

Mark H Anderson

List of Publications by Year in descending order

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papers

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126907

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121
all docs

121
docs citations

121
times ranked

1863
citing authors

#	ARTICLE	IF	CITATIONS
1	A High-Throughput Method to Define Additive Manufacturing Process Parameters: Application to Haynes 282. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 250-263.	2.2	11
2	The performance of additively manufactured Haynes 282 in supercritical CO ₂ . Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 841, 143007.	5.6	7
3	Pressure drop and heat transfer characteristics of nitrate salt and supercritical CO ₂ in a diffusion-bonded heat exchanger. International Journal of Heat and Mass Transfer, 2022, 189, 122691.	4.8	6
4	Critical heat flux on zircaloy and accident tolerant fuel cladding under prototypical conditions of pressurized and boiling water reactors. Applied Thermal Engineering, 2022, 213, 118740.	6.0	8
5	Enhanced flow boiling heat transfer on chromium coated zircaloy-4 using cold spray technique for accident tolerant fuel (ATF) materials. Applied Thermal Engineering, 2021, 185, 116347.	6.0	15
6	Simulation of the supercritical CO ₂ recompression Brayton power cycle with a high-temperature regenerator. Energy Conversion and Management, 2021, 229, 113678.	9.2	9
7	Mechanical and Corrosion Response of 316SS in Supercritical CO ₂ . Oxidation of Metals, 2021, 95, 409-425.	2.1	11
8	Experimental investigation of pressure drop and heat transfer in high temperature supercritical CO ₂ and helium in a printed-circuit heat exchanger. International Journal of Heat and Mass Transfer, 2021, 171, 121089.	4.8	36
9	Experimental study of SRT scrubbing model in water coolant pool. Nuclear Engineering and Design, 2021, 377, 111130.	1.7	3
10	Design and demonstration of a laboratory-scale oxygen controlled liquid sodium facility. Nuclear Engineering and Design, 2021, 378, 111093.	1.7	2
11	High Temperature Sodium Submersible Flowmeter Design and Analysis. IEEE Sensors Journal, 2021, 21, 16529-16537.	4.7	1
12	Coupled Heat Transfer and Hydraulic Modeling of an Experimental Printed Circuit Heat Exchanger Using Finite Element Methods. Journal of Thermal Science and Engineering Applications, 2021, 13, .	1.5	6
13	A Critical Review of Fluoride Salt Heat Transfer. Nuclear Technology, 2020, 206, 1625-1641.	1.2	7
14	Using optical fibers to examine thermal mixing of liquid sodium in a pool-type geometry. International Journal of Heat and Mass Transfer, 2020, 158, 119968.	4.8	10
15	Experimental study for critical heat flux in 2x2 rod bundles at high pressure conditions. Nuclear Engineering and Design, 2020, 365, 110730.	1.7	6
16	An Efficient 1-D Thermal Stratification Model for Pool-Type Sodium-Cooled Fast Reactors. Nuclear Technology, 2020, 206, 1465-1480.	1.2	6
17	One-dimensional, transient modeling of a fixed-bed regenerator as a replacement for recuperators in supercritical CO ₂ power cycles. Energy Conversion and Management, 2020, 218, 112921.	9.2	9
18	Optical Fiber-Based Level Sensor for High Temperature Applications. IEEE Sensors Journal, 2020, 20, 9187-9195.	4.7	4

