Signe Kjelstrup

List of Publications by Year
in descending order

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340 papers	8,560 citations	47 h-index	72 g-index
		47006	82547
353 all docs	353 docs citations	353 times ranked	5531 citing authors

#	Article	IF	Citations
1	Ion and water transport characteristics of Nafion membranes as electrolytes. Electrochimica Acta, 1998, 43, 3741-3747.	5.2	243
2	On the molecular mechanism of thermal diffusion in liquids. Molecular Physics, 1993, 80, 1389-1412.	1.7	185
3	Transport and equilibrium properties of NafionÂ® membranes with H+ and Na+ ions. Journal of Electroanalytical Chemistry, 1998, 442, 137-145.	3.8	163
4	Kirkwoodâ€“Buff Integrals for Finite Volumes. Journal of Physical Chemistry Letters, 2013, 4, 235-238.	4.6	163
5	Mechanical properties of clathrate hydrates: status and perspectives. Energy and Environmental Science, 2012, 5, 6779.	30.8	161
6	Ex situ measurements of through-plane thermal conductivities in a polymer electrolyte fuel cell. Journal of Power Sources, 2010, 195, 249-256.	7.8	155
7	Thermal conductivities from temperature profiles in the polymer electrolyte fuel cell. Electrochimica Acta, 2004, 49, 1069-1077.	5.2	136
8	Exergy analysis of two cryogenic air separation processes. Energy, 2010, 35, 4731-4739.	8.8	105
9	Calculating Thermodynamic Properties from Fluctuations at Small Scales. Journal of Physical Chemistry B, 2011, 115, 10911-10918.	2.6	105
10	Diffusion Coefficients from Molecular Dynamics Simulations in Binary and Ternary Mixtures. International Journal of Thermophysics, 2013, 34, 1169-1196.	2.1	102
11	Criteria for local equilibrium in a system with transport of heat and mass. Journal of Statistical Physics, 1995, 78, 463-494.	1.2	101
12	Minimizing the entropy production in heat exchange. International Journal of Heat and Mass Transfer, 2002, 45, 2649-2654.	4.8	101
13	On the nature of ion leaks in energy-transducing membranes. Biochimica Et Biophysica Acta - Bioenergetics, 1989, 976, 109-120.	1.0	100
14	Heat transfer in proteinâ€“water interfaces. Physical Chemistry Chemical Physics, 2010, 12, 1610.	2.8	95
15	Mechanical instability of monocrystalline and polycrystalline methane hydrates. Nature Communications, 2015, 6, 8743.	12.8	93
16	Water Polarization under Thermal Gradients. Physical Review Letters, 2008, 101, 020602.	7.8	92
17	Nonequilibrium Molecular Dynamics Simulations of Steady-State Heat and Mass Transport in Condensation. Journal of Colloid and Interface Science, 2000, 232, 178-185.	9.4	87
18	Through-Plane Thermal Conductivity of PEMFC Porous Transport Layers. Journal of Fuel Cell Science and Technology, 2011, 8, .	0.8	84

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19	Compressibility, thermal expansion coefficient and heat capacity of CH₄ and CO₂ hydrate mixtures using molecular dynamics simulations. Physical Chemistry Chemical Physics, 2015, 17, 2869-2883.	2.8	82
20	Fick Diffusion Coefficients in Ternary Liquid Systems from Equilibrium Molecular Dynamics Simulations. Industrial & Engineering Chemistry Research, 2012, 51, 10247-10258.	3.7	79
21	The permselectivity and water transference number of ion exchange membranes in reverse electrodialysis. Journal of Membrane Science, 2017, 523, 402-408.	8.2	78
22	Flow Field Patterns for Proton Exchange Membrane Fuel Cells. Frontiers in Energy Research, 2020, 8, .	2.3	78
23	Protonic and Native Conduction in Srâ€Substituted LaPO4 Studied by Thermoelectric Power Measurements. Journal of the Electrochemical Society, 1998, 145, 3313-3319.	2.9	77
