

Shu Takagi

List of Publications by Year in descending order

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Version: 2024-02-01

129
papers

1,757
citations

331538

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h-index

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39
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130
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130
docs citations

130
times ranked

1439
citing authors

#	ARTICLE	IF	CITATIONS
1	Important Regulatory Roles of Erythrocytes in Platelet Adhesion to the von Willebrand Factor on the Wall under Blood Flow Conditions. <i>Thrombosis and Haemostasis</i> , 2022, 122, 974-983.	1.8	6
2	Localized motion imaging for monitoring HIFU therapy: Comparison of modulating frequencies and utilization of square modulating wave. <i>Ultrasonics</i> , 2022, 120, 106658.	2.1	2
3	Automatic Aortic Valve Cusps Segmentation from CT Images Based on the Cascading Multiple Deep Neural Networks. <i>Journal of Imaging</i> , 2022, 8, 11.	1.7	5
4	Numerical Study of Particle Margination in a Square Channel Flow with Red Blood Cells. <i>Fluids</i> , 2022, 7, 96.	0.8	5
5	Numerical study on stress in a solid wall caused by the collapse of a cavitation bubble cloud in hydraulic fluid. <i>International Journal of Multiphase Flow</i> , 2022, 150, 103965.	1.6	4
6	Gas Adsorption and Diffusion Behaviors in Interfacial Systems Composed of a Polymer of Intrinsic Microporosity and Amorphous Silica: A Molecular Simulation Study. <i>Langmuir</i> , 2022, 38, 7567-7579.	1.6	4
7	Molecular Insights into the Mechanical Properties of Polymer-Fullerene Bulk Heterojunctions for Organic Photovoltaic Applications. <i>Macromolecules</i> , 2021, 54, 958-969.	2.2	11
8	Effect of Deformation Constraint Conditions on Force-length Relationship in Skeletal Muscles. <i>Transactions of the Institute of Systems Control and Information Engineers</i> , 2021, 34, 122-127.	0.1	0
9	Viscid-inviscid interactions of pairwise bubbles in a turbulent channel flow and their implications for bubble clustering. <i>Journal of Fluid Mechanics</i> , 2021, 919, .	1.4	4
10	Numerical study on sector-vortex phased irradiation method using annular array transducer in High-Intensity Focused Ultrasound treatment. <i>Ultrasonics</i> , 2021, 115, 106464.	2.1	4
11	Study on the performance of a 200 μ m airlift pump for water and highly-viscous shear-thinning slurry. <i>International Journal of Multiphase Flow</i> , 2021, 142, 103726.	1.6	9
12	Biomechanical Gain in Joint Excursion from the Curvature of the Achilles Tendon: Role of the Geometrical Arrangement of Inflection Point, Center of Rotation, and Calcaneus. <i>Diagnostics</i> , 2021, 11, 2097.	1.3	0
13	Relation between oxygen gas diffusivity and porous characteristics under capillary condensation of water in cathode catalyst layers of polymer electrolyte membrane fuel cells. <i>International Journal of Heat and Mass Transfer</i> , 2020, 150, 119277.	2.5	13
14	A penalized spline fitting method to optimize geometric parameters of arterial centerlines extracted from medical images. <i>Computerized Medical Imaging and Graphics</i> , 2020, 84, 101746.	3.5	5
15	Characterization of Brain-Targeted Drug Delivery Enhanced by a Combination of Lipid-Based Microbubbles and Non-Focused Ultrasound. <i>Journal of Pharmaceutical Sciences</i> , 2020, 109, 2827-2835.	1.6	12
16	An immersed boundary method for mass transfer through porous biomembranes under large deformations. <i>Journal of Computational Physics</i> , 2020, 413, 109444.	1.9	15
17	Potential different impact of inhibition of thrombin function and thrombin generation rate for the growth of thrombi formed at site of endothelial injury under blood flow condition. <i>Thrombosis Research</i> , 2019, 179, 121-127.	0.8	8
18	Prediction of binding characteristics between von Willebrand factor and platelet glycoprotein Ib β with various mutations by molecular dynamic simulation. <i>Thrombosis Research</i> , 2019, 184, 129-135.	0.8	9