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19	Corrosion and Mechanical Performance of Grade 92 Ferritic-Martensitic Steel After Exposure to Supercritical Carbon Dioxide. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 2564-2572.	2.2	12
20	ASME Boiler and Pressure Vessel Code Roadmap for Compact Heat Exchangers in High Temperature Reactors. Journal of Nuclear Engineering and Radiation Science, 2020, 6, .	0.4	5
21	Ionization Chambers to Determine Neutron and Gamma-Ray Kerma in a Research Reactor. IEEE Transactions on Nuclear Science, 2019, 66, 2160-2169.	2.0	0
22	The performance of Haynes 282 and its weld in supercritical CO2. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 770-777.	5.6	18
23	Development of a Stable High-Temperature Diamond Thermistor Using Enhanced Supporting Designs. IEEE Sensors Journal, 2019, 19, 6587-6594.	4.7	6
24	Experimental investigation of thermal-hydraulic performance of discontinuous fin printed circuit heat exchangers for supercritical CO2 power cycles. Experimental Thermal and Fluid Science, 2019, 106, 119-129.	2.7	52
25	Natural circulation FLiBe loop overview. International Journal of Heat and Mass Transfer, 2019, 134, 970-983.	4.8	18
26	Effect of supercritical CO2 on the performance of 740H fusion welds. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 742, 414-422.	5.6	13
27	Modeling and experimental testing of periodic flow regenerators for sCO2 cycles. Applied Thermal Engineering, 2019, 147, 789-803.	6.0	5
28	On the Development of a Robust Optical Fiber-Based Level Sensor. IEEE Sensors Journal, 2018, 18, 583-588.	4.7	12
29	Designing moving magnet pumps for high-temperature, liquid-metal systems. Nuclear Engineering and Design, 2018, 327, 228-237.	1.7	15
30	Summary on the Results of Two Computational Fluid Dynamic Benchmarks of Tube and Different Channel Geometries. Journal of Nuclear Engineering and Radiation Science, 2018, 4, .	0.4	4
31	Thermal Stratification Modeling for Sodium-Cooled Fast Reactors: A Status Update. , 2018, , .		1
32	Ceramic-metal composites for heat exchangers in concentrated solar power plants. Nature, 2018, 562, 406-409.	27.8	123
33	Effects of Corrosion in Supercritical CO2 on the Microstructural Evolution in 800H Alloy. Oxidation of Metals, 2018, 90, 453-468.	2.1	26
34	Effects of CO and O2 Impurities on Supercritical CO2 Corrosion of Alloy 625. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3703-3714.	2.2	23
35	Characterization of Thermal Striping in Liquid Sodium With Optical Fiber Sensors. Journal of Nuclear Engineering and Radiation Science, 2017, 3, .	0.4	10
36	Cost comparison of printed circuit heat exchanger to low cost periodic flow regenerator for use as recuperator in a s-CO2 Brayton cycle. Applied Energy, 2017, 208, 1150-1161.	10.1	50

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37	Ionization Chambers to Measure Neutron and Gamma-Ray Kerma in a Research Reactor. , 2017, , .		0
38	Temperature Profiles and Mixing in a Natural-Circulation Cooling Facility via Distributed Optical Sensors. Nuclear Technology, 2016, 196, 346-354.	1.2	4
39	Experimental Testing of s-CO ₂ Regenerator for Use as a Replacement to High Cost Printed Circuit Recuperators for Use in s-CO ₂ Recompression Brayton Cycle. , 2016, , .		0
40	Heat transfer behavior of molten nitrate salt. AIP Conference Proceedings, 2016, , .	0.4	6
41	Experimental and Numerical Study of Supercritical Carbon Dioxide Flow Through Valves. Journal of Nuclear Engineering and Radiation Science, 2016, 2, .	0.4	1
42	Polymer film-based optical access to enclosed gas: demonstration of H ₂ O absorption tomography. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	4
43	Corrosion of Alloy Haynes 230 in High Temperature Supercritical Carbon Dioxide with Oxygen Impurity Additions. Oxidation of Metals, 2016, 86, 567-580.	2.1	46
44	Observed Redox Potential Range of Li ₂ BeF ₄ Using a Dynamic Reference Electrode. Nuclear Technology, 2016, 195, 239-252.	1.2	17
45	PDF-based modeling on the turbulent convection heat transfer of supercritical CO ₂ in the printed circuit heat exchangers for the supercritical CO ₂ Brayton cycle. International Journal of Heat and Mass Transfer, 2016, 98, 204-218.	4.8	93
46	Unusual Heat Transfer Characteristics of Supercritical Carbon Dioxide. , 2015, , .		0
47	Batch-Scale Hydrofluorination of Li ²⁷ BeF ₄ to Support Molten Salt Reactor Development. Journal of Nuclear Engineering and Radiation Science, 2015, 1, .	0.4	25
48	Study of Critical Heat Flux in Natural Convectionâ€Cooled TRIGA Reactors with Single Annulus and Rod Bundle Geometries. Nuclear Science and Engineering, 2015, 180, 141-153.	1.1	2
49	Numerical modeling of supercritical carbon dioxide flow in see-through labyrinth seals. Nuclear Engineering and Design, 2015, 293, 436-446.	1.7	25
50	Impact of Corrosion Test Container Material in Molten Fluorides. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.8	34
51	Simulation of Supercritical CO ₂ Flow Through Circular and Annular Orifice. Journal of Nuclear Engineering and Radiation Science, 2015, 1, .	0.4	7
52	Investigation of Buoyancy Effects on Heat Transfer Characteristics of Supercritical Carbon Dioxide in Heating Mode. Journal of Nuclear Engineering and Radiation Science, 2015, 1, .	0.4	21
53	Corrosion of 316 stainless steel in high temperature molten Li ₂ BeF ₄ (FLiBe) salt. Journal of Nuclear Materials, 2015, 461, 143-150.	2.7	76
54	High-Temperature Corrosion of UNS N10003 in Molten Li ₂ BeF ₄ (FLiBe) Salt. Corrosion, 2015, 71, 1257-1266.	1.1	33

