

Yoichiro Matsumoto

List of Publications by Year in descending order

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141
papers

2,574
citations

218592

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197736

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141
all docs

141
docs citations

141
times ranked

1895
citing authors

#	ARTICLE	IF	CITATIONS
1	Viscidâ€“inviscid interactions of pairwise bubbles in a turbulent channel flow and their implications for bubble clustering. Journal of Fluid Mechanics, 2021, 919, .	1.4	4
2	Effects of breast structure on high-intensity focused ultrasound focal error. Journal of Therapeutic Ultrasound, 2018, 6, 4.	2.2	7
3	Incident energy dependence of the scattering dynamics of water molecules on silicon and graphite surfaces: the effect on tangential momentum accommodation. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	4
4	Construction of kidney phantom model with acoustic shadow by rib bones and respiratory organ motion. AIP Conference Proceedings, 2017, , .	0.3	2
5	Hyperthermal molecular beam source using a non-diaphragm-type small shock tube. Review of Scientific Instruments, 2016, 87, 105117.	0.6	1
6	Focused Ultrasound and Lithotripsy. Advances in Experimental Medicine and Biology, 2016, 880, 113-129.	0.8	25
7	An extremely robust US based focal lesion servo system incorporating a servo recovery algorithm for a NIUTS. , 2015, , .		1
8	Introduction for amazing (cavitation) bubbles. Interface Focus, 2015, 5, 20150059.	1.5	5
9	A novel robust template matching method to track and follow body targets for NIUTS. , 2014, , .		10
10	Toward the Multi-scale Simulation for a Human Body Using the Next-generation Supercomputer. Procedia IUTAM, 2014, 10, 193-200.	1.2	4
11	Surfactant effect on path instability of a rising bubble. Journal of Fluid Mechanics, 2014, 738, 124-142.	1.4	55
12	A novel redundant motion control mechanism in accordance with medical diagnostic and therapeutic task functions for a NIUTS. , 2014, , .		3
13	Analysis of scientific research structure in Singapore using bibliometrics and network analysis for understanding their characteristics of R&D: A case study of biomedical field. , 2014, , .		1
14	A Full-Eulerian Approach for the Fluidâ€“Structure Interaction Problem. Lecture Notes in Computational Vision and Biomechanics, 2014, , 47-74.	0.5	0
15	B212 Molecular dynamics simulation of wettability and pore diameter dependence of saturation pressure of water in nanocylinders. The Proceedings of the Thermal Engineering Conference, 2014, _B212-1_-_B212-2_.	0.0	0
16	System Identification Method for Non-Invasive Ultrasound Theragnostic System Incorporating Mechanical Oscillation Part. International Journal of Automation Technology, 2014, 8, 110-119.	0.5	2
17	J0550203 Molecular Dynamics Simulation of Pore Diameter Dependence of Saturation Pressure of Water in Nanocylinder. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, _J0550203-_J0550203-.	0.0	0
18	Measurements of microbubble generation process in microchannel using ultra high-speed micro-PTV system. Microfluidics and Nanofluidics, 2013, 14, 1011-1020.	1.0	4

