds in thermal desorption of contaminated soils. Canadian Journal of Chemical Engineering, 1995, 73, 844-853.	0.9	9
81	Petroleum and Coal. Crude Oil and Shale Oil. Analytical Chemistry, 1995, 67, 321-326.	3.2	3
82	Correlation and prediction of the viscosity of pure hydrocarbons. Canadian Journal of Chemical Engineering, 1994, 72, 554-557.	0.9	16
83	Separation of monoclonal IgM antibodies using tangential flow ultrafiltration. Canadian Journal of Chemical Engineering, 1994, 72, 982-990.	0.9	4
84	Modeling reaction quench times in the waste heat boiler of a Claus plant. [Erratum to document cited in CA120:33794]. Industrial & Engineering Chemistry Research, 1994, 33, 1880-1880.	1.8	0
85	Modeling reaction quench times in the waste heat boiler of a Claus plant. Industrial & Engineering Chemistry Research, 1994, 33, 7-13.	1.8	28
86	Including Radiative Heat Transfer and Reaction Quenching in Modeling a Claus Plant Waste Heat Boiler. Industrial & Engineering Chemistry Research, 1994, 33, 2651-2655.	1.8	13
87	Comments on "Modeling the Viscosity of Middle-East Crude Oil Mixtures". Industrial & Engineering Chemistry Research, 1994, 33, 1410-1411.	1.8	1
88	Effects of Temperature and Pressure on Asphaltene Particle Size Distributions in Crude Oils Diluted with n-Pentane. Industrial & Engineering Chemistry Research, 1994, 33, 1324-1330.	1.8	60
89	The movement of solids through flighted rotating drums. Part II solidsâ€gas interaction and model validation. Canadian Journal of Chemical Engineering, 1994, 72, 240-248.	0.9	13
90	Non-isothermal crystallization kinetics of n-paraffins: comparison of even-numbered and odd-numbered normal alkanes. Thermochimica Acta, 1993, 215, 197-209.	1.2	19

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91	The movement of solids through flighted rotating drums. Part i: Model formulation. Canadian Journal of Chemical Engineering, 1993, 71, 337-346.	0.9	47
92	Measurement of asphaltene agglomeration from cold lake bitumen diluted with n-alkanes. Canadian Journal of Chemical Engineering, 1993, 71, 699-703.	0.9	27
93	Measurement of asphaltene particle size distributions in crude oils diluted with n-heptane. Industrial & Engineering Chemistry Research, 1993, 32, 955-959.	1.8	65
94	Comments on "Solubility of carbon dioxide in tar sand bitumens: experimental determination and modeling". Industrial & Engineering Chemistry Research, 1992, 31, 1422-1423.	1.8	2
95	Non-isothermal crystallization kinetics of n-paraffins with chain lengths between thirty and fifty. Thermochimica Acta, 1992, 211, 137-153.	1.2	38
96	Phase behaviour of CO₂ â€bitumen fractions. Canadian Journal of Chemical Engineering, 1992, 70, 159-164.	0.9	11
97	Mixing rules for predicting the viscosity of bitumens saturated with pure gases. Canadian Journal of Chemical Engineering, 1992, 70, 165-172.	0.9	16
98	Reply to Andersson and Kristoffersen. Canadian Journal of Chemical Engineering, 1992, 70, 205-206.	0.9	0
99	Reply to Mitschka. Canadian Journal of Chemical Engineering, 1992, 70, 832-832.	0.9	0
100	A generalized viscosity equation for liquid hydrocarbons: Application to oil-sand bitumens. Fluid Phase Equilibria, 1992, 75, 257-268.	1.4	11
101	A mixing rule approach for predicting the viscosity of CO2-saturated cold lake bitumen and bitumen fractions. Journal of Petroleum Science and Engineering, 1992, 6, 289-299.	2.1	6
102	A generalized viscosity equation for pure heavy hydrocarbons. Industrial & Engineering Chemistry Research, 1991, 30, 420-427.	1.8	44
103	Generalized one-parameter viscosity equation for light and medium liquid hydrocarbons. Industrial & Engineering Chemistry Research, 1991, 30, 1367-1372.	1.8	49
104	Modeling temperature and composition dependence for the viscosity of diluted bitumens. Journal of Petroleum Science and Engineering, 1991, 5, 261-272.	2.1	11
105	Modified shape factors for improved viscosity predictions using corresponding states. Canadian Journal of Chemical Engineering, 1991, 69, 1213-1219.	0.9	29
106	Phase equilibria predictions for the CO₂â€H₂Oâ€NaClâ€bitumen system. Canadian Journal of Chemical Engineering, 1990, 68, 498-503.	0.9	1
107	Unified entry length for newtonian and powerâ€“law fluids in laminar pipe flow. Canadian Journal of Chemical Engineering, 1990, 68, 529-533.	0.9	21
108	Development of mixing rules for predicting the viscosity of bitumen and its fractions blended with toluene. Canadian Journal of Chemical Engineering, 1990, 68, 839-848.	0.9	41

