

# Hiroki Yamaguchi

## List of Publications by Year in descending order

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93  
papers

872  
citations

471509

17  
h-index

552781

26  
g-index

94  
all docs

94  
docs citations

94  
times ranked

739  
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental measurements of thermal and tangential momentum accommodation coefficients on solid surfaces: Water vapor in comparison with noble gases. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122195.	4.8	4
2	Single-molecule tracking measurement of PDMS layer during curing process. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2021, 565, 125576.	2.6	3
3	Molecular dynamics study on flow structure inside a thermal transpiration flow field. <i>Physics of Fluids</i> , 2021, 33, .	4.0	9
4	FRET Measurement of Polymer Response under Shear. <i>Sensors</i> , 2021, 21, 8033.	3.8	0
5	Extraction of Tangential Momentum and Normal Energy Accommodation Coefficients by Comparing Variational Solutions of the Boltzmann Equation with Experiments on Thermal Creep Gas Flow in Microchannels. <i>Fluids</i> , 2021, 6, 445.	1.7	2
6	Dynamics of impact cratering on granular bed by hydrogel sphere. <i>Physics of Fluids</i> , 2020, 32, 067112.	4.0	2
7	Measurement of Heat Transfer from Anodic Oxide Film on Aluminum in High Knudsen Number Flows. <i>Micromachines</i> , 2020, 11, 234.	2.9	1
8	Simultaneous measurement of gas-liquid interface motion and temperature distribution on heated surface using temperature-sensitive paint. <i>International Journal of Heat and Mass Transfer</i> , 2020, 153, 119567.	4.8	13
9	Design and demonstration of Knudsen heat pump without moving parts free from electricity. <i>Applied Energy</i> , 2019, 250, 1260-1269.	10.1	16
10	Electrophoretic Separation on an Origami Paper-Based Analytical Device Using a Portable Power Bank. <i>Sensors</i> , 2019, 19, 1724.	3.8	6
11	Impact cratering on a granular bed by hydrogel spheres having intermediate property between solid and liquid. <i>Physical Review E</i> , 2019, 99, 032906.	2.1	8
12	Measurement of conductive heat transfer through rarefied binary gas mixtures. <i>Vacuum</i> , 2019, 160, 164-170.	3.5	8
13	Estimation of diffusive states from single-particle trajectory in heterogeneous medium using machine-learning methods. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 24099-24108.	2.8	21
14	A novel heat pump system using a multi-stage Knudsen compressor. <i>International Journal of Heat and Mass Transfer</i> , 2018, 127, 84-91.	4.8	14
15	Conductive heat transfer in a gas confined between two concentric spheres: From free-molecular to continuum flow regime. <i>International Journal of Heat and Mass Transfer</i> , 2017, 108, 1527-1534.	4.8	14
16	Fine printing of pressure- and temperature-sensitive paints using commercial inkjet printer. <i>Sensors and Actuators B: Chemical</i> , 2017, 250, 563-568.	7.8	16
17	Molecular-dynamics study on characteristics of energy and tangential momentum accommodation coefficients. <i>Physical Review E</i> , 2017, 96, 013116.	2.1	22
18	Performance prediction method for a multi-stage Knudsen pump. <i>Physics of Fluids</i> , 2017, 29, 122002.	4.0	11

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19	Polymer-Particle Pressure-Sensitive Paint with High Photostability. <i>Sensors</i> , 2016, 16, 550.	3.8	23
20	Viscous slip coefficients for binary gas mixtures measured from mass flow rates through a single microtube. <i>Physics of Fluids</i> , 2016, 28, 092001.	4.0	12
21	Faster Convergence of Diffusion Anisotropy Detection by Three-Step Relation of Single-Particle Trajectory. <i>Analytical Chemistry</i> , 2016, 88, 4502-4507.	6.5	8
22	Mass flow rate measurement of thermal creep flow from transitional to slip flow regime. <i>Journal of Fluid Mechanics</i> , 2016, 795, 690-707.	3.4	34
23	Micro-molecular tagging velocimetry of internal gaseous flow. <i>Microfluidics and Nanofluidics</i> , 2016, 20, 1.	2.2	5
24	Study on diffusion process of nanoparticles in a PDMS layer using SPT technique. , 2015, , .		1
25	Electric Conductive Pattern Element Fabricated Using Commercial Inkjet Printer for Paper-Based Analytical Devices. <i>Analytical Chemistry</i> , 2015, 87, 5762-5765.	6.5	24
26	Development of fast response bi-luminophore pressure-sensitive paint by means of an inkjet printing technique. <i>Measurement Science and Technology</i> , 2015, 26, 064004.	2.6	20
27	J0540106 Mass Flow Rate Measurement of Water Molecules through a Micro-channel. <i>The Proceedings of Mechanical Engineering Congress Japan</i> , 2015, 2015, _J0540106--_J0540106-.	0.0	0
28	Combined PSP $\frac{1}{2}$ ¥TSP sensor fabricated with inkjet-printing technique. <i>Journal of the Visualization Society of Japan</i> , 2014, 34, 28-34.	0.0	0
29	Single particle tracking study on diffusion process in a polymer matrix. , 2014, , .		1
30	Dual luminescent arrays sensor fabricated by inkjet-printing of pressure- and temperature-sensitive paints. <i>Sensors and Actuators B: Chemical</i> , 2014, 190, 70-77.	7.8	47
31	Measurement of thermal accommodation coefficients using a simplified system in a concentric sphere shells configuration. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014, 32, .	2.1	14
32	Property changes of temperature-sensitive paint immobilized in acrylic polymer matrices. <i>Sensors and Actuators B: Chemical</i> , 2014, 195, 677-681.	7.8	14
33	Investigation of inkjet printing conditions for microdot pressure-sensitive sensor on anodized aluminum substrate. <i>Transactions of the JSME (in Japanese)</i> , 2014, 80, FE0040-FE0040.	0.2	0
34	Thermal transpiration flow through a single rectangular channel. <i>Journal of Fluid Mechanics</i> , 2014, 744, 169-182.	3.4	22
35	J0550103 Measurement of tangential momentum accommodation coefficient by using a micro-channel. <i>The Proceedings of Mechanical Engineering Congress Japan</i> , 2014, 2014, _J0550103--_J0550103-.	0.0	0
36	Reduction of Temperature Effects in Pressure-Sensitive Paint Measurements. <i>AIAA Journal</i> , 2013, 51, 1779-1783.	2.6	16

