Atsuki Komiya

List of Publications by Year
in descending order

137	2,425	201674	254184
papers	citations	27 h-index	43 g-index

137	137	137	1582
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Production behavior and numerical analysis for 2017 methane hydrate extraction test of Shenhu, South China Sea. Journal of Natural Gas Science and Engineering, 2018, 53, 55-66.	4.4	176
2	Enhancement of gas production from methane hydrate reservoirs by the combination of hydraulic fracturing and depressurization method. Energy Conversion and Management, 2019, 184, 194-204.	9.2	133
3	Construction and simulation of reservoir scale layered model for production and utilization of methane hydrate: The case of Nankai Trough Japan. Energy, 2018, 143, 128-140.	8.8	96
4	Numerical analysis of gas production from layered methane hydrate reservoirs by depressurization. Energy, 2019, 166, 1106-1119.	8.8	88
5	Combined heat transfer of radiation and natural convection in a square cavity containing participating gases. International Journal of Heat and Mass Transfer, 2011, 54, 5087-5099.	4.8	85
6	Initiation process and propagation mechanism of positive streamer discharge in water. Journal of Applied Physics, 2014, 116, .	2.5	69
7	A new approach to optimizing pigmented coatings considering both thermal and aesthetic effects. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 192-204.	2.3	64
8	Dimensionless solutions and general characteristics of bioheat transfer during thermal therapy. Journal of Thermal Biology, 2009, 34, 377-384.	2.5	62
9	Numerical analysis of gas production from reservoir-scale methane hydrate by depressurization with a horizontal well: The effect of permeability anisotropy. Marine and Petroleum Geology, 2019, 102, 817-828.	3.3	55
10	Controlling the radiative properties of cool black-color coatings pigmented with CuO submicron particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 132, 90-98.	2.3	53
11	Development of phase-shifting interferometry for measurement of isothermal diffusion coefficients in binary solutions. Optics and Lasers in Engineering, 2012, 50, 1287-1296.	3.8	52
12	Investigation on the dissociation flow of methane hydrate cores: Numerical modeling and experimental verification. Chemical Engineering Science, 2017, 163, 31-43.	3.8	48
13	Comparison between aesthetic and thermal performances of copper oxide and titanium dioxide nano-particulate coatings. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1197-1204.	2.3	45
14	Photothermal therapy of tumors in lymph nodes using gold nanorods and near-infrared laser light with controlled surface cooling. Nano Research, 2015, 8, 3842-3852.	10.4	43
15	Numerical analysis of core-scale methane hydrate dissociation dynamics and multiphase flow in porous media. Chemical Engineering Science, 2016, 153, 221-235.	3.8	43
16	Production strategy for oceanic methane hydrate extraction and power generation with Carbon Capture and Storage (CCS). Energy, 2017, 126, 256-272.	8.8	40
17	The effect of particles size distribution on aesthetic and thermal performances of polydisperse TiO2 pigmented coatings: Comparison between numerical and experimental results. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 594-606.	2.3	39
18	Development of guarded hot plate apparatus utilizing Peltier module for precise thermal conductivity measurement of insulation materials. International Journal of Heat and Mass Transfer, 2015, 91, 1157-1166.	4.8	39

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19	Influence of radiation effect on turbulent natural convection in cubic cavity at normal temperature atmospheric gas. International Journal of Heat and Mass Transfer, 2017, 104, 456-466.	4.8	38
20	Development and estimation of a novel cryoprobe utilizing the Peltier effect for precise and safe cryosurgery. Cryobiology, 2009, 59, 275-284.	0.7	37
