Anthony G Dixon

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5957564/publications.pdf

Version: 2024-02-01

79 papers	4,719 citations	101543 36 h-index	95266 68 g-index
79 all docs	79 docs citations	79 times ranked	1973 citing authors

#	Article	IF	Citations
1	Theoretical prediction of effective heat transfer parameters in packed beds. AICHE Journal, 1979, 25, 663-676.	3.6	377
2	Dense perovskite membrane reactors for partial oxidation of methane to syngas. AICHE Journal, 1997, 43, 2741-2750.	3.6	244
3	CFD as a Design Tool for Fixed-Bed Reactors. Industrial & Engineering Chemistry Research, 2001, 40, 5246-5254.	3.7	205
4	CFD study of fluid flow and wall heat transfer in a fixed bed of spheres. AICHE Journal, 2004, 50, 906-921.	3.6	205
5	Comparison of CFD simulations to experiment for convective heat transfer in a gasâ€“solid fixed bed. Chemical Engineering Journal, 2001, 82, 231-246.	12.7	191
6	Correlations for wall and particle shape effects on fixed bed bulk voidage. Canadian Journal of Chemical Engineering, 1988, 66, 705-708.	1.7	189
7	Dense Perovskite, La_{1â€x}Aâ€²_xFe_{1â€y}Co_yO_{3â€Î´} (Aâ€²=) Tj ETQq1 1 Society, 1998, 81, 1437-1444.	3.8	167
8	Systematic mesh development for 3D CFD simulation of fixed beds: Contact points study. Computers and Chemical Engineering, 2013, 48, 135-153.	3.8	160
9	Packed Tubular Reactor Modeling and Catalyst Design using Computational Fluid Dynamics. Advances in Chemical Engineering, 2006, 31, 307-389.	0.9	144
10	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
11	Oxygen-permeable dense membrane reactor for the oxidative coupling of methane. Journal of Membrane Science, 2000, 170, 27-34.	8.2	108
12	An integrated workflow for resolved-particle packed bed models with complex particle shapes. Powder Technology, 2017, 322, 258-272.	4.2	108
13	Computational Fluid Dynamics for Fixed Bed Reactor Design. Annual Review of Chemical and Biomolecular Engineering, 2020, 11, 109-130.	6.8	99
14	Fixed bed catalytic reactor modellingâ€”the radial heat transfer problem. Canadian Journal of Chemical Engineering, 2012, 90, 507-527.	1.7	97
15	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
16	Catalyst design by CFD for heat transfer and reaction in steam reforming. Chemical Engineering Science, 2004, 59, 5185-5191.	3.8	92
17	An improved equation for the overall heat transfer coefficient in packed beds. Chemical Engineering and Processing: Process Intensification, 1996, 35, 323-331.	3.6	88
18	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

#	Article	IF	Citations
19	WALL AND PARTICLE-SHAPE EFFECTS ON HEAT TRANSFER IN PACKED BEDS. Chemical Engineering Communications, 1988, 71, 217-237.	2.6	79
20	Comparison of CFD simulations to experiment under methane steam reforming reacting conditions. Chemical Engineering Journal, 2012, 207-208, 690-700.	12.7	77
21	Systematic mesh development for 3D CFD simulation of fixed beds: Single sphere study. Computers and Chemical Engineering, 2011, 35, 1171-1185.	3.8	70
22	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
23	Computational fluid dynamics studies of fixed bed heat transfer. Chemical Engineering and Processing: Process Intensification, 1998, 37, 7-21.	3.6	67
24	Heat Transfer in Fixed Beds at Very Low (<4) Tube-to-Particle Diameter Ratio. Industrial & Engineering Chemistry Research, 1997, 36, 3053-3064.	3.7	64
25	3D CFD simulations of steam reforming with resolved intraparticle reaction and gradients. Chemical Engineering Science, 2007, 62, 4963-4966.	3.8	63
26	Oxidative coupling of methane using oxygen-permeable dense membrane reactors. Catalysis Today, 2000, 56, 297-305.	4.4	60
27	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
28	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
29	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
30	The length effect on packed bed effective heat transfer parameters. The Chemical Engineering Journal, 1985, 31, 163-173.	0.3	52
31	Oxidative coupling of methane in a modified Î³-alumina membrane reactor. Chemical Engineering Science, 2000, 55, 4901-4912.	3.8	51
32	Flow, Transport, and Reaction Interactions in Shaped Cylindrical Particles for Steam Methane Reforming. Industrial & Engineering Chemistry Research, 2012, 51, 15839-15854.	3.7	51
33	Wall-to-particle heat transfer in steam reformer tubes: CFD comparison of catalyst particles. Chemical Engineering Science, 2008, 63, 2219-2224.	3.8	50
34	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
35	Random Forests for mapping and analysis of microkinetics models. Computers and Chemical Engineering, 2018, 115, 286-294.	3.8	42
36	MODELING AND SIMULATION OF A NONISOTHERMAL CATALYTIC MEMBRANE REACTOR. Chemical Engineering Communications, 1995, 134, 107-132.	2.6	39