#	ARTICLE	IF	CITATIONS
19	Construction Methodology for the Non-Invasive Ultrasound Theragnostic System (4th report) -Bed-Type Servoing System for Body Targets. <i>Procedia CIRP</i> , 2013, 5, 294-299.	1.0	0
20	A Mechanical System Identification Method for Non-Invasive Ultrasound Theragnostic System. <i>Procedia CIRP</i> , 2013, 5, 315-320.	1.0	2
21	Gasâ€œSurface Energy Exchange in Collisions of Helium Atoms with Aligned Single-Walled Carbon Nanotube Arrays. <i>Journal of Physical Chemistry C</i> , 2013, 117, 14254-14260.	1.5	5
22	Two-dimensional manipulation of microbubbles using primary Bjerknes force. , 2013, , .		1
23	A Novel High Intensity Focused Ultrasound Robotic System for Breast Cancer Treatment. <i>Lecture Notes in Computer Science</i> , 2013, 16, 388-395.	1.0	14
24	Construction Methodology for NIUTS â€œ Bed Servoing System for Body Targets â€œ. <i>Journal of Robotics and Mechatronics</i> , 2013, 25, 1088-1096.	0.5	5
25	J053016 New formulation of dissipative particle dynamics : Non-Markovian models. <i>The Proceedings of Mechanical Engineering Congress Japan</i> , 2013, 2013, _J053016-1-_J053016-5.	0.0	0
26	Numerical study on microbubble-enhanced heating for various parameters in EUS-FUS. , 2012, , .		1
27	Ultrasound-mediated gene transfection: A comparison between cells irradiated in suspension and attachment status. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	1
28	Optimization of HIFU treatment on the basis of temperature distributions measured by a thin-film thermocouple array. , 2012, , .		0
29	Focus Control in HIFU Therapy Assisted by Time-Reversal Simulation with an Iterative Procedure for Hot Spot Elimination. <i>Journal of Biomechanical Science and Engineering</i> , 2012, 7, 43-56.	0.1	10
30	A Computational Blood Flow Analysis in a Capillary Vessel including Multiple Red Blood Cells and Platelets. <i>Journal of Biomechanical Science and Engineering</i> , 2012, 7, 72-83.	0.1	20
31	A Priori Modeling of the Acoustic Boundary Layer Effect on the Heat Source in Ultrasound. <i>Journal of Biomechanical Science and Engineering</i> , 2012, 7, 84-101.	0.1	1
32	Improvement of Bubble Model in High Void Fraction for Cavitating Flow Simulations. <i>Journal of Computational Science and Technology</i> , 2012, 6, 113-128.	0.4	1
33	Surface instability of an encapsulated bubble induced by an ultrasonic pressure wave. <i>Journal of Fluid Mechanics</i> , 2012, 691, 315-340.	1.4	29
34	Collapse of micrometer-sized cavitation bubbles near a rigid boundary. <i>Microfluidics and Nanofluidics</i> , 2012, 13, 957-966.	1.0	83
35	A Review of Full Eulerian Methods for Fluid Structure Interaction Problems. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2012, 79, .	1.1	26
36	Multiphase Flows in Bio-Medical Field. <i>Japanese Journal of Multiphase Flow</i> , 2012, 26, 386-391.	0.1	1