21	The effects of TiO2 pigmented coatings characteristics on temperature and brightness of a coated black substrate. Solar Energy, 2012, 86, 200-207.	6.1	37
22	The Effects of Using Some Common White Pigments on Thermal and Aesthetic Performances of Pigmented Coatings. Journal of Thermal Science and Technology, 2009, 4, 131-145.	1.1	33
23	Measurement of Soret and Fickian diffusion coefficients by orthogonal phase-shifting interferometry and its application to protein aqueous solutions. Journal of Chemical Physics, 2013, 139, 074203.	3.0	33
24	Report on Microgravity Experiments of Dynamic Surface Deformation Effects on Marangoni Instability in High-Prandtl-Number Liquid Bridges. Microgravity Science and Technology, 2018, 30, 599-610.	1.4	33
25	Proposal for a low CO2 emission power generation system utilizing oceanic methane hydrate. Energy, 2012, 47, 340-347.	8.8	32
26	A novel treatment for metastatic lymph nodes using lymphatic delivery and photothermal therapy. Scientific Reports, 2017, 7, 45459.	3.3	32
27	Rapid yet accurate measurement of mass diffusion coefficients by phase shifting interferometer. Journal Physics D: Applied Physics, 1999, 32, 995-999.	2.8	28
28	Bifurcation analysis of steady natural convection in a tilted cubical cavity with adiabatic sidewalls. Journal of Fluid Mechanics, 2014, 756, 650-688.	3.4	28
29	Spatiotemporal analysis of propagation mechanism of positive primary streamer in water. Journal of Applied Physics, 2013, 113, .	2.5	27
30	Precise and short-time measurement method of mass diffusion coefficients. Experimental Thermal and Fluid Science, 2006, 30, 535-543.	2.7	26
31	Continuous measurement of an artificial upwelling of deep sea water induced by the perpetual salt fountain. Deep-Sea Research Part I: Oceanographic Research Papers, 2007, 54, 75-84.	1.4	26
32	Evidences of increasing primary production in the ocean by Stommel's perpetual salt fountain. Deep-Sea Research Part I: Oceanographic Research Papers, 2011, 58, 567-574.	1.4	25
33	Evaluation of rate-determining step of methane hydrate decomposition by measurement of transient heat and mass transfer near solidâ€“gas interface. International Journal of Heat and Mass Transfer, 2020, 149, 119191.	4.8	24
34	Discrete Ordinates Radiation Element Method for Radiative Heat Transfer in Three-Dimensional Participating Media. Numerical Heat Transfer, Part B: Fundamentals, 2007, 51, 121-140.	0.9	22
35	Nutrient transport from an artificial upwelling of deep sea water. Journal of Oceanography, 2009, 65, 349-359.	1.7	22
36	Regenerative cooling using elastocaloric rubber: Analytical model and experiments. Journal of Applied Physics, 2020, 127, .	2.5	22

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37	Infrared Radiative Properties of Thin Polyethylene Coating Pigmented With Titanium Dioxide Particles. Journal of Heat Transfer, 2010, 132, .	2.1	21
38	High-speed phase-shifting interferometry using triangular prism for time-resolved temperature measurement. Applied Optics, 2015, 54, 6297.	2.1	21
39	Numerical Study of Non-Gray Radiation and Natural Convection Using the Full-Spectrumk-Distribution Method. Numerical Heat Transfer; Part A: Applications, 2012, 61, 61-84.	2.1	20
40	Evaluation method for radiative heat transfer in polydisperse water droplets. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 1-15.	2.3	19
41	Flat-Plate Solar Collector Performance with Coated and Uncoated Glass Cover. Heat Transfer Engineering, 2006, 27, 46-53.	1.9	18
42	Development of quasi common path phase-shifting interferometer for measurement of natural convection fields. International Journal of Heat and Mass Transfer, 2012, 55, 7460-7470.	4.8	18
43	Large eddy simulation of turbulent natural convection between symmetrically heated vertical parallel plates for water. International Journal of Heat and Mass Transfer, 2016, 101, 870-877.	4.8	18