24	Improved electrode systems for reverse electro-dialysis and electro-dialysis. Desalination, 2012, 285, 147-152.	8.2	75
25	Thermal conductivity and internal temperature profiles of Li-ion secondary batteries. Journal of Power Sources, 2017, 359, 592-600.	7.8	75
26	Equipartition of Forces:Â A New Principle for Process Design and Optimization. Industrial & Engineering Chemistry Research, 1996, 35, 4147-4153.	3.7	73
27	Mesoscopic Nonequilibrium Thermodynamics Gives the Same Thermodynamic Basis to Butlerâ^'Volmer and Nernst Equations. Journal of Physical Chemistry B, 2003, 107, 13471-13477.	2.6	72
28	Minimum entropy production rate in plug flow reactors: An optimal control problem solved for SO2 oxidation. Energy, 2004, 29, 2403-2423.	8.8	71
29	Thermodynamics of a small system in a Î¼T reservoir. Chemical Physics Letters, 2011, 504, 199-201.	2.6	71
30	Fick Diffusion Coefficients of Liquid Mixtures Directly Obtained From Equilibrium Molecular Dynamics. Journal of Physical Chemistry B, 2011, 115, 12921-12929.	2.6	70
31	Measurements of ageing and thermal conductivity in a secondary NMC-hard carbon Li-ion battery and the impact on internal temperature profiles. Electrochimica Acta, 2017, 250, 228-237.	5.2	70
32	Nonequilibrium Molecular Dynamics Simulations of Steady-State Heat and Mass Transport in Condensation. II. Transfer Coefficients. Journal of Colloid and Interface Science, 2001, 240, 355-364.	9.4	68
33	Nature-Inspired Energy- and Material-Efficient Design of a Polymer Electrolyte Membrane Fuel Cell. Energy & Fuels, 2010, 24, 5097-5108.	5.1	66
34	Transfer coefficients for evaporation. Physica A: Statistical Mechanics and Its Applications, 1999, 270, 413-426.	2.6	64
35	Thermal Flux through a Surface ofn-Octane. A Non-equilibrium Molecular Dynamics Study. Journal of Physical Chemistry B, 2004, 108, 7186-7195.	2.6	64
36	Thermodynamics of small systems embedded in a reservoir: a detailed analysis of finite size effects. Molecular Physics, 2012, 110, 1069-1079.	1.7	62

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37	A highway in state space for reactors with minimum entropy production. Chemical Engineering Science, 2005, 60, 3347-3361.	3.8	60
38	Heat transfer in soft nanoscale interfaces: the influence of interface curvature. Soft Matter, 2009, 5, 2407.	2.7	59
39	Exergy analysis of the oil and gas processing on a North Sea oil platform a real production day. Energy, 2013, 55, 716-727.	8.8	59
40	Exergy Sustainability Indicators as a Tool in Industrial Ecology. Journal of Industrial Ecology, 2007, 11, 85-98.	5.5	58
41	Water transport in cation exchange membranes. Journal of Membrane Science, 1992, 66, 179-192.	8.2	57
42	Equipartition of forces as a lower bound on the entropy production in heat exchange. International Journal of Heat and Mass Transfer, 2001, 44, 2827-2833.	4.8	57
43	Energy and exergy analysis of the silicon production process. Energy, 2013, 58, 138-146.	8.8	57
44	Distribution of heat exchange in optimum diabatic distillation columns. Energy, 2004, 29, 2425-2440.	8.8	55
45	Analysis of Entropy Production Rates for Design of Distillation Columns. Industrial & Engineering Chemistry Research, 1995, 34, 3001-3007.	3.7	52
46	Verification of Onsager's reciprocal relations for evaporation and condensation using non-equilibrium molecular dynamics. Journal of Colloid and Interface Science, 2006, 299, 452-463.	9.4	49
47	How to apply the Kirkwoodâ€“Buff theory to individual species in salt solutions. Chemical Physics Letters, 2013, 582, 154-157.	2.6	49
