

Anthony G Dixon

List of Publications by Year in descending order

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79
papers

4,719
citations

101543

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79
all docs

79
docs citations

79
times ranked

1973
citing authors

#	ARTICLE	IF	CITATIONS
1	Local transport and reaction rates in a fixed bed reactor tube: Exothermic partial oxidation of ethylene. <i>Chemical Engineering Science</i> , 2021, 231, 116305.	3.8	18
2	Particle-resolved CFD simulation of fixed bed pressure drop at moderate to high Reynolds number. <i>Powder Technology</i> , 2021, 385, 69-82.	4.2	14
3	Local Structure Effects on Heat Transfer in Very Low Tube-to-Particle Diameter Ratio Fixed Beds of Spheres. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 9777-9786.	3.7	7
4	Multi-scale two-dimensional packed bed reactor model for industrial steam methane reforming. <i>Fuel Processing Technology</i> , 2020, 200, 106314.	7.2	23
5	Effect of particle shape on methanol partial oxidation in a fixed bed using CFD reactor modeling. <i>AIChE Journal</i> , 2020, 66, e16904.	3.6	23
6	Comparative evaluation of heat transfer correlations with different fluid property considerations for fixed-bed reactor modeling. <i>International Journal of Heat and Mass Transfer</i> , 2020, 148, 119099.	4.8	5
7	Computational Fluid Dynamics for Fixed Bed Reactor Design. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2020, 11, 109-130.	6.8	99
8	A new heat transfer correlation suited for the design of fixed-bed reactors via numerical optimization. <i>Chemical Engineering Science</i> , 2020, 220, 115614.	3.8	5
9	Partial oxidation of o-xylene to phthalic anhydride in a fixed bed reactor with axial thermowells. <i>Chemical Engineering Research and Design</i> , 2020, 159, 125-137.	5.6	11
10	Integrated multiscale modeling of fixed bed reactors: Studying the reactor under dynamic reaction conditions. <i>Chemical Engineering Journal</i> , 2019, 377, 119738.	12.7	24
11	Flow and heat transfer in narrow fixed beds with axial thermowells. <i>Numerical Heat Transfer; Part A: Applications</i> , 2019, 76, 811-829.	2.1	12
12	110th Anniversary: Commentary: CFD as a Modeling Tool for Fixed Bed Reactors. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 5733-5736.	3.7	29
13	Flux-dependent anisotropic pellet diffusivity in particle-resolved CFD simulations of fixed beds. <i>Chemical Engineering Science</i> , 2019, 198, 224-234.	3.8	11
14	n-Butane partial oxidation in a fixed bed: A resolved particle computational fluid dynamics simulation. <i>Canadian Journal of Chemical Engineering</i> , 2018, 96, 1946-1956.	1.7	13
15	A hierarchical approach to chemical reactor engineering: an application to micro packed bed reactors. <i>Reaction Chemistry and Engineering</i> , 2018, 3, 25-33.	3.7	20
16	Random Forests for mapping and analysis of microkinetics models. <i>Computers and Chemical Engineering</i> , 2018, 115, 286-294.	3.8	42
17	CFD study of heat and mass transfer in ethanol steam reforming in a catalytic membrane reactor. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 7662-7674.	7.1	36
18	Scalability of multitube membrane modules for hydrogen separation: Technical considerations, issues and solutions. <i>Journal of Membrane Science</i> , 2018, 564, 887-896.	8.2	9