44	Experimental evaluation of thermal radiation effects on natural convection with a Rayleigh number of 108â€“109 by using an interferometer. International Journal of Heat and Mass Transfer, 2019, 132, 1239-1249.	4.8	18
45	Transition from multiplicity to singularity of steady natural convection in a tilted cubical enclosure. Physical Review E, 2015, 92, 023031.	2.1	16
46	Three-step phase-shifting imaging ellipsometry to measure nanofilm thickness profiles. Optics and Lasers in Engineering, 2019, 112, 145-150.	3.8	16
47	24-gauge ultrafine cryoprobe with diameter of 550Î¼m and its cooling performance. Cryobiology, 2014, 69, 411-418.	0.7	15
48	Numerical simulation of stability behaviors and heat transfer characteristics for near-critical fluid microchannel flows. Energy Conversion and Management, 2016, 110, 407-418.	9.2	15
49	Law of the wall for a temporally evolving vertical natural convection boundary layer. Journal of Fluid Mechanics, 2020, 902, .	3.4	15
50	Three-dimensional continuation study of convection in a tilted rectangular enclosure. Physical Review E, 2013, 88, 043015.	2.1	14
51	Control of thermal barrier performance by optimized nanoparticle size and experimental evaluation using a solar simulator. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 149, 81-89.	2.3	14
52	Quantitative visualization of boundary layers by developing quasi-common-path phase-shifting interferometer. Experimental Thermal and Fluid Science, 2015, 60, 231-240.	2.7	14
53	Visualization Study of Supercritical Fluid Convection and Heat Transfer in Weightlessness by Interferometry: A Brief Review. Microgravity Science and Technology, 2017, 29, 275-295.	1.4	14
54	Computer simulation for postmortem cooling processes in the outer ear. Legal Medicine, 2007, 9, 55-62.	1.3	13

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55	Numerical investigation on gas production from Shenhu (China): Influence of layer inclination and horizontal inhomogeneities. Journal of Natural Gas Science and Engineering, 2020, 82, 103509.	4.4	13
56	Numerical analysis of gas production from large-scale methane hydrate sediments with fractures. Energy, 2021, 236, 121485.	8.8	13
57	Description of the adhesive crystal growth under normal and micro-gravity conditions employing experimental and numerical approaches. Journal of Crystal Growth, 2002, 245, 278-288.	1.5	12
58	Measurement of the Molecular Mass Dependence of the Mass Diffusion Coefficient in Protein Aqueous Solutions. Defect and Diffusion Forum, 0, 326-328, 452-458.	0.4	12
59	Interferometric measurement and numerical comparisons of supersonic heat transfer flows in microchannel. Applied Thermal Engineering, 2016, 109, 582-590.	6.0	12
60	Measurement of transient heat transfer in vicinity of gasâ€“liquid interface using high-speed phase-shifting interferometer. International Communications in Heat and Mass Transfer, 2017, 89, 57-63.	5.6	12
61	A review analysis of gas hydrate tests: engineering progress and policy trend. Environmental Geotechnics, 2022, 9, 242-258.	2.3	12
62	Effects of rounding errors on postmortem temperature measurements caused by thermometer resolution. International Journal of Legal Medicine, 2007, 121, 267-273.	2.2	11
63	Treatment of tumor in lymph nodes using nearâ€infrared laser lightâ€activated thermosensitive liposomeâ€encapsulated doxorubicin and gold nanorods. Journal of Biophotonics, 2017, 10, 1676-1682.	2.3	11
64	Coherent regime and far-to-near-field transition for radiative heat transfer. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 187, 310-321.	2.3	11
65	Radiative control through greenhouse covering materials using pigmented coatings. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 231, 29-36.	2.3	11