48	Finite-size effects of Kirkwoodâ€“Buff integrals from molecular simulations. Molecular Simulation, 2018, 44, 599-612.	2.0	47
49	Second law optimization of a tubular steam reformer. Chemical Engineering and Processing: Process Intensification, 2005, 44, 429-440.	3.6	45
50	Transfer coefficients for evaporation of a system with a Lennard-Jones long-range spline potential. Physical Review E, 2007, 75, 061604.	2.1	45
51	Exergy destruction and losses on four North Sea offshore platforms: A comparative study of the oil and gas processing plants. Energy, 2014, 74, 45-58.	8.8	44
52	On the definition of exergy efficiencies for petroleum systems: Application to offshore oil and gas processing. Energy, 2014, 73, 264-281.	8.8	43
53	Energy dissipation in slipping biological pumps. Physical Chemistry Chemical Physics, 2005, 7, 4009.	2.8	42
54	Interface Film Resistivities for Heat and Mass TransfersIntegral Relations Verified by Non-equilibrium Molecular Dynamics. Journal of Physical Chemistry B, 2006, 110, 18528-18536.	2.6	41

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55	Exploring the potential for waste heat recovery during metal casting with thermoelectric generators: On-site experiments and mathematical modeling. Energy, 2017, 118, 865-875.	8.8	41
56	Minimizing the Entropy Production Rate of an Exothermic Reactor with a Constant Heat-Transfer Coefficient:Â The Ammonia Reaction. Industrial & Engineering Chemistry Research, 2003, 42, 1044-1056.	3.7	40
57	Irreversible thermodynamicsâ€"a tool to describe phase transitions far from global equilibrium. Chemical Engineering Science, 2004, 59, 109-118.	3.8	40
58	Local and Total Entropy Production and Heat and Water Fluxes in a One-Dimensional Polymer Electrolyte Fuel Cell. Journal of Physical Chemistry B, 2005, 109, 9020-9033.	2.6	40
59	Criteria for validity of thermodynamic equations from non-equilibrium molecular dynamics simulations. Energy, 2008, 33, 1185-1196.	8.8	38
60	A non-equilibrium thermodynamics approach to model mass and heat transport for water pervaporation through a zeolite membrane. Journal of Membrane Science, 2009, 330, 388-398.	8.2	37
61	Ageing and thermal conductivity of Porous Transport Layers used for PEM Fuel Cells. Journal of Power Sources, 2013, 221, 356-365.	7.8	37
62	The Inverted Temperature Profile Across a Vapor/Liquid Surface Analyzed by Molecular Computer Simulations. Journal of Colloid and Interface Science, 2002, 256, 451-461.	9.4	36
63	Entropy production in mesoscopic stochastic thermodynamics: nonequilibrium kinetic cycles driven by chemical potentials, temperatures, and mechanical forces. Journal of Physics Condensed Matter, 2016, 28, 153004.	1.8	36
64	Thermo-osmosis in Membrane Systems: A Review. Journal of Non-Equilibrium Thermodynamics, 2017, 42, .	4.2	36
65	Drug Distribution Within Human Milk Phases. Journal of Pharmaceutical Sciences, 1985, 74, 1071-1074.	3.3	35
66	The second law optimal state of a diabatic binary tray distillation column. Chemical Engineering Science, 2005, 60, 1199-1210.	3.8	35
67	Phase Diagram of Methane and Carbon Dioxide Hydrates Computed by Monte Carlo Simulations. Journal of Physical Chemistry B, 2017, 121, 7336-7350.	2.6	35
68	Comparison of Entropy Production Rate Minimization Methods for Binary Diabatic Distillation. Industrial & Engineering Chemistry Research, 2002, 41, 5826-5834.	3.7	34
69	Low barriers for hydrogen diffusion in sII clathrate. Physical Chemistry Chemical Physics, 2015, 17, 13808-13812.	2.8	34
70	Good practice guide for papers on batteries for the Journal of Power Sources. Journal of Power Sources, 2020, 452, 227824.	7.8	34