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37	An interface capturing method with a continuous function: The THINC method with multi-dimensional reconstruction. Journal of Computational Physics, 2012, 231, 2328-2358.	1.9	124
38	OS1-2-2 Analysis of gas transport in polymer electrolyte fuel cells using structure constructed from X-ray nano CT. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2012, 2012.4, 161-162.	0.0	0
39	J053012 Measurements of Time-of-Flight Distributions of Shock-heated Molecular Beams. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _J053012-1- _J053012-5.	0.0	0
40	J053013 Investigation of water-graphite interaction using molecular beam technique. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _J053013-1- _J053013-5.	0.0	0
41	BC-JP-1 Development of Multiscale Thrombus Simulator. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _BC-JP-1-1- _BC-JP-1-2.	0.0	0
42	Technologizing and Digitalizing Medical Professional Skills for a Non-Invasive Ultrasound Theragnostic System “ Technologizing and Digitalizing Kidney Stone Extraction Skills “. Journal of Robotics and Mechatronics, 2012, 24, 379-388.	0.5	2
43	Robust kidney stone tracking for a non-invasive ultrasound theragnostic system-Servoing performance and safety enhancement-. , 2011, , .		19
44	Surfactant Effects on Bubble Motion and Bubbly Flows. Annual Review of Fluid Mechanics, 2011, 43, 615-636.	10.8	210
45	Ultrasound -Assisted Gene Transfer to Adipose Tissue-Derived Stemâ•Progenitor Cells (ASCs). , 2011, , .		0
46	Temperature Change from Oscillating Bubbles within a Capillary Network Induced by Focused Ultrasound. AIP Conference Proceedings, 2011, , .	0.3	0
47	A TR-induced algorithm for hot spots elimination through CT-scan HIFU simulations. AIP Conference Proceedings, 2011, , .	0.3	0
48	Medical Application of Fluid Dynamics (Diagnostic and Therapeutic Integrated System by Ultrasound). 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2011, 77, 1868-1878.	0.2	1
49	The Influence of the Insonation Conditions of Pulsed Ultrasound on Microbubble Volumetric Oscillations (On the Mechanical Index and the Oscillation Characteristics). 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2011, 77, 264-273.	0.2	2
50	Development of high intensity focused ultrasound simulator for largeâ€scale computing. International Journal for Numerical Methods in Fluids, 2011, 65, 43-66.	0.9	26
51	A full Eulerian finite difference approach for solving fluidâ€structure coupling problems. Journal of Computational Physics, 2011, 230, 596-627.	1.9	139
52	Numerical study on the shape oscillation of an encapsulated microbubble in ultrasound field. Physics of Fluids, 2011, 23, .	1.6	33
53	Multiscale Analysis on Cavitating Flow. , 2011, , .		0
54	Numerical Study of the Effective Combination of Microbubbles and Ultrasound in HIFU Therapy. , 2011, , .		3

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55	Prediction of Cavitation Intensity and Erosion Area in Centrifugal Pump by Using Cavitating Flow Simulation with Bubble Flow Model. Journal of Fluid Science and Technology, 2010, 5, 305-316.	0.2	20
56	Full-Eulerian Finite-Difference Simulation of Fluid Flow in Hyperelastic Wavy Channel. Journal of Fluid Science and Technology, 2010, 5, 475-490.	0.2	16
57	Scattering Process of Transmitted Gas Molecules Through Vertically Aligned Single-Walled Carbon Nanotube Arrays (<Special Issue>The 1st Symposium on Micro-Nano Engineering). Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2010, 76, 1933-1935.	0.2	0
58	A Single Bubble 3D Motion in Dilute Surfactant Solution : 1st Report, Relation between Surfactant Concentration and 3D Motion(Fluids Engineering). 880-02 Nihon Kikai Gakkai Ronbunshu Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2010, 76, 1785-1792.	0.2	2
59	Full Eulerian simulations of biconcave neo-Hookean particles in a Poiseuille flow. Computational Mechanics, 2010, 46, 147-157.	2.2	52
60	Numerical simulation of the tissue ablation in high-intensity focused ultrasound therapy with array transducer. International Journal for Numerical Methods in Fluids, 2010, 64, 1395-1411.	0.9	11
61	Surfactant effects on single bubble motion and bubbly flow structure. , 2010, , .		3
62	Temperature distribution in heating experiment using HIFU and microbubbles. , 2010, , .		1
63	Micro-bubble Enhanced Sonoporation. , 2010, , .		0
64	Development of computer controlled HIFU focal model scanning system. , 2010, , .		0
65	Large-scale analysis of focused ultrasound in heterogeneous media. , 2010, , .		1
66	An Eulerian Approach to Fluid-Structure Coupling Problems Suitable for Voxel-Based Geometry. , 2010, , .		2
67	A numerical analysis of the effect of bubble-induced liquid flow on mass transfer in bubble plumes. , 2010, , .		1
68	Numerical Simulation of High Intensity Focused Ultrasound Therapy with Volume Model of Human Body. , 2010, , .		0
69	Integration of diagnostics and therapy by ultrasound and robot technology. , 2010, , .		4
70	A control framework for the non-invasive ultrasound theragnostic system. , 2009, , .		14
71	Enhancement of ultrasonic heating with microbubbles and their localization in target tissue. , 2009, , .		0
72	The Deformation of a Vesicle in a Linear Shear Flow. Journal of Applied Mechanics, Transactions ASME, 2009, 76, .	1.1	19