66	Fast propagation of an underwater secondary streamer by the appearance of a continuous component in the discharge current. Europhysics Letters, 2014, 105, 15003.	2.0	10
67	Effects of concentration of participating media on turbulent natural convection in cubic cavity. Applied Thermal Engineering, 2018, 131, 141-149.	6.0	10
68	Uniform thermal conditions on 3-D object: Optimal power estimation of panel heaters in a 3-D radiant enclosure. International Journal of Thermal Sciences, 2012, 51, 63-76.	4.9	9
69	Development of a guard-heated thermistor probe for the accurate measurement of surface temperature. International Journal of Heat and Mass Transfer, 2017, 108, 2283-2292.	4.8	9
70	Optical Method for Simultaneous High-Resolution Measurement of Heat and Fluid Flow: The Case of Rayleigh-BÃ©nard Convection. Physical Review Applied, 2020, 14, .	3.8	9
71	Dynamic imaging and analysis of transient mass transfer process using pixelated-array masked phase-shifting interferometry. International Journal of Heat and Mass Transfer, 2021, 174, 121339.	4.8	9
72	Boiling heat transfer in small channel for development of ultrafine cryoprobe. International Journal of Heat and Fluid Flow, 2010, 31, 1012-1018.	2.4	8

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73	Thermal therapy and evaluation by a precise temperature control device. Heat Transfer - Asian Research, 2011, 40, 114-124.	2.8	8
74	Analysis of Evaporative Heat Transfer by Expansion Bubble in a Microchannel for High Heat Flux Cooling. Journal of Thermal Science and Technology, 2012, 7, 740-752.	1.1	8
75	Output density quantification of electricity generation by flowing deionized water on graphene. Applied Physics Letters, 2020, 117, .	3.3	8
76	High Grashof number turbulent natural convection on an infinite vertical wall. Journal of Fluid Mechanics, 2021, 929, .	3.4	8
77	Quantitative visualization of injection jet flow behaviors of transcritical and supercritical processes by pixelated phase-shifting interferometer. Experimental Thermal and Fluid Science, 2022, 139, 110729.	2.7	8
78	Estimation of temperature distribution in biological tissue by using solutions of bioheat transfer equation. Heat Transfer - Asian Research, 2008, 37, 374-386.	2.8	7
79	The Flexible Cryoprobe Using Peltier Effect for Heat Transfer Control. Journal of Biomechanical Science and Engineering, 2008, 3, 138-150.	0.3	7
80	Propagation and branching process of negative streamers in water. Journal of Applied Physics, 2018, 124, 163301.	2.5	7
81	Resonance-driven heat transfer enhancement in a natural convection boundary layer perturbed by a moderate impinging jet. Physical Review Fluids, 2021, 6, .	2.5	7
82	Asymptotic analysis of boundary thermal-wave process near the liquidâ€“gas critical point. Physics of Fluids, 2022, 34, .	4.0	7
83	Cooling Characteristics of Ultrafine Cryoprobe Utilizing Convective Boiling Heat Transfer in Microchannel. , 2010, , .		6
84	Experimental evaluation of optimization method for developing ultraviolet barrier coatings. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 133, 454-463.	2.3	6
85	Highly Temporal Visualization of Generation Process of Underwater Secondary Streamer From Developed Primary Streamer. IEEE Transactions on Plasma Science, 2014, 42, 2398-2399.	1.3	5
86	Study of methane hydrate as a future energy resource: low emission extraction and power generation. IOP Conference Series: Earth and Environmental Science, 2016, 40, 012074.	0.3	5
87	Measurement of Transient Double Diffusive Convection and Crystal Growth Using Real-Time Phase-Shifting Interferometer.. JSME International Journal Series B, 2001, 44, 561-567.	0.3	4
88	Design and Feasibility Analysis of Microscale Bumped Channel With Supersonic Flow for Electronics Cooling. Journal of Microelectromechanical Systems, 2016, 25, 1033-1040.	2.5	4