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19	Multiscale Simulations for Fluid Structure Interaction Problems with Biomedical Applications. Lecture Notes in Mechanical Engineering, 2019, , 207-215.	0.3	0
20	Numerical investigation of COD reduction in compact bioreactor with bubble plumes. Chemical Engineering Science, 2018, 185, 1-17.	1.9	8
21	Mutual influence of molecular diffusion in gas and surface phases. Physical Review E, 2018, 97, 013101.	0.8	11
22	A Multi-modality Approach Towards Elucidation of the Mechanism for Human Achilles Tendon Bending During Passive Ankle Rotation. Scientific Reports, 2018, 8, 4319.	1.6	14
23	Constructing a coarse-grained water model based on non-Markovian dissipative particle dynamics. Transactions of the JSME (in Japanese), 2018, 84, 18-00193-18-00193.	0.1	0
24	Development of patient-specific 1D-0D simulation based on MRI and SPECT data. Journal of Biorheology, 2018, 32, 2-8.	0.2	5
25	Effects of breast structure on high-intensity focused ultrasound focal error. Journal of Therapeutic Ultrasound, 2018, 6, 4.	2.2	7
26	Continuum and stochastic approach for cell adhesion process based on Eulerian fluid-capsule coupling with Lagrangian markers. Journal of Computational Physics, 2018, 374, 769-786.	1.9	6
27	Visualization of Temperature Distribution around Focal Area and Near Fields of High Intensity Focused Ultrasound Using a 3D Measurement System. Advanced Biomedical Engineering, 2018, 7, 1-7.	0.4	3
28	Ultrasound computed tomography with the ring transducer using contrast source inversion. The Proceedings of Mechanical Engineering Congress Japan, 2018, 2018, J2410105.	0.0	0
29	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
30	A Full Eulerian Method for Fluid-structure Interaction Problems. Procedia IUTAM, 2017, 20, 159-166.	1.2	10
31	Effect of capillary condensation on gas transport properties in porous media. Physical Review E, 2017, 96, 043112.	0.8	10
32	Behavior of the oscillating microbubble clusters trapped in focused ultrasound field. , 2017, , .		0
33	Behavior of the oscillating microbubble clusters trapped in focused ultrasound field. , 2017, , .		0
34	Numerical simulation of red blood cell flow for investigation of coronary peripheral resistance. The Proceedings of the Computational Mechanics Conference, 2017, 2017.30, 218.	0.0	0
35	Prediction of Molecular Interaction between Platelet Glycoprotein Ib α and von Willebrand Factor using Molecular Dynamics Simulations. Journal of Atherosclerosis and Thrombosis, 2016, 23, 455-464.	0.9	21
36	Hyperthermal molecular beam source using a non-diaphragm-type small shock tube. Review of Scientific Instruments, 2016, 87, 105117.	0.6	1

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37	Development of Multi-scale Musculo-Skeletal Simulator. , 2016, , .		0
38	Influence of intramuscular fiber orientation on the Achilles tendon curvature using three-dimensional finite element modeling of contracting skeletal muscle. Journal of Biomechanics, 2016, 49, 3592-3595.	0.9	12
39	On the interaction of two encapsulated bubbles in an ultrasound field. Journal of Fluid Mechanics, 2016, 804, 58-89.	1.4	21
40	Synthetic aperture ultrasound imaging with a ring transducer array: preliminary ex vivo results. Journal of Medical Ultrasonics (2001), 2016, 43, 461-471.	0.6	26
41	Development of a Numerical Method for Patient-Specific Cerebral Circulation Using 1D-3D Simulation of the Entire Cardiovascular System with SPECT Data. Annals of Biomedical Engineering, 2016, 44, 2351-2363.	1.3	22
42	Large-scale analysis of liquid-water distribution in a porous material based on mean field theory: Application to a micro-porous layer in a polymer electrolyte fuel cell. The Proceedings of Mechanical Engineering Congress Japan, 2016, 2016, J2220101.	0.0	0
43	Platelets: Small in Size But Essential in the Regulation of Vascular Homeostasis- Translation From Basic Science to Clinical Medicine . Circulation Journal, 2015, 79, 1871-1881.	0.7	26
44	Numerical study on the effective heating due to inertial cavitation in microbubble-enhanced HIFU therapy. AIP Conference Proceedings, 2015, , .	0.3	6
45	Anatomical Geometry and Thickness of Aponeuroses in Human Cadaver Triceps Surae Muscles. Advanced Biomedical Engineering, 2015, 4, 12-15.	0.4	2
46	The role of numerical simulation for the development of an advanced HIFU system. Computational Mechanics, 2014, 54, 1023-1033.	2.2	14
47	Surfactant effect on path instability of a rising bubble. Journal of Fluid Mechanics, 2014, 738, 124-142.	1.4	55
48	Effect of tendon stiffness on the generated force at the Achilles tendon - 3D finite element simulation of a human triceps surae muscle during isometric contraction. Journal of Biomechanical Science and Engineering, 2014, 9, 13-00294-13-00294.	0.1	5
49	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, 2014, _B212-1_-_B212-2_.	0.0	0
50	Measurements of microbubble generation process in microchannel using ultra high-speed micro-PTV system. Microfluidics and Nanofluidics, 2013, 14, 1011-1020.	1.0	4
51	Gas-Surface Energy Exchange in Collisions of Helium Atoms with Aligned Single-Walled Carbon Nanotube Arrays. Journal of Physical Chemistry C, 2013, 117, 14254-14260.	1.5	5
52	Focus Control Aided by Numerical Simulation in Heterogeneous Media for High-Intensity Focused Ultrasound Treatment. Japanese Journal of Applied Physics, 2013, 52, 07HF01.	0.8	34
53	Two-dimensional manipulation of microbubbles using primary Bjerknes force. , 2013, , .		1
54	Development of High-Energy Molecular Beam Source Using Small Shock Tube. 880-02 Nihon Kikai Gakkai Ronbunshu Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2013, 79, 140-150.	0.2	0