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73	Ultrasound Gene Transfer into Fibroblast Cells using Microbubbles. , 2009, , .		0
74	Development of HIFU treatment in which the heating location is controlled using microbubbles. , 2009, , .		0
75	High intensity focused ultrasound lithotripsy with cavitating microbubbles. Medical and Biological Engineering and Computing, 2009, 47, 851-860.	1.6	91
76	The Deformation Behavior of Multiple Red Blood Cells in a Capillary Vessel. Journal of Biomechanical Engineering, 2009, 131, 074504.	0.6	21
77	Numerical study on the shear-induced lift force acting on a spherical bubble in aqueous surfactant solutions. Physics of Fluids, 2008, 20, .	1.6	45
78	Nonlinear Phenomena of Acoustic Cloud Cavitation. AIP Conference Proceedings, 2008, , .	0.3	0
79	Scattering of Monatomic Gas Molecules on Vertically Aligned Single-Walled Carbon Nanotubes. , 2008, , .		1
80	Nonequilibrium Rotational Temperature Measurements over Flat Plates in Hypersonic Rarefied Gas Flow. , 2008, , .		0
81	Development of Ultra Small Shock Tube for High Energy Molecular Beam Source. , 2008, , .		1
82	Cavitation detection with subharmonic emissions by low intensity sustaining ultrasound. , 2008, , .		0
83	Effects of Surfactant on the Lift Force Acting on a Bubble in a Shear Flow. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 1679-1685.	0.2	0
84	The Behavior of a Lipid Bilayer Vesicle in a Simple Shear Flow (1st Report, Validation of the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 530-535.	0.2	2
85	The Behavior of a Lipid Bilayer Vesicle in a Simple Shear Flow (2nd Report, An Experimental Analysis of) Tj ETQq1 1 0.784314 rgBT /Over Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 856-861.	0.2	1
86	Propagation of Pressure Waves, Caused by a Thermal Shock, in Liquid Metals Containing Gas Bubbles. Journal of Fluid Science and Technology, 2008, 3, 116-128.	0.2	26
87	A Molecular Dynamics Study on the Local Structure of Liquid-Vapor Interface of Water and L-J Fluid. Journal of Thermal Science and Technology, 2008, 3, 234-240.	0.6	1
88	A Framework of the Non-invasive Ultrasound Theragnostic System. Lecture Notes in Computer Science, 2008, , 231-240.	1.0	9
89	Thermal Decomposition Process of Ultrathin Oxide Layers on Si(100). Hyomen Kagaku, 2008, 29, 537-542.	0.0	2
90	Feed-Forward Controller for the Integrated Non-Invasive Ultrasound Diagnosis and Treatment. Journal of Robotics and Mechatronics, 2008, 20, 89-97.	0.5	10