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109	Combined thermal-momentum start-up in long pipes. International Journal of Heat and Mass Transfer, 1990, 33, 2051-2053.	2.5	3
110	Comments on: Wax deposition of Bombay high crude oil under flowing conditions. Fuel, 1990, 69, 1575-1576.	3.4	11
111	Viscosity data and correlation for mixtures of bitumen fractions. Fuel Processing Technology, 1990, 26, 25-37.	3.7	12
112	Modeling the effects of temperature, pressure, and composition on the viscosity of crude oil mixtures. Industrial & Engineering Chemistry Research, 1990, 29, 1574-1578.	1.8	42
113	Quench time modeling in propane ultrapyrolysis. Canadian Journal of Chemical Engineering, 1989, 67, 608-614.	0.9	7
114	Laminar startâ€up flow in short pipe lengths. Canadian Journal of Chemical Engineering, 1989, 67, 883-888.	0.9	15
115	Viscosity of cold lake bitumen and its fractions. Canadian Journal of Chemical Engineering, 1989, 67, 1004-1009.	0.9	39
116	Subsaturation equilibrium distribution of carbon dioxide between bitumen and water. Fluid Phase Equilibria, 1989, 52, 299-306.	1.4	3
117	Solubilities of carbon dioxide in water and 1 wt. % sodium chloride solution at pressures up to 10 MPa and temperatures from 80 to 200.degree.C. Journal of Chemical & Engineering Data, 1989, 34, 355-360.	1.0	172
118	Properties Of Peace River Bitumen Saturated With Field Gas Mixtures. Journal of Canadian Petroleum Technology, 1989, 28, .	2.3	35
119	Calculation Of Gas Solubility In Wabasca Bitumen. Journal of Canadian Petroleum Technology, 1989, 28, .	2.3	12
120	Properties of cold lake bitumen saturated with pure gases and gas mixtures. Canadian Journal of Chemical Engineering, 1988, 66, 656-665.	0.9	99
121	Correlation and prediction of gas solubility in cold lake bitumen. Canadian Journal of Chemical Engineering, 1988, 66, 666-670.	0.9	25
122	Vâ€Lâ€S multiphase equilibrium in bitumenâ€diluent systems. Canadian Journal of Chemical Engineering, 1988, 66, 870-878.	0.9	24
123	Characterization Of Athabasca Bitumen For Gas Solubility Calculations. Journal of Canadian Petroleum Technology, 1988, 27, .	2.3	16
124	Viscosity prediction of Athabasca bitumen using the extended principle of corresponding states. Industrial & Engineering Chemistry Research, 1987, 26, 2290-2298.	1.8	39
125	Viscosity of compressed cold lake bitumen. Canadian Journal of Chemical Engineering, 1987, 65, 672-675.	0.9	52
126	Prediction of mass diffusivity of CO₂ into bitumen. Canadian Journal of Chemical Engineering, 1987, 65, 826-832.	0.9	14

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127	Viscosity of compressed athabasca bitumen. Canadian Journal of Chemical Engineering, 1986, 64, 844-847.	0.9	154
128	Prediction of surface tension of athabasca bitumen. Canadian Journal of Chemical Engineering, 1985, 63, 340-343.	0.9	5
129	High-temperature chlorination of coal ash in a fluidized bed. 1. Recovery of aluminum. Industrial & Engineering Chemistry Process Design and Development, 1982, 21, 37-44.	0.6	22
130	High-temperature chlorination of coal ash in a fluidized bed. 2. Recovery of iron, silicon, and titanium. Industrial & Engineering Chemistry Process Design and Development, 1982, 21, 44-50.	0.6	9
131	Correlations For Properties of Bitumen Saturated With CO2 , CH4 And N2 , And Experiments With Combustion Gas Mixtures. Journal of Canadian Petroleum Technology, 1982, 21, .	2.3	67
132	Gas Solubility, Viscosity And Density Measurements For Athabasca Bitumen. Journal of Canadian Petroleum Technology, 1982, 21, .	2.3	116
133	Metal recovery from coal ash via chlorination â€" A thermodynamic study. Canadian Journal of Chemical Engineering, 1979, 57, 225-232.	0.9	12