71	Active transport: a kinetic description based on thermodynamic grounds. Journal of Theoretical Biology, 2005, 234, 7-12.	1.7	33
72	Exergy Analysis of a GTL Process Based on Low-Temperature Slurry Fâ^'T Reactor Technology with a Cobalt Catalyst. Energy & Fuels, 2007, 21, 2317-2324.	5.1	33

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73	Improving the Heat Integration of Distillation Columns in a Cryogenic Air Separation Unit. Industrial & Engineering Chemistry Research, 2011, 50, 9324-9338.	3.7	33
74	Evaluation of Nanoporous Polymer Membranes for Electrokinetic Energy Conversion in Power Applications. Journal of Physical Chemistry C, 2013, 117, 1582-1588.	3.1	33
75	Good practice guide for papers on fuel cells and electrolysis cells for the Journal of Power Sources. Journal of Power Sources, 2020, 451, 227635.	7.8	33
76	Nonequilibrium Molecular Dynamics Simulations of Steady-State Heat and Mass Transport in Distillation. Industrial & Engineering Chemistry Research, 1996, 35, 4203-4213.	3.7	32
77	Tailored porosities of the cathode layer for improved polymer electrolyte fuel cell performance. Journal of Power Sources, 2015, 287, 472-477.	7.8	31
78	Thermodynamic stability of nanosized multicomponent bubbles/droplets: The square gradient theory and the capillary approach. Journal of Chemical Physics, 2014, 140, 024704.	3.0	30
79	Raman Spectra of Molten Mixtures Containing Aluminum Fluoride. II. Dissociation of AlF6(3-) Ion.. Acta Chemica Scandinavica, 1975, 29a, 565-566.	0.7	30
80	A Gerischer Phase Element in the Impedance Diagram of the Polymer Electrolyte Membrane Fuel Cell Anode. Journal of Physical Chemistry B, 2005, 109, 21380-21388.	2.6	29
81	Thermodynamics for Single-Molecule Stretching Experiments. Journal of Physical Chemistry B, 2006, 110, 12733-12737.	2.6	29
82	The second-law optimal operation of a paper drying machine. Chemical Engineering Science, 2006, 61, 3653-3662.	3.8	29
83	Is the Ca2+-ATPase from sarcoplasmic reticulum also a heat pump?. European Biophysics Journal, 2008, 38, 59-67.	2.2	29
84	Exergy based efficiency indicators for the silicon furnace. Energy, 2015, 90, 1916-1921.	8.8	29
85	Molecular dynamics simulations of a chemical reaction; conditions for local equilibrium in a temperature gradient. Physical Chemistry Chemical Physics, 2006, 8, 2017.	2.8	28
86	Three steps in the anode reaction of the polymer electrolyte membrane fuel cell. Effect of CO. Journal of Electroanalytical Chemistry, 2007, 610, 171-178.	3.8	28
87	Influence of Curvature on the Transfer Coefficients for Evaporation and Condensation of Lennard-Jones Fluid from Square-Gradient Theory and Nonequilibrium Molecular Dynamics. Journal of Physical Chemistry C, 2015, 119, 8160-8173.	3.1	28
88	Transported Entropy in Zirconia with 3 to 12 Mole Percent Yttria. Journal of the Electrochemical Society, 1993, 140, 59-66.	2.9	27
89	Energy efficient reactor design simplified by second law analysis. International Journal of Hydrogen Energy, 2010, 35, 13219-13231.	7.1	27
90	The Seebeck coefficient and the Peltier effect in a polymer electrolyte membrane cell with two hydrogen electrodes. Electrochimica Acta, 2013, 99, 166-175.	5.2	27

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91	Size and shape effects on the thermodynamic properties of nanoscale volumes of water. Physical Chemistry Chemical Physics, 2017, 19, 9016-9027.	2.8	27
92	Transference coefficients and transference numbers in salt mixtures relevant for the aluminium electrolysis. Electrochimica Acta, 1993, 38, 415-423.	5.2	26