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55	A Novel High Intensity Focused Ultrasound Robotic System for Breast Cancer Treatment. Lecture Notes in Computer Science, 2013, 16, 388-395.	1.0	14
56	J011014 Blood Flow Simulation using the Fluid-Structure Coupling Method suitable for Massively Parallel Computing. The Proceedings of Mechanical Engineering Congress Japan, 2013, 2013, _J011014-1-_J011014-5.	0.0	0
57	J053016 New formulation of dissipative particle dynamics : Non-Markovian models. The Proceedings of Mechanical Engineering Congress Japan, 2013, 2013, _J053016-1-_J053016-5.	0.0	0
58	A Full Eulerian Fluid-Membrane Coupling Method with a Smoothed Volume-of-Fluid Approach. Communications in Computational Physics, 2012, 12, 544-576.	0.7	23
59	THE INFLUENCES OF CARDIOVASCULAR PROPERTIES ON SUPRASYSTOLIC BRACHIAL CUFF WAVE STUDIED BY A SIMPLE ARTERIAL-TREE MODEL. Journal of Mechanics in Medicine and Biology, 2012, 12, 1250040.	0.3	6
60	Numerical study on microbubble-enhanced heating for various parameters in EUS-FUS. , 2012, , .		1
61	Ultrasound-mediated gene transfection: A comparison between cells irradiated in suspension and attachment status. AIP Conference Proceedings, 2012, , .	0.3	1
62	Optimization of HIFU treatment on the basis of temperature distributions measured by a thin-film thermocouple array. , 2012, , .		0
63	Development of Microbubble Generator and its Utilization to Enhance the Mass Transfer in the Bubble Plumes and Columns. , 2012, , .		4
64	The Effects of Brachial Arterial Stiffening on The Accuracy of Oscillometric Blood Pressure Measurement: A Computational Model Study. Journal of Biomechanical Science and Engineering, 2012, 7, 15-30.	0.1	10
65	Focus Control in HIFU Therapy Assisted by Time-Reversal Simulation with an Iterative Procedure for Hot Spot Elimination. Journal of Biomechanical Science and Engineering, 2012, 7, 43-56.	0.1	10
66	A Computational Blood Flow Analysis in a Capillary Vessel including Multiple Red Blood Cells and Platelets. Journal of Biomechanical Science and Engineering, 2012, 7, 72-83.	0.1	20
67	Numerical Study on Platelet Adhesion to Vessel Walls using the Kinetic Monte Carlo Method. Journal of Biomechanical Science and Engineering, 2012, 7, 275-283.	0.1	9
68	Surface instability of an encapsulated bubble induced by an ultrasonic pressure wave. Journal of Fluid Mechanics, 2012, 691, 315-340.	1.4	29
69	A Review of Full Eulerian Methods for Fluid Structure Interaction Problems. Journal of Applied Mechanics, Transactions ASME, 2012, 79, .	1.1	26
70	Multiphase Flows in Bio-Medical Field. Japanese Journal of Multiphase Flow, 2012, 26, 386-391.	0.1	1
71	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
72	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

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73	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
74	J025026 A Study on Numerical Models of Neural Networks for Human Motion in Parkinson's Patients. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _J025026-1-_J025026-4.	0.0	0
75	Biomechanical Simulation for Predictive Medical Treatment. The Proceedings of the Fluids Engineering Conference, 2012, 2012, 3-4.	0.0	0
76	F221003 Development of Functional Microbubbles. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _F221003-1-_F221003-2.	0.0	0
77	Notice of Retraction Nanoparticle control of slurry flow in microchannel. , 2011, , .		0
78	Surfactant Effects on Bubble Motion and Bubbly Flows. Annual Review of Fluid Mechanics, 2011, 43, 615-636.	10.8	210
79	Development of high intensity focused ultrasound simulator for large-scale computing. International Journal for Numerical Methods in Fluids, 2011, 65, 43-66.	0.9	26
80	A full Eulerian finite difference approach for solving fluid-structure coupling problems. Journal of Computational Physics, 2011, 230, 596-627.	1.9	139
81	Numerical Study of the Effective Combination of Microbubbles and Ultrasound in HIFU Therapy. , 2011, , .		3
82	B116 Development of Cerebral Circulation Model for Multi-Scale Blood Flow Simulation. The Proceedings of the JSME Conference on Frontiers in Bioengineering, 2011, 2011.22, 69-70.	0.0	0
83	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
84	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
85	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 RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2010, 76, 1785-1792.	0.2	2
86	Full Eulerian simulations of biconcave neo-Hookean particles in a Poiseuille flow. Computational Mechanics, 2010, 46, 147-157.	2.2	52
87	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
88	Surfactant effects on single bubble motion and bubbly flow structure. , 2010, , .		3
89	Analysis of microbubble dynamics under ultrasound exposure. , 2010, , .		1
90	Temperature distribution in heating experiment using HIFU and microbubbles. , 2010, , .		1