#	Article	IF	Citations
37	Analysis and optimization of cross-flow reactors with staged feed policiesâ€"isothermal operation with parallel-series, irreversible reaction systems. Chemical Engineering Science, 1997, 52, 1349-1363.	3.8	38
38	The influence of the tube and particle diameters at constant ratio on heat transfer in packed beds. Chemical Engineering and Processing: Process Intensification, 1998, 37, 23-32.	3.6	37
39	CFD study of heat and mass transfer in ethanol steam reforming in a catalytic membrane reactor. International Journal of Hydrogen Energy, 2018, 43, 7662-7674.	7.1	36
40	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
41	DETERMINATION OF THE FIXED BED WALL HEAT TRANSFER COEFFICIENT USING COMPUTATIONAL FLUID DYNAMICS. Numerical Heat Transfer; Part A: Applications, 1996, 29, 777-794.	2.1	33
42	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
43	Waste Reduction and Recovery Using O2-Permeable Membrane Reactors. Industrial & Engineering Chemistry Research, 1994, 33, 3015-3024.	3.7	32
44	Flow, Transport, and Reaction Interactions for Cylindrical Particles With Strongly Endothermic Reactions. Industrial & Engineering Chemistry Research, 2010, 49, 9026-9037.	3.7	32
45	Catalyst Deactivation in 3D CFD Resolved Particle Simulations of Propane Dehydrogenation. Industrial & Engineering Chemistry Research, 2010, 49, 10641-10650.	3.7	32
46	Analysis and Optimization of Cross-Flow Reactors for Oxidative Coupling of Methane. Industrial & Engineering Chemistry Research, 1997, 36, 559-567.	3.7	31
47	CFD Study of Heat Transfer near and at the Wall of a Fixed Bed Reactor Tube:Â Effect of Wall Conduction. Industrial & Engineering Chemistry Research, 2005, 44, 6342-6353.	3.7	30
48	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
49	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
50	110th Anniversary: Commentary: CFD as a Modeling Tool for Fixed Bed Reactors. Industrial & Engineering Chemistry Research, 2019, 58, 5733-5736.	3.7	29
51	Recent Research in Catalytic Inorganic Membrane Reactors. International Journal of Chemical Reactor Engineering, 2003, 1, .	1.1	28
52	Computational Fluid Dynamics Studies of the Effects of Temperature-Dependent Physical Properties on Fixed-Bed Heat Transfer. Industrial & Engineering Chemistry Research, 1998, 37, 739-747.	3.7	27
53	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
54	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

#	Article	IF	Citations
55	Resolvedâ€particle fixed bed CFD with microkinetics for ethylene oxidation. AICHE Journal, 2017, 63, 87-94.	3.6	26
56	Integrated multiscale modeling of fixed bed reactors: Studying the reactor under dynamic reaction conditions. Chemical Engineering Journal, 2019, 377, 119738.	12.7	24
57	Multi-scale two-dimensional packed bed reactor model for industrial steam methane reforming. Fuel Processing Technology, 2020, 200, 106314.	7.2	23
58	Effect of particle shape on methanol partial oxidation in a fixed bed using CFD reactor modeling. AICHE Journal, 2020, 66, e16904.	3.6	23
59	Analysis of intermediate product yield in distributed-feed nonisothermal tubular membrane reactors. Catalysis Today, 2001, 67, 189-203.	4.4	22
60	A hierarchical approach to chemical reactor engineering: an application to micro packed bed reactors. Reaction Chemistry and Engineering, 2018, 3, 25-33.	3.7	20
61	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
62	Local transport and reaction rates in a fixed bed reactor tube: Exothermic partial oxidation of ethylene. Chemical Engineering Science, 2021, 231, 116305.	3.8	18
63	Computational Fluid Dynamics Simulations of Gas-Phase Radial Dispersion in Fixed Beds with Wall Effects. Fluids, 2017, 2, 56.	1.7	16
64	Particle-resolved CFD simulation of fixed bed pressure drop at moderate to high Reynolds number. Powder Technology, 2021, 385, 69-82.	4.2	14
65	CFD testing of the pointwise use of the Zehnerâ€“SchlÃ¼nder formulas for fixed-bed stagnant thermal conductivity. International Communications in Heat and Mass Transfer, 2013, 42, 1-4.	5.6	13
66	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
67	nâ€butane partial oxidation in a fixed bed: A resolved particle computational fluid dynamics simulation. Canadian Journal of Chemical Engineering, 2018, 96, 1946-1956.	1.7	13
68	Flow and heat transfer in narrow fixed beds with axial thermowells. Numerical Heat Transfer; Part A: Applications, 2019, 76, 811-829.	2.1	12
69	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
70	Flux-dependent anisotropic pellet diffusivity in particle-resolved CFD simulations of fixed beds. Chemical Engineering Science, 2019, 198, 224-234.	3.8	11
71	Partial oxidation of o-xylene to phthalic anhydride in a fixed bed reactor with axial thermowells. Chemical Engineering Research and Design, 2020, 159, 125-137.	5.6	11
72	3D CFD Simulations of Local Carbon Formation in Steam Methane Reforming Catalyst Particles. International Journal of Chemical Reactor Engineering, 2017, 15, .	1.1	9

#	Article	IF	Citations
73	Scalability of multitube membrane modules for hydrogen separation: Technical considerations, issues and solutions. Journal of Membrane Science, 2018, 564, 887-896.	8.2	9
74	Plasma deposition of silicon nitride films in a radial-flow reactor. AICHE Journal, 1989, 35, 995-1002.	3.6	8
75	HEAT TRANSFER IN PACKED BEDS OF SPHERES WITH Dt/Dp â‰ˆ 4. , 1994, , .		8
76	Local Structure Effects on Heat Transfer in Very Low Tube-to-Particle Diameter Ratio Fixed Beds of Spheres. Industrial & Engineering Chemistry Research, 2021, 60, 9777-9786.	3.7	7
77	Comparative evaluation of heat transfer correlations with different fluid property considerations for fixed-bed reactor modeling. International Journal of Heat and Mass Transfer, 2020, 148, 119099.	4.8	5
78	A new heat transfer correlation suited for the design of fixed-bed reactors via numerical optimization. Chemical Engineering Science, 2020, 220, 115614.	3.8	5
79	Resolved-Pore Simulation of CO Oxidation on Rh/Al2O3 in a Catalyst Layer. ChemEngineering, 2018, 2, 2.	2.4	4