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55	Corrosion resistance of <sc>PM</sc>2000 <sc>ODS</sc> steel in high temperature supercritical carbon dioxide. Materials and Corrosion - Werkstoffe Und Korrosion, 2015, 66, 137-142.	1.5	22
56	ICOPE-15-C029 A physically improved semi-empirical model on turbulent convection heat transfer to supercritical CO ₂ in printed circuit heat exchangers. The Proceedings of the International Conference on Power Engineering (ICOPE), 2015, 2015.12, _ICOPE-15-_ICOPE-15-.	0.0	0
57	Development of High Temperature, Corrosion Resistant Sensors for Concentrating Solar Power Systems. , 2014, , .		0
58	Advanced heat exchanger development for molten salts. Nuclear Engineering and Design, 2014, 280, 42-56.	1.7	42
59	Failure analysis of 316L stainless steel crucible by molten fluoride salt interaction with clay bonded silicon carbide. Engineering Failure Analysis, 2014, 42, 38-44.	4.0	10
60	Corrosion behavior of an alumina forming austenitic steel exposed to supercritical carbon dioxide. Corrosion Science, 2014, 82, 67-76.	6.6	79
61	Influences of boil-off on the behavior of a two-phase natural circulation loop. International Journal of Multiphase Flow, 2014, 60, 135-148.	3.4	16
62	Phenomenology, methods and experimental program for fluoride-salt-cooled, high-temperature reactors (FHRs). Progress in Nuclear Energy, 2014, 77, 390-405.	2.9	20
63	Measurements of the flow of supercritical carbon dioxide through short orifices. Journal of Supercritical Fluids, 2014, 88, 17-25.	3.2	20
64	Numerical Study of Compact Heat Exchanger Designs for Generation IV Supercritical Carbon Dioxide Power Conversion Cycles. Nuclear Science and Engineering, 2014, 176, 138-153.	1.1	4
65	Corrosion of 316L Stainless Steel Alloy and Hastelloy-N Superalloy in Molten Eutectic LiF-NaF-KF Salt and Interaction with Graphite. Nuclear Technology, 2014, 188, 192-199.	1.2	40
66	Effect of Buoyancy on Heat Transfer Characteristics of Supercritical Carbon Dioxide in the Heating Mode. , 2014, , .		1
67	Corrosion of a stainless steel and nickel-based alloys in high temperature supercritical carbon dioxide environment. Corrosion Science, 2013, 69, 281-291.	6.6	148
68	Spectral emissivity of candidate alloys for very high temperature reactors in high temperature air environment. Journal of Nuclear Materials, 2013, 441, 667-673.	2.7	16
69	Zirconium Effect on the Corrosion Behavior of 316L Stainless Steel Alloy and Hastelloy-N Superalloy in Molten Fluoride Salt. Nuclear Technology, 2013, 183, 248-259.	1.2	19
70	Study on the Behavior of an Asymmetrically Heated Reactor Cavity Cooling System with Water in Single Phase. Nuclear Technology, 2013, 183, 75-87.	1.2	9
71	Supercritical Carbon Dioxide Heat Transfer in Horizontal Semicircular Channels. Journal of Heat Transfer, 2012, 134, .	2.1	49
72	Critical Heat Flux in TRIGA-Fueled Reactors Cooled by Natural Convection. Nuclear Science and Engineering, 2012, 172, 249-258.	1.1	7

