Sergey Misyura

List of Publications by Year
in descending order

128 papers	2,880 citations	70961 41 h-index	189595 50 g-index
129 all docs	129 docs citations	129 times ranked	650 citing authors

#	Article	IF	Citations
1	Dissociation of natural and artificial gas hydrate. Chemical Engineering Science, 2016, 148, 65-77.	1.9	78
2	Efficiency of methane hydrate combustion for different types of oxidizer flow. Energy, 2016, 103, 430-439.	4.5	77
3	The influence of porosity and structural parameters on different kinds of gas hydrate dissociation. Scientific Reports, 2016, 6, 30324.	1.6	71
4	The behavior of water droplets on the heated surface. International Journal of Heat and Mass Transfer, 2012, 55, 6609-6617.	2.5	70
5	Evaporation of a sessile water drop and a drop of aqueous salt solution. Scientific Reports, 2017, 7, 14759.	1.6	67
6	Non-stationary combustion of natural and artificial methane hydrate at heterogeneous dissociation. Energy, 2019, 181, 589-602.	4.5	67
7	Ways to improve the efficiency of carbon dioxide utilization and gas hydrate storage at low temperatures. Journal of CO2 Utilization, 2019, 34, 313-324.	3.3	66
8	Combustion of methane hydrates. Journal of Engineering Thermophysics, 2013, 22, 87-92.	0.6	63
9	Contact angle and droplet heat transfer during evaporation on structured and smooth surfaces of heated wall. Applied Surface Science, 2017, 414, 188-196.	3.1	62
10	Evaporation and heat transfer of aqueous salt solutions during crystallization. Applied Thermal Engineering, 2018, 139, 203-212.	3.0	62
11	Evaporation modes of LiBr, CaCl2, LiCl, NaCl aqueous salt solution droplets on aluminum surface. International Journal of Heat and Mass Transfer, 2018, 126, 161-168.	2.5	62
12	The effect of Weber number, droplet sizes and wall roughness on crisis of droplet boiling. Experimental Thermal and Fluid Science, 2017, 84, 190-198.	1.5	60
13	The role of convection in gas and liquid phases at droplet evaporation. International Journal of Thermal Sciences, 2018, 134, 421-439.	2.6	60
14	Dissociation kinetics of methane hydrate and CO2 hydrate for different granular composition. Fuel, 2020, 262, 116614.	3.4	60
15	Methane combustion in hydrate systems: Water-methane and water-methane-isopropanol. Journal of Engineering Thermophysics, 2013, 22, 169-173.	0.6	58
16	Effect of heat transfer on the kinetics of methane hydrate dissociation. Chemical Physics Letters, 2013, 583, 34-37.	1.2	58
17	Droplets boiling crisis of ethanol water solution on duralumin substrate with SiO 2 nanoparticles coating. Experimental Thermal and Fluid Science, 2016, 75, 43-53.	1.5	57
18	Bubble boiling in droplets of water and lithium bromide water solution. Journal of Engineering Thermophysics, 2016, 25, 24-31.	0.6	56