89	Thermal Therapy and Evaluation by Precise Temperature Control Device(Thermal Engineering). 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2009, 75, 2055-2059.	0.2	3
90	Measurement of Mass Diffusion Coefficient of Multi-Component System in Aqueous Media by Phase Shifting Interferometer. Defect and Diffusion Forum, 0, 297-301, 624-630.	0.4	3

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91	Study of Supersonic Micro-Channel for Cooling Electronic Devices. , 2013, , .		3
92	Experimental and Numerical Evaluation of Small-Scale Cryosurgery Using Ultrafine Cryoprobe. Journal of Nanotechnology in Engineering and Medicine, 2013, 4, .	0.8	3
93	Preliminary experiment of supersonic micro-channel gas flow visualization by using Interferometer. Journal of Fluid Science and Technology, 2014, 9, JFST0069-JFST0069.	0.6	3
94	Measurement of concentration dependency of diffusion coefficient in ethanol-water solution under different storage condition. Journal of Fluid Science and Technology, 2018, 13, JFST0030-JFST0030.	0.6	3
95	Numerical Modelling of Gas Production from the Oceanic Gas Hydrate Reservoirs in Eastern Nankai Trough (AT1 site), Japan. Environmental Geotechnics, 2020, , 1-9.	2.3	3
96	Visualization of methane hydrate decomposition interface and analyses of decomposition rate and interfacial configuration. Physics of Fluids, 2020, 32, .	4.0	3
97	Evaluation of forced convective boiling heat transfer with layered parallel microchannels. Journal of Thermal Science and Technology, 2020, 15, JTST0006-JTST0006.	1.1	3
98	Low-energy activation of large convective heat transfer via flow resonance triggered by impinging jet. International Journal of Heat and Mass Transfer, 2022, 195, 123036.	4.8	3
99	Development of Precise-temperature-controlled Cooling Apparatus for Medical Application by Using Peltier Effect. , 2008, , .		2
100	THREE-DIMENSIONAL PHONON TRANSPORT SIMULATION FOR NANO/MICROSTRUCTURED MATERIALS. International Journal of Nanoscience, 2008, 07, 103-112.	0.7	2
101	Design of Plate-type Actuator using SMA Wire for Assistant Artificial Heart Muscle. Journal of Intelligent Material Systems and Structures, 2008, 19, 359-365.	2.5	2
102	Control of Radiative Properties of Coatings Pigmented With Fe2O3 Nanoparticles. , 2011, , .		2
103	The Effect of Dispersed State to Control of Radiative Properties of Coatings Pigmented with Nanoparticles. Journal of Thermal Science and Technology, 2012, 7, 364-378.	1.1	2
104	Radiative properties of spectral selective coatings pigmented with TiO₂ nanoparticles. Heat Transfer - Asian Research, 2013, 42, 352-363.	2.8	2
105	Inverse Method for Estimating Local Thermal Diffusivity of Biomaterials. Journal of Thermal Science and Technology, 2013, 8, 395-406.	1.1	2
106	Estimation Method for Thermal Conductivity of Soft Materials and Liquids by Inverse Analysis. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2013, 79, 2264-2274.	0.2	2
107	Visualization of the flow pattern in methane hydrate reservoir model. Journal of Fluid Science and Technology, 2018, 13, JFST0028-JFST0028.	0.6	2
108	Measurement of Transient Transport Process of Different Molecules Across Mixed Fiber (CA-CN) Membrane by Pixelated-Array Masked Phase-Shifting Interferometer. Experimental Thermal and Fluid Science, 2021, , 110490.	2.7	2

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109	Measurement of dynamic wetting using phase-shifting imaging ellipsometer: comparison of pure solvent and nanoparticle suspension on film thickness profile, apparent contact angle, and precursor film length. Experiments in Fluids, 2021, 62, 1.	2.4	2
110	Effect of gas radiation-depended natural convection on the transition of spatially developing boundary layers. International Journal of Heat and Mass Transfer, 2021, 177, 121580.	4.8	2