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91	Ultrasound-based visual servoing system for lithotripsy. , 2007, , .		6
92	A Molecular Dynamics Study on the Growth of Bubble Nuclei with a Noncondensable Gas (1st Report,) Tj ETQq0 0 0 rgBT /Overlock 10 T the Japan Society of Mechanical Engineers Series B B-hen, 2007, 73, 2145-2152.	0.2	0
93	A Molecular Dynamics Study on the Growth of Bubble Nuclei with a Noncondensable Gas (2nd Report,) Tj ETQq1 1 0.784314 rgBT /Ove Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2007, 73, 2153-2159.	0.2	1
94	Microbubble-Enhanced Ultrasound Gene Transfer into Fibroblast Cells. AIP Conference Proceedings, 2007, , .	0.3	0
95	Development of a Non-Invasive Ultrasound Therapy System. , 2007, , .		0
96	Effective Heat therapy Controlling Heat Deposition of Microbubbles in the Ultrasound Field. AIP Conference Proceedings, 2007, , .	0.3	3
97	A meso-scale analysis of lipid bilayers with the dissipative particle dynamics method: Thermally fluctuating interfaces. International Journal for Numerical Methods in Fluids, 2007, 54, 831-840.	0.9	19
98	Generation of micro gas bubbles of uniform diameter in an ultrasonic field. Journal of Fluid Mechanics, 2006, 548, 113.	1.4	44
99	Interaction between Shock Wave and Boundary Layer in Nonequilibrium Hypersonic Rarefied Flow. JSME International Journal Series B, 2006, 49, 771-779.	0.3	1
100	Nonlinear Behavior of the Collapse of a Spherical Bubble Cloud. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2006, 72, 620-627.	0.2	1
101	Propagation of Pressure Waves, Caused by a Thermal Shock, in Liquid Metals Containing Gas Bubbles. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2006, 72, 885-892.	0.2	3
102	Cloud cavitation control for lithotripsy using high intensity focused ultrasound. Ultrasound in Medicine and Biology, 2006, 32, 1383-1397.	0.7	112
103	Microbubble-induced increase in ablation of liver tumors by high-intensity focused ultrasound. Hepatology Research, 2006, 36, 308-314.	1.8	25
104	Relationship between Thermal Effect and Bubble Behavior in HIFU. AIP Conference Proceedings, 2006, , .	0.3	1
105	Temperature Distribution In The Medium Containing Contrast Agent Microbubbles In HIFU Field. AIP Conference Proceedings, 2006, , .	0.3	1
106	2342 DEVELOPMENT OF ULTRA SMALL SHOCK TUBE FOR HIGH ENERGY MOLECULAR BEAM SOURCE. The Proceedings of the JSME Annual Meeting, 2006, 2006.2, 97-98.	0.0	0
107	Inverse Phenomenon of Nucleation Rate in Binary Liquid-Gas Mixtures (Molecular Dynamics Study of) Tj ETQq1 1 0.784314 rgBT /Ove Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2005, 71, 1893-1900.	0.2	0
108	Medical ultrasound with microbubbles. Experimental Thermal and Fluid Science, 2005, 29, 255-265.	1.5	83

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109	A molecular-dynamics study of lipid bilayers: Effects of the hydrocarbon chain length on permeability. Journal of Chemical Physics, 2005, 123, 184714.	1.2	60
110	Use of a microbubble agent to increase the effects of high intensity focused ultrasound on liver tissue. European Radiology, 2005, 15, 1415-1420.	2.3	164
111	Behaviour of a bubble cluster in an ultrasound field. International Journal for Numerical Methods in Fluids, 2005, 47, 591-601.	0.9	50
112	Erythrocytes and microbubble contrast agents, improve the therapeutic efficiency of high intensity focused ultrasound. AIP Conference Proceedings, 2005, , .	0.3	0
113	Heating and Coagulation Volume Obtained with High-Intensity Focused Ultrasound Therapy: Comparison of Perflutren Protein-Type A Microspheres and MRX-133 in Rabbits. Radiology, 2005, 237, 132-136.	3.6	33
114	Numerical Study Of The Heat Transfer From An Oscillating Bubble. AIP Conference Proceedings, 2005, , .	0.3	0
115	DSMC Simulation of Non-uniform Flow Effects behind a Conical Nozzle. AIP Conference Proceedings, 2005, , .	0.3	0
116	Out-of-plane Scattering Distribution of Nitrogen Molecular Beam on Graphite (0001) Surface. AIP Conference Proceedings, 2005, , .	0.3	6
117	Polyacrylamide gel containing egg white as new model for irradiation experiments using focused ultrasound. Ultrasound in Medicine and Biology, 2004, 30, 1419-1422.	0.7	133
118	Renal Stone Comminution Utilizing Cloud Cavitation Erosion (1st Report, The Control of Cloud) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 38 Engineers Series B B-hen, 2004, 70, 904-911.	0.2	3
119	Reduced-Order Modeling for Thermal Damping Effect on Radial Motion of a Bubble. The Proceedings of the Fluids Engineering Conference, 2004, 2004, 292.	0.0	0
120	Molecular Dynamics Simulation of Vibrational Friction Force Due to Molecular Deformation in Confined Lubricant Film. Journal of Tribology, 2003, 125, 587-591.	1.0	29
121	Multi-Scale Analysis for Rarefied Gas Flows. AIP Conference Proceedings, 2003, , .	0.3	1
122	Vibrational Relaxation of Diatomic Molecules in Rarefied Gas Flows. AIP Conference Proceedings, 2003, , .	0.3	0
123	Dynamic Molecular Collision (DMC) Model for General Diatomic Rarefied Gas Flows. AIP Conference Proceedings, 2003, , .	0.3	0
124	Drag and lift forces on a bubble rising near a vertical wall in a viscous liquid. Journal of Fluid Mechanics, 2002, 461, 277-300.	1.4	90
125	Vibrational friction force by confined polymer film. The Proceedings of the JSME Annual Meeting, 2002, 2002.1, 213-214.	0.0	0
126	Molecular Scale Flow Structure Near a Solid Surface. JSME International Journal Series B, 2001, 44, 552-560.	0.3	0