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37	ZnS <sup>AgInS2</sup> nanoparticles as a temperature sensor. Sensors and Actuators B: Chemical, 2013, 176, 505-508.	7.8	42
38	Pressure measurement of gas flows through a micro-channel by phosphorescence dye. , 2013, , .		0
39	Unsteady pressure-sensitive paint measurement based on the heterodyne method using low frame rate camera. Review of Scientific Instruments, 2013, 84, 105110.	1.3	11
40	Development of Organic Electroluminescent Sensor for Pressure/Oxygen Measurement. , 2013, , .		0
41	J053044 Micro Gas Flow Measurement by Pressure-Sensitive Molecular Film. The Proceedings of Mechanical Engineering Congress Japan, 2013, 2013, _J053044-1-_J053044-3.	0.0	0
42	Pressure-Sensitive Molecular Film. , 2013, , 1-10.		0
43	J053035 Study on fundamental characteristics of Knudsen pump. The Proceedings of Mechanical Engineering Congress Japan, 2013, 2013, _J053035-1-_J053035-4.	0.0	0
44	Organic Electroluminescent Sensor for Pressure Measurement. Sensors, 2012, 12, 13899-13906.	3.8	17
45	Investigation on heat transfer between two coaxial cylinders for measurement of thermal accommodation coefficient. Physics of Fluids, 2012, 24, .	4.0	27
46	Measurement of the rotational temperature in a nitrogen molecular beam by REMPI. AIP Conference Proceedings, 2012, , .	0.4	2
47	Tangential Momentum Accommodation Coefficient measurements for various materials and gas species. Journal of Physics: Conference Series, 2012, 362, 012035.	0.4	11
48	Development of Pressure-Sensitive Channel Chip for Micro Gas Flows. Journal of Physics: Conference Series, 2012, 362, 012036.	0.4	1
49	A Discussion of Spatial Resolution of Pressure-Sensitive Paint. 880-02 Nihon Kikai Gakkai Ronbunshu Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2012, 78, 1260-1266.	0.2	3
50	Combined Pressure-/Temperature-Sensitive Paint Arranged in Dot Array. 880-02 Nihon Kikai Gakkai Ronbunshu Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2012, 78, 1327-1335.	0.2	4
51	Reduction of Temperature Effect in Pressure-Sensitive Paint Measurements by Model Materials and Coatings. , 2012, , .		1
52	Combined pressure and temperature sensor using pressure- and temperature-sensitive paints. , 2012, , .		5
53	Pressure-sensitive paint measurement on co-rotating disks in a hard disk drive. Optics and Lasers in Engineering, 2012, 50, 82-86.	3.8	15
54	Application of MTV to Internal Gaseous Flow through Rectangular Channel. Transactions of Visualization Soc of Japan, 2012, 32, 15-20.	0.2	1