111	Development of Various Cryoprobes Using Heat Transfer Control. , 2012, , 211-248.		2
112	Thermo-fluid dynamic design optimization of a concentric tube heat exchanger. Journal of Fluid Science and Technology, 2019, 14, JFST0011-JFST0011.	0.6	2
113	A Measurement Method of Thermal Conductivity of Soft Materials and Liquids by Utilizing a Point-Contact Method. Netsu Bussei, 2014, 26, 136-141.	0.1	2
114	Development of a Simple Structured Artificial Muscle Using SMA Wire. AIP Conference Proceedings, 2006, , .	0.4	1
115	Precise Control of Frozen Region During Cryosurgery Utilizing Peltier Effect. , 2007, , 51.		1
116	Application of Traditional Medical Ideas to Geriatric Syndrome. Advances in Geriatrics, 2014, 2014, 1-20.	1.6	1
117	Estimation and measurement of permeability inside methane hydrate mimicking porous media. Journal of Fluid Science and Technology, 2016, 11, JFST0031-JFST0031.	0.6	1
118	Transition from the incoherent to the coherent regime for propagative-wave based thermal radiation. Journal of Physics: Conference Series, 2016, 676, 012023.	0.4	1
119	ICOPE-15-1012 Evaluation of power generation system utilizing ocean methane hydrate and chemical carbon capture and storage system. The Proceedings of the International Conference on Power Engineering (ICOPE), 2015, 2015.12, _ICOPE-15--_ICOPE-15-.	0.0	1
120	NUMERICAL STUDY OF A TRANSITIONAL NATURAL VENTILATION FLOW DRIVEN BY A LINE SOURCE PLUME WITH VARIED REYNOLDS AND PRANDTL NUMBERS. Computational Thermal Sciences, 2011, 3, 511-519.	0.9	1
121	MEASUREMENT OF MASS DIFFUSION COEFFICIENT OF MICRO QUANTITY PROTEINS USING PHASE SHIFTING INTERFEROMETER. , 2006, , .		1
122	VISUALIZATION OF HEAT AND MASS TRANSFER NEAR THE FORMATION AND DISSOCIATION INTERFACE OF CO2 HYDRATE WITH HIGHâ€“SPEED PHASEâ€“SHIFTING INTERFEROMETER. , 2018, , .		1
123	IN-SITU MEASUREMENT OF SMALL DIFFUSION FIELDS USING A PHASE-SHIFTING INTERFEROMETER. Journal of Flow Visualization and Image Processing, 2006, 13, 243-264.	0.5	1
124	Evaluation of the Influence of Universal Buffer Solution on Diffusion Phenomena of Protein. Netsu Bussei, 2010, 24, 15-20.	0.1	1
125	LARGE EDDY SIMULATION OF THE DIFFUSION PROCESS OF NUTRIENT-RICH UP-WELLED SEAWATER. Frontiers in Heat and Mass Transfer, 2013, 4, .	0.2	1
126	Numerical Study of 3D Nonlinear Disturbance Growth in Transitional Natural Convection. , 2010, , .		0

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127	High-Tech Equipment for Moxibustion in Modern Medicine. , 0, , .		0
128	Radiative Properties of Wavelength Selection Coatings Pigmented with TiO2 Nanoparticles. Netsu Bussei, 2014, 24, 177-182.	0.1	0
129	The effect of contact force during radiofrequency catheter ablation using a vibrating catheter: New cooling method for catheter ablation. Technology and Health Care, 2019, 27, 589-601.	1.2	0
130	Development of Precise Visualization System for Small Transient Diffusion Field of Protein Using Phase Shifting Interferometer. , 2007, , .		0
131	An Investigation of Concentration Dependency of Mass Diffusion Coefficients in Multi-Component Diffusion. , 2010, , .		0
132	Formation and Dissociation of Oceanic Methane Hydrate for a Low CO2 Emission Power Generation System. , 2011, , .		0
133	Experimental and Numerical Evaluation of Small-Scale Cryosurgery Using Ultrafine Cryoprobe. , 2013, , .		0
134	Oceanic methane hydrate utilization system design and reservoir scale numerical modeling. Chinese Science Bulletin, 2018, 63, 3241-3250.	0.7	0
135	Visualization of Inception, Propagation, and Collapse Process of Underwater Positive Streamer. , 2019, , 859-862.		0
136	Thermo-Fluid Dynamic Design Exploration of a Double Pipe Heat Exchanger. , 2019, , .		0
137	Estimation of radiative thermal conductivity of glass wool using high precision GHP apparatus. Transactions of the JSME (in Japanese), 2022, , .	0.2	0