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19	Resolved-Pore Simulation of CO Oxidation on Rh/Al ₂ O ₃ in a Catalyst Layer. ChemEngineering, 2018, 2, 2.	2.4	4
20	Local transport and reaction rates in a fixed bed reactor tube: Endothermic steam methane reforming. Chemical Engineering Science, 2017, 168, 156-177.	3.8	109
21	Cell agglomeration algorithm for coupling microkinetic modeling and steady-state CFD simulations of catalytic reactors. Computers and Chemical Engineering, 2017, 97, 175-182.	3.8	13
22	3D CFD Simulations of Local Carbon Formation in Steam Methane Reforming Catalyst Particles. International Journal of Chemical Reactor Engineering, 2017, 15, .	1.1	9
23	An integrated workflow for resolved-particle packed bed models with complex particle shapes. Powder Technology, 2017, 322, 258-272.	4.2	108
24	Resolved-particle fixed bed CFD with microkinetics for ethylene oxidation. AIChE Journal, 2017, 63, 87-94.	3.6	26
25	Performance of a pilot-scale multitube membrane module under coal-derived syngas for hydrogen production and separation. Journal of Membrane Science, 2017, 523, 515-523.	8.2	11
26	Computational Fluid Dynamics Simulations of Gas-Phase Radial Dispersion in Fixed Beds with Wall Effects. Fluids, 2017, 2, 56.	1.7	16
27	Integration of Methane Steam Reforming and Water Gas Shift Reaction in a Pd/Au/Pd-Based Catalytic Membrane Reactor for Process Intensification. Membranes, 2016, 6, 44.	3.0	26
28	Reduced Microkinetics Model for Computational Fluid Dynamics (CFD) Simulation of the Fixed-Bed Partial Oxidation of Ethylene. Industrial & Engineering Chemistry Research, 2016, 55, 7296-7306.	3.7	33
29	Experimental and simulation studies of the production of renewable hydrogen through ethanol steam reforming in a large-scale catalytic membrane reactor. Chemical Engineering Journal, 2016, 303, 302-313.	12.7	60
30	Computationally efficient incorporation of microkinetics into resolved-particle CFD simulations of fixed-bed reactors. Computers and Chemical Engineering, 2016, 88, 126-134.	3.8	45
31	CFD study of effect of inclination angle on transport and reaction in hollow cylinder catalysts. Chemical Engineering Research and Design, 2014, 92, 1279-1295.	5.6	29
32	A New Approach to Fixed Bed Radial Heat Transfer Modeling Using Velocity Fields from Computational Fluid Dynamics Simulations. Industrial & Engineering Chemistry Research, 2013, 52, 15244-15261.	3.7	56
33	CFD testing of the pointwise use of the Zehner-Schl�nder formulas for fixed-bed stagnant thermal conductivity. International Communications in Heat and Mass Transfer, 2013, 42, 1-4.	5.6	13
34	Systematic mesh development for 3D CFD simulation of fixed beds: Contact points study. Computers and Chemical Engineering, 2013, 48, 135-153.	3.8	160
35	Flow, Transport, and Reaction Interactions in Shaped Cylindrical Particles for Steam Methane Reforming. Industrial & Engineering Chemistry Research, 2012, 51, 15839-15854.	3.7	51
36	Experimental validation of high Reynolds number CFD simulations of heat transfer in a pilot-scale fixed bed tube. Chemical Engineering Journal, 2012, 200-202, 344-356.	12.7	88

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37	Comparison of CFD simulations to experiment under methane steam reforming reacting conditions. Chemical Engineering Journal, 2012, 207-208, 690-700.	12.7	77
38	Fixed bed catalytic reactor modelling—the radial heat transfer problem. Canadian Journal of Chemical Engineering, 2012, 90, 507-527.	1.7	97
39	Systematic mesh development for 3D CFD simulation of fixed beds: Single sphere study. Computers and Chemical Engineering, 2011, 35, 1171-1185.	3.8	70
40	Flow, Transport, and Reaction Interactions for Cylindrical Particles With Strongly Endothermic Reactions. Industrial & Engineering Chemistry Research, 2010, 49, 9026-9037.	3.7	32
41	Catalyst Deactivation in 3D CFD Resolved Particle Simulations of Propane Dehydrogenation. Industrial & Engineering Chemistry Research, 2010, 49, 10641-10650.	3.7	32
42	CFD Method To Couple Three-Dimensional Transport and Reaction inside Catalyst Particles to the Fixed Bed Flow Field. Industrial & Engineering Chemistry Research, 2010, 49, 9012-9025.	3.7	96
43	Wall-to-particle heat transfer in steam reformer tubes: CFD comparison of catalyst particles. Chemical Engineering Science, 2008, 63, 2219-2224.	3.8	50
44	CFD Study of the Influence of Catalyst Particle Design on Steam Reforming Reaction Heat Effects in Narrow Packed Tubes. Industrial & Engineering Chemistry Research, 2008, 47, 5966-5975.	3.7	34
45	CFD Study of Fluid Flow and Heat Transfer in a Fixed Bed of Cylinders. Numerical Heat Transfer; Part A: Applications, 2007, 52, 203-218.	2.1	29
46	3D CFD simulations of steam reforming with resolved intraparticle reaction and gradients. Chemical Engineering Science, 2007, 62, 4963-4966.	3.8	63
47	Packed Tubular Reactor Modeling and Catalyst Design using Computational Fluid Dynamics. Advances in Chemical Engineering, 2006, 31, 307-389.	0.9	144
48	CFD Study of Heat Transfer near and at the Wall of a Fixed Bed Reactor Tube: Effect of Wall Conduction. Industrial & Engineering Chemistry Research, 2005, 44, 6342-6353.	3.7	30
49	CFD study of fluid flow and wall heat transfer in a fixed bed of spheres. AIChE Journal, 2004, 50, 906-921.	3.6	205
50	Catalyst design by CFD for heat transfer and reaction in steam reforming. Chemical Engineering Science, 2004, 59, 5185-5191.	3.8	92
51	Recent Research in Catalytic Inorganic Membrane Reactors. International Journal of Chemical Reactor Engineering, 2003, 1, .	1.1	28
52	CFD Simulation of Reaction and Heat Transfer Near the Wall of a Fixed Bed. International Journal of Chemical Reactor Engineering, 2003, 1, .	1.1	18
53	CFD as a Design Tool for Fixed-Bed Reactors. Industrial & Engineering Chemistry Research, 2001, 40, 5246-5254.	3.7	205
54	Comparison of CFD simulations to experiment for convective heat transfer in a gas–solid fixed bed. Chemical Engineering Journal, 2001, 82, 231-246.	12.7	191