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19	Non-isothermal evaporation in a sessile droplet of water-salt solution. International Journal of Thermal Sciences, 2018, 124, 76-84.	2.6	56
20	Marangoni flow and free convection during crystallization of a salt solution droplet. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 572, 37-46.	2.3	56
21	Contact angle and droplet evaporation on the smooth and structured wall surface in a wide range of droplet diameters. Applied Thermal Engineering, 2017, 113, 472-480.	3.0	54
22	The influence of key factors on the heat and mass transfer of a sessile droplet. Experimental Thermal and Fluid Science, 2018, 99, 59-70.	1.5	54
23	Comparing the dissociation kinetics of various gas hydrates during combustion: Assessment of key factors to improve combustion efficiency. Applied Energy, 2020, 270, 115042.	5.1	54
24	Effect of various key factors on the law of droplet evaporation on the heated horizontal wall. Chemical Engineering Research and Design, 2018, 129, 306-313.	2.7	53
25	The influence of characteristic scales of convection on non-isothermal evaporation of a thin liquid layer. Scientific Reports, 2018, 8, 11521.	1.6	53
26	The influence of the surface microtexture on wettability properties and drop evaporation. Surface and Coatings Technology, 2019, 375, 458-467.	2.2	53
27	The features of self-preservation for hydrate systems with methane. Chemical Engineering Science, 2013, 104, 1-9.	1.9	52
28	Nucleate boiling in pure-water and salt-water droplets. Doklady Physics, 2014, 59, 441-445.	0.2	52
29	Interaction of two drops at different temperatures: The role of thermocapillary convection and surfactant. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 559, 275-283.	2.3	52
30	Nonisothermal desorption of droplets of complex compositions. Thermal Science, 2012, 16, 997-1004.	0.5	51
31	Boiling crisis in droplets of ethanol water solution on the heating surface. Journal of Engineering Thermophysics, 2013, 22, 1-6.	0.6	51
32	Nucleate boiling in bidistillate droplets. International Journal of Heat and Mass Transfer, 2014, 71, 197-205.	2.5	50
33	The Anomalously High Rate of Crystallization, Controlled by Crystal Forms under the Conditions of a Limited Liquid Volume. Crystal Growth and Design, 2018, 18, 1327-1338.	1.4	50
34	Evaporation and heat and mass transfer of a sessile drop of aqueous salt solution on heated wall. International Journal of Heat and Mass Transfer, 2018, 116, 667-674.	2.5	50
35	Dependence of wettability of microtextured wall on the heat and mass transfer: Simple estimates for convection and heat transfer. International Journal of Mechanical Sciences, 2020, 170, 105353.	3.6	50
36	The influence of convection on heat transfer in a water layer on a heated structured wall. International Communications in Heat and Mass Transfer, 2019, 102, 14-21.	2.9	48

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37	Two-phase nonisothermal flows of LiBr water solution in minichannels. Journal of Engineering Thermophysics, 2014, 23, 257-263.	0.6	46
38	Dissociation of various gas hydrates (methane hydrate, double gas hydrates of methane-propane and) Tj ETQq0 0 0 rgBT /Overlock 10 T 118120.	4.5	46
39	Wall effect on heat transfer crisis. Experimental Thermal and Fluid Science, 2016, 70, 389-396.	1.5	43
40	Developing the environmentally friendly technologies of combustion of gas hydrates. Reducing harmful emissions during combustion. Environmental Pollution, 2020, 265, 114871.	3.7	43
41	The influence of key parameters on combustion of double gas hydrate. Journal of Natural Gas Science and Engineering, 2020, 80, 103396.	2.1	42
42	Investigating regularities of gas hydrate ignition on a heated surface: Experiments and modelling. Combustion and Flame, 2021, 228, 78-88.	2.8	25
43	Gas Hydrate Combustion in Five Method of Combustion Organization. Entropy, 2020, 22, 710.	1.1	24
44	Droplet evaporation on a structured surface: The role of near wall vortexes in heat and mass transfer. International Journal of Heat and Mass Transfer, 2020, 148, 119126.	2.5	23
45	Studying the influence of key parameters on the methane hydrate dissociation in order to improve the storage efficiency. Journal of Energy Storage, 2021, 44, 103288.	3.9	22
46	The influence of the wall microtexture on functional properties and heat transfer. Journal of Molecular Liquids, 2019, 294, 111670.	2.3	21
47	The influence of key factors on the movement of a crystal and a non-crystalline particle on a free droplet surface. Experimental Thermal and Fluid Science, 2019, 109, 109883.	1.5	17
48	The effect of impurity particles on the forced convection velocity in a drop. Powder Technology, 2020, 362, 341-349.	2.1	17
49	Graphene wettability control: Texturing of the substrate and removal of airborne contaminants in the atmosphere of various gases. Journal of Molecular Liquids, 2022, 349, 118116.	2.3	17
50	Dissociation of gas hydrate for a single particle and for a thick layer of particles: The effect of self-preservation on the dissociation kinetics of the gas hydrate layer. Fuel, 2022, 314, 122759.	3.4	17
51	Co-modeling of methane hydrate dissociation and combustion in a boundary layer. Combustion and Flame, 2022, 238, 111912.	2.8	16
52	Methane hydrate combustion by using different granules composition. Fuel Processing Technology, 2017, 158, 154-162.	3.7	15
53	The crystallization behavior of the aqueous solution of CaCl2 salt in a drop and a layer. Scientific Reports, 2020, 10, 256.	1.6	15
54	Different modes of heat transfer and crystallization in a drop of NaCl solution: The influence of key factors on the crystallization rate and the heat transfer coefficient. International Journal of Thermal Sciences, 2021, 159, 106602.	2.6	15