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55	J053011 Development of combined pressure and temperature sensor using PtTFPP and CdSe/ZnS. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _J053011-1- _J053011-4.	0.0	0
56	Error Analysis of Pressure-Sensitive Paint Measurement. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2011, 77, 1189-1200.	0.2	4
57	Experimental Study on Rotational Temperatures in Nitrogen Molecular Beam. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2011, 77, 282-291.	0.2	1
58	Unsteady 2D measurement of dissolved oxygen distribution using luminescent sensor film. Sensors and Actuators B: Chemical, 2011, 160, 1464-1467.	7.8	14
59	Pressure-sensitive molecular film for investigation of micro gas flows. Microfluidics and Nanofluidics, 2011, 10, 165-171.	2.2	55
60	Experimental measurement on tangential momentum accommodation coefficient in a single microtube. Microfluidics and Nanofluidics, 2011, 11, 57-64.	2.2	63
61	Pressure-sensitive channel chip for visualization measurement of micro gas flows. Microfluidics and Nanofluidics, 2011, 11, 507-510.	2.2	31
62	Pressure-Sensitive Molecular Film for Experimental Analyses of Micro Gas-Flows. , 2011, , .		0
63	Experimental Study on Measurement of Tangential Momentum Accommodation Coefficient in Microtube. , 2010, , .		1
64	Pressure Distribution Measurement on a Rotating Disk Surface by Pressure-Sensitive Paint(Mechanical) Tj ETQq0 0 0 rgBT /Overlock 10 Engineers, Part C, 2010, 76, 3002-3007.	0.2	1
65	Pressure-Sensitive Paint Measurement on Co-Rotating Disks. , 2010, , .		0
66	Experimental Measurement of Energy Accommodation Coefficient by Low-Pressure Method. , 2009, , .		1
67	Extension and characterization of pressure-sensitive molecular film. Experiments in Fluids, 2009, 47, 1025-1032.	2.4	19
68	Discussion on measurement mechanism of pressure-sensitive paints. Sensors and Actuators B: Chemical, 2009, 142, 224-229.	7.8	9
69	Discussion on Mechanism of Pressure-Sensitive Paint through Application to High Knudsen Number Regime(Fluids Engineering). 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2009, 75, 730-735.	0.2	0
70	Measurement of Oxygen Concentration Distribution inside a Mixing Channel using Oxygen Sensitive Luminophore. Transactions of Visualization Soc of Japan, 2009, 29, 51-57.	0.2	0
71	Measurement of Oxygen Concentration Distribution inside a Mixing Channel using Oxygen Sensitive Luminophore. Transactions of Visualization Soc of Japan, 2009, 29, 27-33.	0.2	1
72	Development of Pressure Sensitive Molecular Film as a Measurement Technique for Micro-Flows. , 2008, , .		1

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73	Molecular Dynamics Study on Rare Gas-Graphite (0001) Surface Scattering. , 2008, , .		4
74	Inhomogeneous decomposition of ultrathin oxide films on Si(100): Application of Avrami kinetics to thermal desorption spectra. Journal of Chemical Physics, 2008, 128, 164712.	3.0	20
75	Measurement and Analysis of Rotational Energy of Nitrogen Molecular Beam by REMPI. , 2008, , .		4
76	Modeling of a Vibrational Transition Collisional Model for Diatomic Molecules (1st Report,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 627 Td Society of Mechanical Engineers Series B B-hen, 2008, 74, 1694-1699.	0.2	0
77	Development of Pressure Sensitive Molecular Film Composed of Platinum Porphyrin Complex. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 385-391.	0.2	1
78	Thermal Decomposition Process of Ultrathin Oxide Layers on Si(100). Hyomen Kagaku, 2008, 29, 537-542.	0.0	2
79	Discussion on Mechanism of Pressure-Sensitive Paints. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2007, 73, 112-117.	0.2	1
80	Discussion on Luminescent Intensity of Pressure Sensitive Paint. , 2007, , .		1
81	Development of Pressure Sensitive Molecular Film Suitable for Measurement in High Knudsen Number Flows. , 2007, , .		0
82	Multiscale analysis for dissociative adsorption of SiH4 on Si(100) surface. Surface and Coatings Technology, 2006, 200, 3385-3388.	4.8	3
83	Energy transfer in hyperthermal Xe-graphite surface scattering. European Physical Journal D, 2006, 38, 103-109.	1.3	32
84	Ab Initio Studies of the Surface Reaction of Si<sub>2</sub>C and SiC<sub>2</sub> with Si on the 4H-SiC (000-1) Surface. Materials Science Forum, 2006, 527-529, 235-238.	0.3	4
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86	Trampoline motions in Xeâ€“graphite(0001) surface scattering. Chemical Physics Letters, 2005, 413, 331-334.	2.6	34
87	Vibrational Relaxation/Excitation Collision Model of Diatomic Molecules for Rarefied Gas Flows. AIP Conference Proceedings, 2005, , .	0.4	1
88	Out-of-plane Scattering Distribution of Nitrogen Molecular Beam on Graphite (0001) Surface. AIP Conference Proceedings, 2005, , .	0.4	6
89	Direct Simulation Monte Carlo Method on Rarefied Hypersonic Gas Flow Around Flat Plates. Journal of Spacecraft and Rockets, 2004, 41, 397-405.	1.9	4
90	Vibrational Relaxation of Diatomic Molecules in Rarefied Gas Flows. AIP Conference Proceedings, 2003, , .	0.4	0

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91	Interaction between a Shock Wave and a Boundary Layer in a Nonequilibrium Hypersonic Rarefied Flow. 2nd Report. Comparison of State for Translational and Rotational Energy Distributions.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2002, 68, 1653-1660.	0.2	1
92	3D DSMC Simulation of rarefied hypersonic flow over a sharp flat plate. AIP Conference Proceedings, 2001, , .	0.4	1
93	Interaction between Shock Waves and Boundary Layer in Non-Equilibrium Hypersonic Rarefield Flow. 1st Report. Comparison with Continuum Model and Larsen-Borgnakke Model.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2000, 66, 1377-1386.	0.2	0