93	The Driving Force Distribution for Minimum Lost Work in Chemical Reactors Close to and Far from Equilibrium. 1. Theory. Industrial & Engineering Chemistry Research, 1999, 38, 3046-3050.	3.7	26
94	Adsorption and Desorption of H₂ on Graphite by Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2010, 114, 10212-10220.	3.1	26
95	Local equilibrium of the Gibbs interface in two-phase systems. Europhysics Letters, 2012, 97, 40002.	2.0	26
96	Effective rheology of bubbles moving in a capillary tube. Physical Review E, 2013, 87, 025001.	2.1	26
97	Exergy effeciency and local heat production in solid oxide fuel cells. Electrochimica Acta, 1993, 38, 447-453.	5.2	25
98	Diabatic column optimization compared to isoforce columns. Energy Conversion and Management, 1997, 38, 1777-1783.	9.2	25
99	The measurable heat flux that accompanies active transport by Ca2+-ATPase. Physical Chemistry Chemical Physics, 2008, 10, 7304.	2.8	25
100	Heat transport through a solidâ€“solid junction: the interface as an autonomous thermodynamic system. Physical Chemistry Chemical Physics, 2016, 18, 13741-13745.	2.8	25
101	Membrane distillation against a pressure difference. Journal of Membrane Science, 2017, 524, 151-162.	8.2	25
102	Mesoscopic non-equilibrium thermodynamics of non-isothermal reaction-diffusion. Physical Chemistry Chemical Physics, 2010, 12, 12780.	2.8	24
103	Toward a Possibility To Exchange CO₂ and CH₄ in sI Clathrate Hydrates. Journal of Physical Chemistry B, 2012, 116, 3745-3753.	2.6	24
104	Selectivity and self-diffusion of CO2 and H2 in a mixture on a graphite surface. Frontiers in Chemistry, 2013, 1, 38.	3.6	24
105	Stable and Efficient Time Integration of a Dynamic Pore Network Model for Two-Phase Flow in Porous Media. Frontiers in Physics, 2018, 6, .	2.1	24
106	Heat and Internal Energy Changes at Electrodes and Junctions in Thermocells. Journal of the Electrochemical Society, 1990, 137, 2088-2095.	2.9	23
107	Nonequilibrium translational effects in evaporation and condensation. Journal of Chemical Physics, 2003, 119, 9163-9170.	3.0	23
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109	On a possible difference between the barycentric velocity and the velocity that gives translational momentum in fluids. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 177-187.	2.6	23
110	Quasi-elastic Neutron Scattering Investigation of the Hydrogen Surface Self-Diffusion on Polymer Electrolyte Membrane Fuel Cell Catalyst Support. Journal of Physical Chemistry C, 2008, 112, 3121-3125.	3.1	23
111	Efficient Conversion of Thermal Energy into Hydrogen: Comparing Two Methods to Reduce Exergy Losses in a Sulfuric Acid Decomposition Reactor. Industrial & Engineering Chemistry Research, 2009, 48, 8500-8507.	3.7	23
112	Coherent description of transport across the water interface: From nanodroplets to climate models. Physical Review E, 2016, 93, 032801.	2.1	23
113	Reviewâ€"Reversible Heat Effects in Cells Relevant for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2021, 168, 050522.	2.9	23
114	Towards a solid state reference electrode. Sensors and Actuators B: Chemical, 1997, 44, 381-388.	7.8	22
115	Transport properties of 2F ? F2 in a temperature gradient as studied by molecular dynamics simulations. Physical Chemistry Chemical Physics, 2007, 9, 969.	2.8	22
116	Surface Self-Diffusion and Mean Displacement of Hydrogen on Graphite and a PEM Fuel Cell Catalyst Support. Journal of Physical Chemistry C, 2009, 113, 20281-20289.	3.1	22