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55	Effect of heat treatment on corrosion of laser-textured aluminum alloy surfaces. Journal of Materials Science, 2021, 56, 12845-12863.	1.7	15
56	Heat transfer and convection of evaporating sessile droplets in transition from superhydrophilic to superhydrophobic structured wall: Optimization of functional properties. International Communications in Heat and Mass Transfer, 2020, 112, 104474.	2.9	14
57	Convection in a droplet blown by gas flow. Applied Thermal Engineering, 2020, 165, 114536.	3.0	13
58	Experimental data and modeling of wettability on graphene-coated copper. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 277, 115588.	1.7	13
59	Free convection and vapor diffusion of droplet aqueous solutions. Chemical Engineering Research and Design, 2017, 126, 153-160.	2.7	12
60	Heat transfer of aqueous salt solution layers. International Journal of Heat and Mass Transfer, 2018, 125, 610-617.	2.5	12
61	Dissociation and Combustion of a Layer of Methane Hydrate Powder: Ways to Increase the Efficiency of Combustion and Degassing. Energies, 2021, 14, 4855.	1.6	12
62	The effect of textured surface on graphene wettability and droplet evaporation. Journal of Materials Science, 2022, 57, 1850-1862.	1.7	12
63	Dissociation of a powder layer of methane gas hydrate in a wide range of temperatures and heat fluxes. Powder Technology, 2022, 397, 117017.	2.1	12
64	Evaporation of aqueous solutions of LiBr and LiCl salts. International Communications in Heat and Mass Transfer, 2020, 117, 104727.	2.9	11
65	The dependence of evaporation and crystallization kinetics on dynamic and thermal background. AICHE Journal, 2020, 66, e16282.	1.8	10
66	The dependence of drop evaporation rate and wettability on corrosion kinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 610, 125735.	2.3	10
67	Improving the efficiency of storage of natural and artificial methane hydrates. Journal of Natural Gas Science and Engineering, 2021, , 104324.	2.1	10
68	Combustion of a Powder Layer of Methane Hydrate: The Influence of Layer Height and Air Velocity Above the Layer. Flow, Turbulence and Combustion, 2022, 109, 175-191.	1.4	10
69	Water evaporation on structured surfaces with different wettability. International Journal of Heat and Mass Transfer, 2022, 192, 122843.	2.5	10
70	The influence of copper substrate temperature on the wettability of graphene coating. Surface Innovations, 2023, 11, 272-284.	1.4	9
71	Heat transfer of aqueous salt solutions during evaporation on a structured heated wall. International Communications in Heat and Mass Transfer, 2018, 96, 7-11.	2.9	8
72	Molecular dynamic simulation and experimental data on graphene wettability on heated structured surfaces. Experimental Heat Transfer, 2023, 36, 808-825.	2.3	8