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55	Analysis of intermediate product yield in distributed-feed nonisothermal tubular membrane reactors. <i>Catalysis Today</i> , 2001, 67, 189-203.	4.4	22
56	Oxidative coupling of methane in a modified γ -alumina membrane reactor. <i>Chemical Engineering Science</i> , 2000, 55, 4901-4912.	3.8	51
57	Oxygen-permeable dense membrane reactor for the oxidative coupling of methane. <i>Journal of Membrane Science</i> , 2000, 170, 27-34.	8.2	108
58	Oxidative coupling of methane using oxygen-permeable dense membrane reactors. <i>Catalysis Today</i> , 2000, 56, 297-305.	4.4	60
59	The influence of the tube and particle diameters at constant ratio on heat transfer in packed beds. <i>Chemical Engineering and Processing: Process Intensification</i> , 1998, 37, 23-32.	3.6	37
60	Computational fluid dynamics studies of fixed bed heat transfer. <i>Chemical Engineering and Processing: Process Intensification</i> , 1998, 37, 7-21.	3.6	67
61	Computational Fluid Dynamics Studies of the Effects of Temperature-Dependent Physical Properties on Fixed-Bed Heat Transfer. <i>Industrial & Engineering Chemistry Research</i> , 1998, 37, 739-747.	3.7	27
62	Dense Perovskite, $\text{La}_{1-x}\text{Ae}_x\text{FeCo}_y\text{O}_{3-\delta}$ ($\text{Ae} = \text{Tj, ET, Q, O}$) Society, 1998, 81, 1437-1444.	3.8	167
63	Heat Transfer in Fixed Beds at Very Low (<4) Tube-to-Particle Diameter Ratio. <i>Industrial & Engineering Chemistry Research</i> , 1997, 36, 3053-3064.	3.7	64
64	Analysis and Optimization of Cross-Flow Reactors for Oxidative Coupling of Methane. <i>Industrial & Engineering Chemistry Research</i> , 1997, 36, 559-567.	3.7	31
65	Dense perovskite membrane reactors for partial oxidation of methane to syngas. <i>AIChE Journal</i> , 1997, 43, 2741-2750.	3.6	244
66	Analysis and optimization of cross-flow reactors with staged feed policies— isothermal operation with parallel-series, irreversible reaction systems. <i>Chemical Engineering Science</i> , 1997, 52, 1349-1363.	3.8	38
67	An improved equation for the overall heat transfer coefficient in packed beds. <i>Chemical Engineering and Processing: Process Intensification</i> , 1996, 35, 323-331.	3.6	88
68	DETERMINATION OF THE FIXED BED WALL HEAT TRANSFER COEFFICIENT USING COMPUTATIONAL FLUID DYNAMICS. <i>Numerical Heat Transfer; Part A: Applications</i> , 1996, 29, 777-794.	2.1	33
69	MODELING AND SIMULATION OF A NONISOTHERMAL CATALYTIC MEMBRANE REACTOR. <i>Chemical Engineering Communications</i> , 1995, 134, 107-132.	2.6	39
70	Waste Reduction and Recovery Using O ₂ -Permeable Membrane Reactors. <i>Industrial & Engineering Chemistry Research</i> , 1994, 33, 3015-3024.	3.7	32
71	HEAT TRANSFER IN PACKED BEDS OF SPHERES WITH $D_t/D_p \approx 4$. , 1994, , .		8
72	Plasma deposition of silicon nitride films in a radial-flow reactor. <i>AIChE Journal</i> , 1989, 35, 995-1002.	3.6	8

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73	Correlations for wall and particle shape effects on fixed bed bulk voidage. Canadian Journal of Chemical Engineering, 1988, 66, 705-708.	1.7	189
74	WALL AND PARTICLE-SHAPE EFFECTS ON HEAT TRANSFER IN PACKED BEDS. Chemical Engineering Communications, 1988, 71, 217-237.	2.6	79
75	The length effect on packed bed effective heat transfer parameters. The Chemical Engineering Journal, 1985, 31, 163-173.	0.3	52
76	Solid conduction in low dt/dp beds of spheres, pellets and rings. International Journal of Heat and Mass Transfer, 1985, 28, 383-394.	4.8	54
77	Wall-to-fluid coefficients for fixed bed heat and mass transfer. International Journal of Heat and Mass Transfer, 1985, 28, 879-881.	4.8	26
78	Fluid-phase radial transport in packed beds of low tube-to-particle diameter ratio. International Journal of Heat and Mass Transfer, 1984, 27, 1701-1713.	4.8	67
79	Theoretical prediction of effective heat transfer parameters in packed beds. AIChE Journal, 1979, 25, 663-676.	3.6	377