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127	Three-Dimensional Numerical Analysis of Bubbly Flow around a Circular Cylinder.. JSME International Journal Series B, 2001, 44, 319-327.	0.3	6
128	Multi-scale analysis of bubbly flows. Computer Methods in Applied Mechanics and Engineering, 2001, 191, 689-704.	3.4	32
129	521 Drag reducing Mechanism in Bubbly Flow around a Circular Cylinder. The Proceedings of Conference of Kanto Branch, 2001, 2001.7, 201-202.	0.0	0
130	Influence of the Nuclei Size Distribution on the Collapsing Behavior of the Cloud Cavitation.. JSME International Journal Series B, 2000, 43, 380-385.	0.3	22
131	Bubble and bubble cloud dynamics. AIP Conference Proceedings, 2000, , .	0.3	10
132	Fine Structure of Boundary layer on Circular Cylinder Surface in Bubbly Flow. The Proceedings of the Fluids Engineering Conference, 2000, 2000, 135.	0.0	0
133	Nonlinear oscillation of a spherical gas bubble in acoustic fields. Journal of the Acoustical Society of America, 1999, 106, 3156-3166.	0.5	23
134	Shock waves in a uniform bubbly flow. Physics of Fluids, 1998, 10, 2661-2668.	1.6	57
135	NUMERICAL SIMULATIONS OF MULTIPHASE FLOWS. , 1998, , 994-1010.		6
136	Numerical Analysis of a Single Rising Bubble Using Boundary-Fitted Coordinate System.. JSME International Journal Series B, 1997, 40, 42-50.	0.3	52
137	Shock waves in a liquid containing small gas bubbles. Physics of Fluids, 1996, 8, 322-335.	1.6	128
138	Influence of Internal Phenomena on Gas Bubble Motion. Effects of Thermal Diffusion, Phase Change on the Gas-Liquid Interface and Mass Diffusion between Vapor and Noncondensable Gas in the Collapsing Phase.. JSME International Journal Series B, 1994, 37, 288-296.	0.3	42
139	Influence of Internal Phenomena on Gas Bubble Motion.Effects of Transport Phenomena and Mist Formation inside Bubble in the Expanding Phase.. JSME International Journal Series B, 1994, 37, 736-745.	0.3	19
140	The film formation dynamics in spin coating. Physics of Fluids A, Fluid Dynamics, 1989, 1, 1949-1959.	1.6	62
141	Growth and Collapse of Cavitation Bubbles : Change of Nuclei Population due to Collapse of Bubbles. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 1983, 49, 2265-2272.	0.2	3