117	Harnessing thermoelectric power from transient heat sources: Waste heat recovery from silicon production. Energy Conversion and Management, 2017, 138, 171-182.	9.2	22
118	Modelling the freeze concentration process by irreversible thermodynamics. Journal of Food Engineering, 1995, 25, 553-568.	5.2	21
119	Transport equations for distillation of ethanol and water from the entropy production rate. Chemical Engineering Science, 2003, 58, 1147-1161.	3.8	21
120	Thermal conductivity of carbon dioxide from non-equilibrium molecular dynamics: A systematic study of several common force fields. Journal of Chemical Physics, 2014, 141, 134504.	3.0	21
121	Electrode Heat Balances of Electrochemical Cells: Application to Water Electrolysis. Journal of the Electrochemical Society, 1984, 131, 2504-2509.	2.9	20
122	Theory of Thermocells. Journal of the Electrochemical Society, 1989, 136, 1698-1704.	2.9	20
123	The Dissipated Energy of Electrode Surfaces: Temperature Jumps from Coupled Transport Processes. Journal of the Electrochemical Society, 1996, 143, 767-779.	2.9	20
124	A calorimetric analysis of a polymer electrolyte fuel cell and the production of H2O2 at the cathode. Electrochimica Acta, 2010, 55, 935-942.	5.2	20
125	Partial molar enthalpies and reaction enthalpies from equilibrium molecular dynamics simulation. Journal of Chemical Physics, 2014, 141, 144501.	3.0	20
126	Relations Between Seepage Velocities in Immiscible, Incompressible Two-Phase Flow in Porous Media. Transport in Porous Media, 2018, 125, 565-587.	2.6	20

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127	Transport coefficients and pressure conditions for growth of ice lens in frozen soil. Acta Geotechnica, 2021, 16, 2231-2239.	5.7	20
128	Membrane transference numbers from a new emf method. Journal of Membrane Science, 1992, 74, 1-8.	8.2	19
129	Denbigh revisited: Reducing lost work in chemical processes. Chemical Engineering Science, 1995, 50, 1551-1560.	3.8	19
130	A Simple Example of Control to Minimize Entropy Production. Journal of Non-Equilibrium Thermodynamics, 2002, 27, .	4.2	19
131	Unifying Thermodynamic and Kinetic Descriptions of Single-Molecule Processes:â€‰ RNA Unfolding under Tension. Journal of Physical Chemistry B, 2007, 111, 9598-9602.	2.6	19
132	Transfer coefficients for the liquidâ€“vapor interface of a two-component mixture. Chemical Engineering Science, 2011, 66, 4533-4548.	3.8	19
133	Thermoelectric effects in ion conducting membranes and perspectives for thermoelectric energy conversion. Journal of Membrane Science, 2013, 434, 10-17.	8.2	19
134	Heat and Mass Transfer across Interfaces in Complex Nanogeometries. Physical Review Letters, 2015, 114, 065901.	7.8	19
135	Pressures Inside a Nano-Porous Medium. The Case of a Single Phase Fluid. Frontiers in Physics, 2019, 7, .	2.1	19
136	Thermoelectric power relevant for the solid-polymer-electrolyte fuel cell. Journal of Membrane Science, 1995, 107, 219-228.	8.2	18
137	External Surface Adsorption on Silicalite-1 Zeolite Studied by Molecular Simulation. Journal of Physical Chemistry C, 2011, 115, 15355-15360.	3.1	18
138	Heat and mass transfer through interfaces of nanosized bubbles/droplets: the influence of interface curvature. Physical Chemistry Chemical Physics, 2014, 16, 10573-10586.	2.8	18
139	Non-isothermal Transport of Multi-phase Fluids in Porous Media. The Entropy Production. Frontiers in Physics, 2018, 6, .	2.1	18
140	Hillâ€™s nano-thermodynamics is equivalent with Gibbsâ€™ thermodynamics for surfaces of constant curvatures. Chemical Physics Letters, 2018, 707, 40-43.	2.6	18