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73	Modeling of a Double Gas Hydrate Particle Ignition. Applied Sciences (Switzerland), 2022, 12, 5953.	1.3	8
74	Non-isothermal Evaporation of Salt Solutions on a Microstructured Surface. Nanoscale and Microscale Thermophysical Engineering, 2018, 22, 213-229.	1.4	7
75	Heat Transfer and Boiling Crisis at Droplets Evaporation of Ethanol Water Solution. Journal of Heat Transfer, 2016, 138, .	1.2	6
76	Free Solution Convection at Non-Isothermal Evaporation of Aqueous Salt Solution on a Micro-Structured Wall. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 48-66.	1.4	6
77	Self-organization of TiO2 microparticles on the surface of a thin liquid layer due to local heating and the formation of convective cells. Journal of Molecular Liquids, 2021, 324, 114685.	2.3	6
78	Emergence and breakup of a cluster of ordered microparticles during the interaction of thermocapillary and thermogravitational convection. Powder Technology, 2021, 379, 165-173.	2.1	6
79	Influence of Air Velocity on Non-Isothermal Decay and Combustion of Gas Hydrate. Journal of Engineering Thermophysics, 2021, 30, 374-382.	0.6	6
80	Self-Organization of Convective Flows and a Cluster of TiO₂ Particles in a Water Film under Local Heating: Interaction of Structures at Micro- and Macrolevels. Journal of Physical Chemistry C, 2020, 124, 25054-25061.	1.5	6
81	Non-isothermal evaporation and heat transfer of the salt solution layer on a structured wall in the presence of corrosion. Chemical Engineering Research and Design, 2020, 153, 306-314.	2.7	5
82	Kinetics of methane hydrate dissociation. Doklady Physical Chemistry, 2015, 464, 244-246.	0.2	4
83	The Influence of Surfactants, Dynamic and Thermal Factors on Liquid Convection after a Droplet Fall on Another Drop. Applied Sciences (Switzerland), 2020, 10, 4414.	1.3	4
84	Forming the Convective Flows and a Cluster of Particles under Spot Heating. Nanoscale and Microscale Thermophysical Engineering, 2021, 25, 46-63.	1.4	4
85	Film Heat Exchangers: Hydrodynamics and Heat Transfer (Review). Journal of Engineering Thermophysics, 2020, 29, 686-710.	0.6	4
86	Evaporation of a Droplet of a Heated Colloid Solution on a Horizontal Structured Wall. Journal of Engineering Thermophysics, 2021, 30, 654-660.	0.6	4
87	Effect of Corrosion and Wall Textures on Wettability and Heat Flux at Non-Isothermal Conditions. Coatings, 2022, 12, 46.	1.2	4
88	VISUALIZING THE VELOCITY INSIDE A DROP WHEN A COLD DROPLET FALLS ON A SESSILE DROP ON A HOT WALL. Interfacial Phenomena and Heat Transfer, 2018, 6, 209-218.	0.3	3
89	Convection in Water Droplet in the Presence of External Air Motion. Journal of Engineering Thermophysics, 2020, 29, 443-450.	0.6	3
90	Droplet evaporation on a heated structured wall. Thermal Science, 2018, , 147-147.	0.5	3

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91	Influence of Annealing and Substrate Surface Textures on the Wettability of Grapheneâ€Coated Copper Foil. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, 2100305.	0.8	3
92	Wetting properties of graphene and multilayer graphene deposited on copper: The influence of copper topography. Thin Solid Films, 2022, 755, 139333.	0.8	3
93	Features of water drop evaporation on a heated surface. Doklady Physics, 2013, 58, 40-43.	0.2	2
94	Kinetics of dissociation of hydrate systems with alcohol and electrolyte admixtures. Journal of Engineering Thermophysics, 2015, 24, 342-345.	0.6	2
95	Experimental determination of change in the liquid layer thickness on the heated surface by confocal sensor. EPJ Web of Conferences, 2017, 159, 00011.	0.1	2
96	Dissociation of methane hydrate granules. Journal of Physics: Conference Series, 2017, 899, 032014.	0.3	2
97	Free convection in a drop at liquid evaporation. Journal of Physics: Conference Series, 2018, 1105, 012044.	0.3	2
98	Effect of Diameter of Granules on Dissociation of Methane Hydrate. Journal of Engineering Thermophysics, 2018, 27, 191-195.	0.6	2
99	Nonisothermal Evaporation of Layers of Aqueous Salt Solutions. Journal of Heat Transfer, 2019, 141, .	1.2	2
100	Convective heat transfer in droplets of fuel microemulsions during conductive heating. Experimental Thermal and Fluid Science, 2021, 120, 110258.	1.5	2
101	Non-isothermal desorption and nucleate boiling in a water-salt droplet LiBr. Thermal Science, 2018, 22, 295-300.	0.5	2
102	Heat transfer and evaporation of salt solution on a horizontal heating wall. Thermal Science, 2020, 24, 2171-2179.	0.5	2
103	Convection in an evaporating drop of aqueous solution at a high concentration of microscopic particles. Journal of Physics: Conference Series, 2021, 2057, 012100.	0.3	2
104	Droplets Evaporation on Heated Wall. MATEC Web of Conferences, 2015, 37, 01032.	0.1	1
105	Influence of the Wall on the Boiling Regime. EPJ Web of Conferences, 2016, 110, 01072.	0.1	1
106	The influence of various factors on the droplet desorption. Journal of Physics: Conference Series, 2017, 899, 032013.	0.3	1
107	Crystallization of Salt Solutions on Surface of Droplet and Layer. Journal of Engineering Thermophysics, 2019, 28, 381-391.	0.6	1
108	Combustion of double gas hydrate. AIP Conference Proceedings, 2021, , .	0.3	1