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73	Corrosion of austenitic alloys in high temperature supercritical carbon dioxide. <i>Corrosion Science</i> , 2012, 60, 246-255.	6.6	141
74	Spectral emissivity measurements of candidate materials for very high temperature reactors. <i>Nuclear Engineering and Design</i> , 2012, 251, 78-83.	1.7	31
75	Richtmyer–Meshkov instability on a low Atwood number interface after reshock. <i>Shock Waves</i> , 2012, 22, 317-325.	1.9	8
76	Experimental study of the shock–bubble interaction with reshock. <i>Shock Waves</i> , 2012, 22, 47-56.	1.9	16
77	Corrosion of austenitic and ferritic-martensitic steels exposed to supercritical carbon dioxide. <i>Corrosion Science</i> , 2011, 53, 3273-3280.	6.6	105
78	In Situ Measurements of Spectral Emissivity of Materials for Very High Temperature Reactors. <i>Nuclear Technology</i> , 2011, 175, 460-467.	1.2	21
79	Design, Fabrication, and Testing of Ceramic Plate-Type Heat Exchangers with Integrated Flow Channel Design. <i>International Journal of Applied Ceramic Technology</i> , 2011, 8, 1073-1086.	2.1	20
80	Development of a new forced convection heat transfer correlation for CO ₂ in both heating and cooling modes at supercritical pressures. <i>International Journal of Thermal Sciences</i> , 2011, 50, 2430-2442.	4.9	105
81	Experimental investigation of a twice-shocked spherical gas inhomogeneity with particle image velocimetry. <i>Shock Waves</i> , 2011, 21, 225-231.	1.9	19
82	Nickel-plating for active metal dissolution resistance in molten fluoride salts. <i>Journal of Nuclear Materials</i> , 2011, 411, 51-59.	2.7	67
83	Heat Transfer of Supercritical Carbon Dioxide in Printed Circuit Heat Exchanger Geometries. <i>Journal of Thermal Science and Engineering Applications</i> , 2011, 3, .	1.5	50
84	Experimental study of the hydraulic operation of an annular centrifugal contactor with various mixing vane geometries. <i>AIChE Journal</i> , 2010, 56, 1960-1974.	3.6	10
85	Heat Transfer of Supercritical Carbon Dioxide in Printed Circuit Heat Exchanger Geometries. , 2010, , .		5
86	Intergranular corrosion of high temperature alloys in molten fluoride salts. <i>Materials at High Temperatures</i> , 2010, 27, 145-149.	1.0	62
87	Experimental measurements of the nonlinear Rayleigh-Taylor instability using a magnetorheological fluid. <i>Physical Review E</i> , 2010, 81, 026303.	2.1	35
88	Experimental validation of a Richtmyer–Meshkov scaling law over large density ratio and shock strength ranges. <i>Physics of Fluids</i> , 2009, 21, .	4.0	70
89	Analysis of the effect of mixing vane geometry on the flow in an annular centrifugal contactor. <i>AIChE Journal</i> , 2009, 55, 2244-2259.	3.6	27
90	Materials corrosion in molten LiF–NaF–KF salt. <i>Journal of Fluorine Chemistry</i> , 2009, 130, 67-73.	1.7	342