141	Non-isothermal Transport of Multi-phase Fluids in Porous Media. Constitutive Equations. Frontiers in Physics, 2019, 6, .	2.1	18
142	Non-Equilibrium Thermodynamics for Engineers. , 2017, , .		18
143	Cyclic Peptide Inhibitors of the Î²-Sliding Clamp in Staphylococcus aureus. PLoS ONE, 2013, 8, e72273.	2.5	18
144	The Driving Force Distribution for Minimum Lost Work in a Chemical Reactor Close to and Far from Equilibrium. 2. Oxidation of SO2. Industrial & Engineering Chemistry Research, 1999, 38, 3051-3055.	3.7	17

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145	Minimizing the entropy production in a chemical process for dehydrogenation of propane. Energy, 2007, 32, 335-343.	8.8	17
146	Coefficients for Active Transport and Thermogenesis of Ca2+-ATPase Isoforms. Biophysical Journal, 2009, 96, 4376-4386.	0.5	17
147	Calculation of reversible electrode heats in the proton exchange membrane fuel cell from calorimetric measurements. Electrochimica Acta, 2011, 56, 3248-3257.	5.2	17
148	The role of temperature in nucleation processes. Journal of Chemical Physics, 2011, 134, 054703.	3.0	17
149	Communication: Superstabilization of fluids in nanocontainers. Journal of Chemical Physics, 2014, 141, 071103.	3.0	17
150	Two-Phase Equilibrium Conditions in Nanopores. Nanomaterials, 2020, 10, 608.	4.1	17
151	Entropy production by heat, mass, charge transfer and specific chemical reactions. Electrochimica Acta, 1980, 25, 157-163.	5.2	16
152	Thermal Diffusion and Partial Molar Enthalpy Variations of n-Butane in Silicalite-1. Journal of Physical Chemistry B, 2008, 112, 14937-14951.	2.6	16
153	Coupled Heat and Mass Transfer during Crystallization of MgSO₄Â·7H₂O on a Cooled Surface. Crystal Growth and Design, 2009, 9, 1318-1326.	3.0	16
154	On the Thermodynamic Efficiency of Ca2+-ATPase Molecular Machines. Biophysical Journal, 2012, 103, 1218-1226.	0.5	16
155	The reversible heat effects at lithium iron phosphate- and graphite electrodes. Electrochimica Acta, 2020, 337, 135567.	5.2	16
156	The principle of equipartition of forces in chemical reactor design: The ammonia synthesis. Computers and Chemical Engineering, 1999, 23, S499-S502.	3.8	15
157	Positioning heat exchangers in binary tray distillation using isoforce operation. Energy Conversion and Management, 2002, 43, 1571-1581.	9.2	15
158	Energy Transduction in Biological Systems: A Mesoscopic Non-Equilibrium Thermodynamics Perspective. Journal of Non-Equilibrium Thermodynamics, 2007, 32, .	4.2	15
159	Modelling the coupled transfer of mass and thermal energy in the vapourâ€“liquid region of a nitrogenâ€“oxygen mixture. Chemical Engineering Science, 2010, 65, 2236-2248.	3.8	15
160	Bridging scales with thermodynamics: from nano to macro. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2014, 5, 023002.	1.5	15
161	Modeling Thermodynamic Properties of Propane or Tetrahydrofuran Mixed with Carbon Dioxide or Methane in Structure-II Clathrate Hydrates. Journal of Physical Chemistry C, 2017, 121, 23911-23925.	3.1	15
162	Seeking minimum entropy production for a tree-like flow-field in a fuel cell. Physical Chemistry Chemical Physics, 2020, 22, 6993-7003.	2.8	15

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163	Gibbs Ensemble Monte Carlo Simulation of Fluids in Confinement: Relation between the Differential and Integral Pressures. Nanomaterials, 2020, 10, 293.	4.1	15
164	Peltier effects in lithium-ion battery modeling. Journal of Chemical Physics, 2021, 154, 114705.	3.0	15