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109	Substrate Wetting Under the Conditions of Drop Free Falling on a Heated Surface. MATEC Web of Conferences, 2015, 37, 01006.	0.1	0
110	Desorption of aqueous salt solution in minichannels. MATEC Web of Conferences, 2015, 23, 01029.	0.1	0
111	Influence of the wall on the droplet evaporation. MATEC Web of Conferences, 2015, 23, 01030.	0.1	0
112	Nonisothermal Desorption of the Libr Aqueous Salt Solution in Minichannels. MATEC Web of Conferences, 2015, 37, 01033.	0.1	0
113	Dissociation of Natural and Artificial Methane Hydrate. EPJ Web of Conferences, 2016, 110, 01040.	0.1	0
114	Spheroid droplets evaporation of water solutions. MATEC Web of Conferences, 2017, 110, 01057.	0.1	0
115	Static contact angle versus volume of distilled water drop on micro patterned surfaces. MATEC Web of Conferences, 2017, 92, 01062.	0.1	0
116	Evaporation and boiling crisis of droplets alcohol solution. MATEC Web of Conferences, 2017, 110, 01059.	0.1	0
117	Nonisothermal desorption of droplets of LiBr salt solution on a heated wall. MATEC Web of Conferences, 2018, 194, 01040.	0.1	0
118	Evaporation of layers of salt solutions. MATEC Web of Conferences, 2018, 194, 01041.	0.1	0
119	Influence of the granule size and composition uniformity on methane hydrate dissociation. Journal of Physics: Conference Series, 2018, 1128, 012072.	0.3	0
120	The nucleate boiling in a droplet of aqueous salt solution. EPJ Web of Conferences, 2019, 196, 00001.	0.1	0
121	Droplet desorption modes at high heat flux. EPJ Web of Conferences, 2019, 196, 00002.	0.1	0
122	Experimental study of the dissociation of natural methane hydrate in the channel in the presence of air flow. Journal of Physics: Conference Series, 2019, 1359, 012057.	0.3	0
123	Comparison of crystallization behavior in a drop and in a thin layer of an aqueous salt solution of LiBr during non-isothermal desorption. Journal of Physics: Conference Series, 2019, 1359, 012066.	0.3	0
124	The droplet boiling on a hot wall with different roughness. AIP Conference Proceedings, 2020, , .	0.3	0
125	The evaporation of water drops on roughness surfaces at heat transfer crisis. AIP Conference Proceedings, 2020, , .	0.3	0
126	Dissociation of the gas hydrate of complex composition during combustion. AIP Conference Proceedings, 2021, , .	0.3	0

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127	Behavior of microparticles in colloidal solution. AIP Conference Proceedings, 2021, , .	0.3	0
128	Evaporation behavior of aqueous salt solution on a structured wall: Effect of SiO2 coating. AIP Conference Proceedings, 2021, , .	0.3	0