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91	Measurement of supercritical CO ₂ critical flow: Effects of L/D and surface roughness. Nuclear Engineering and Design, 2009, 239, 949-955.	1.7	31
92	Heat Transfer and Fluid Flow Characteristics in Supercritical Pressure Water. Journal of Heat Transfer, 2009, 131, .	2.1	54
93	Mini-Channel Supercritical CO ₂ Heat Transfer Measurements for Brayton Cycle Regenerators. , 2009, , .		1
94	Richtmyer-Meshkov Parameter Study. Fusion Science and Technology, 2009, 56, 460-464.	1.1	8
95	Current Status of Knowledge of the Fluoride Salt (FLiNaK) Heat Transfer. Nuclear Technology, 2009, 165, 166-173.	1.2	63
96	Free surface flow in the mixing zone of an annular centrifugal contactor. AIChE Journal, 2008, 54, 74-85.	3.6	35
97	Heat transfer to water at supercritical pressures in a circular and square annular flow geometry. International Journal of Heat and Fluid Flow, 2008, 29, 156-166.	2.4	109
98	A computational parameter study for the three-dimensional shock-bubble interaction. Journal of Fluid Mechanics, 2008, 594, 85-124.	3.4	151
99	Shock-bubble interactions: Features of divergent shock-refraction geometry observed in experiments and simulations. Physics of Fluids, 2008, 20, .	4.0	75
100	CRITICAL FLOW EXPERIMENT AND ANALYSIS FOR SUPERCRITICAL FLUID. Nuclear Engineering and Technology, 2008, 40, 133-138.	2.3	18
101	An apparatus for the study of high temperature water radiolysis in a nuclear reactor: Calibration of dose in a mixed neutron/gamma radiation field. Review of Scientific Instruments, 2007, 78, 124101.	1.3	10
102	Experimental Investigation of Primary and Secondary Features in High-Mach-Number Shock-Bubble Interaction. Physical Review Letters, 2007, 98, 024502.	7.8	64
103	Shock Mitigation Studies in Voided Liquids for Fusion Chamber Protection. Fusion Science and Technology, 2007, 52, 943-947.	1.1	2
104	Heat Transfer in a Supercritical Fluid: Classification of Heat Transfer Regimes. Nuclear Technology, 2006, 154, 335-349.	1.2	23
105	Melt quenching and coolability by water injection from below: Co-injection of water and non-condensable gas. Nuclear Engineering and Design, 2006, 236, 2296-2303.	1.7	14
106	Experimental study of shock-accelerated liquid layers. Shock Waves, 2006, 15, 383-397.	1.9	9
107	Overview of fusion nuclear technology in the US. Fusion Engineering and Design, 2006, 81, 33-43.	1.9	8
108	Liquid-Metal/Water Direct Contact Heat Exchange: Flow Visualization, Flow Stability, and Heat Transfer Using Real-Time X-Ray Imaging. Nuclear Science and Engineering, 2005, 150, 182-220.	1.1	7

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109	Inertial-Fusion-Related Hydrodynamic Instabilities in a Spherical Gas Bubble Accelerated by a Planar Shock Wave. Fusion Science and Technology, 2005, 47, 1160-1164.	1.1	2
110	Experimental Investigation of a Strongly Shocked Gas Bubble. Physical Review Letters, 2005, 94, 184507.	7.8	61
111	Shock Mitigation Studies of Solid Foams for Z-Pinch Chamber Protection. , 2005, , .		2
112	A thermodynamically consistent and fully conservative treatment of contact discontinuities for compressible multicomponent flows. Journal of Computational Physics, 2004, 195, 528-559.	3.8	34
113	Energetic Analysis of Experimental Behavior of Molten Sn _x Li _y When Impacted by a Vertical Column of Water. Fusion Science and Technology, 2003, 44, 803-810.	1.1	1
114	Shock tube investigation of hydrodynamic issues related to inertial confinement fusion. Shock Waves, 2000, 10, 377-387.	1.9	53
115	A diffusion layer model for steam condensation within the AP600 containment. Nuclear Engineering and Design, 1998, 183, 133-150.	1.7	94
116	Experimental analysis of heat transfer within the AP600 containment under postulated accident conditions. Nuclear Engineering and Design, 1998, 185, 153-172.	1.7	109
117	<title>New directions in surface spectroscopy enabled by ultrafast lasers</title>. , 1998, 3272, 51.		0
118	THE EFFECT OF LIGHT GASES IN NONCONDENSABLE MIXTURES ON CONDENSATION HEAT TRANSFER. , 1998, , .		3