165	High-pressure diffusion measurements by Mach-Zehnder interferometry. AICHE Journal, 1991, 37, 142-146.	3.6	14
166	Jumps in electric potential and in temperature at the electrode surfaces of the solid oxide fuel cell. Physica A: Statistical Mechanics and Its Applications, 1997, 244, 213-226.	2.6	14
167	Optimization of Processes by Equipartition. Journal of Non-Equilibrium Thermodynamics, 1999, 24, .	4.2	14
168	Thermal effects during adsorption of n-butane on a silicalite-1 membrane: A non-equilibrium molecular dynamics study. Journal of Colloid and Interface Science, 2007, 313, 563-573.	9.4	14
169	Two performance indicators for the characterization of the entropy production in a process unit. Energy, 2011, 36, 3727-3732.	8.8	14
170	Molecular dynamics simulations of the Ca2+-pump: a structural analysis. Physical Chemistry Chemical Physics, 2012, 14, 3543.	2.8	14
171	Chemical Cycle Kinetics: Removing the Limitation of Linearity of a Non-equilibrium Thermodynamic Description. International Journal of Thermophysics, 2013, 34, 1214-1228.	2.1	14
172	Seebeck coefficients of cells with lithium carbonate and gas electrodes. Electrochimica Acta, 2015, 182, 699-706.	5.2	14
173	Entropy facilitated active transport. Journal of Chemical Physics, 2017, 146, .	3.0	14
174	Minimum entropy production in a distillation column for air separation described by a continuous non-equilibrium model. Chemical Engineering Science, 2020, 218, 115539.	3.8	14
175	Scaling factors for channel width variations in tree-like flow field patterns for polymer electrolyte membrane fuel cells - An experimental study. International Journal of Hydrogen Energy, 2021, 46, 19554-19568.	7.1	14
176	Cassieâ€“Baxter and Wenzel States and the Effect of Interfaces on Transport Properties across Membranes. Journal of Physical Chemistry B, 2021, 125, 12730-12740.	2.6	14
177	Oxy-fluoro aluminate complexes in molten cryolite melts. Electrochimica Acta, 1976, 21, 515-517.	5.2	13
178	Streaming potentials of NUCLEPORE membranes by the electric work method. Electrochimica Acta, 1996, 41, 169-176.	5.2	13
179	Variational principle for entropy in electrochemical transport phenomena. International Journal of Engineering Science, 1996, 34, 549-560.	5.0	13
180	Nonequilibrium thermodynamicsâ€”A tool to describe heterogeneous catalysis. Physical Chemistry Chemical Physics, 2006, 8, 5421-5427.	2.8	13

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181	Thermal phenomena associated with water transport across a fuel cell membrane: Soret and Dufour effects. Journal of Membrane Science, 2013, 431, 96-104.	8.2	13
182	Entropy Production Minimization as Design Principle for Membrane Systems: Comparing Equipartition Results to Numerical Optima. Industrial & Engineering Chemistry Research, 2017, 56, 4856-4866.	3.7	13
183	Exergy-based performance indicators for industrial practice. International Journal of Energy Research, 2018, 42, 3989-4007.	4.5	13
184	Molecular Dynamics Simulations of Metal/Molten Alkali Carbonate Interfaces. Journal of Physical Chemistry C, 2017, 121, 17827-17847.	3.1	13
185	Amiloride inhibition of Na+-entry into corneal endothelium. Pflugers Archiv European Journal of Physiology, 1985, 403, 377-383.	2.8	12
186	The Transported Entropy of Oxygen Ion in Yttriaâ€Stabilized Zirconia. Journal of the Electrochemical Society, 1991, 138, 2374-2376.	2.9	12
187	Perturbational thermodynamics of coupled electrochemical heat and mass transfer. International Journal of Heat and Mass Transfer, 1996, 39, 3293-3303.	4.8	12
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