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91	Micro-bubble Enhanced Sonoporation. , 2010, , .		0
92	A numerical analysis of the effect of bubble-induced liquid flow on mass transfer in bubble plumes. , 2010, , .		1
93	Numerical Simulation of High Intensity Focused Ultrasound Therapy with Volume Model of Human Body. , 2010, , .		0
94	A105 Multi-Scale Simulation of Blood Flow Taking Account of Cardiovascular Circulatory System. The Proceedings of the JSME Conference on Frontiers in Bioengineering, 2010, 2010.21, 9-10.	0.0	0
95	Ultrasound Gene Transfer into Fibroblast Cells using Microbubbles. , 2009, , .		0
96	Development of HIFU treatment in which the heating location is controlled using microbubbles. , 2009, , .		0
97	The effect of bubble-induced liquid flow on mass transfer in bubble plumes. International Journal of Multiphase Flow, 2009, 35, 155-162.	1.6	15
98	Surfactant effect on the bubble motions and bubbly flow structures in a vertical channel. Fluid Dynamics Research, 2009, 41, 065003.	0.6	32
99	The Deformation Behavior of Multiple Red Blood Cells in a Capillary Vessel. Journal of Biomechanical Engineering, 2009, 131, 074504.	0.6	21
100	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
101	The effects of surfactant on the multiscale structure of bubbly flows. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 2117-2129.	1.6	65
102	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
103	The Behavior of a Lipid Bilayer Vesicle in a Simple Shear Flow (1st Report, Validation of the) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T 5 Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 530-535.	0.2	2
104	The Behavior of a Lipid Bilayer Vesicle in a Simple Shear Flow (2nd Report, An Experimental Analysis of) Tj ETQq0 0 0 rgBT /Overlock 10 T Japan Society of Mechanical Engineers Series B B-hen, 2008, 74, 856-861.	0.2	1
105	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
106	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
107	Thermal Decomposition Process of Ultrathin Oxide Layers on Si(100). Hyomen Kagaku, 2008, 29, 537-542.	0.0	2
108	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

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109	A Molecular Dynamics Study on the Growth of Bubble Nuclei with a Noncondensable Gas (2nd Report,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 38 Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2007, 73, 2153-2159.	0.2	1
110	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
111	A numerical study of mass transfer of ozone dissolution in bubble plumes with an Euler-Lagrange method. Chemical Engineering Science, 2007, 62, 1081-1093.	1.9	38
112	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
113	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
114	Relationship between Thermal Effect and Bubble Behavior in HIFU. AIP Conference Proceedings, 2006, , .	0.3	1
115	Temperature Distribution In The Medium Containing Contrast Agent Microbubbles In HIFU Field. AIP Conference Proceedings, 2006, , .	0.3	1
116	Inverse Phenomenon of Nucleation Rate in Binary Liquid-Gas Mixtures (Molecular Dynamics Study of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 38 Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2005, 71, 1893-1900.	0.2	0
117	Numerical Study Of The Heat Transfer From An Oscillating Bubble. AIP Conference Proceedings, 2005, , .	0.3	0
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	Drag, deformation and lateral migration of a buoyant drop moving near a wall. Journal of Fluid Mechanics, 2003, 476, 115-157.	1.4	102
121	Experimental Study on the New Micro-Bubble Generator and Its Application to Water Purification System. , 2003, , 469.		18
122	Multi-Scale Analysis for Rarefied Gas Flows. AIP Conference Proceedings, 2003, , .	0.3	1
123	Behavior of a Rising Bubble in Water with Surfactant Dissolution (1st Report, Steady Behavior). 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2003, 69, 2192-2199.	0.2	27
124	Vibrational Relaxation of Diatomic Molecules in Rarefied Gas Flows. AIP Conference Proceedings, 2003, , .	0.3	0
125	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
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	Force Acting on a Spherical Bubble Rising through a Quiescent Liquid.. Japanese Journal of Multiphase Flow, 1996, 10, 264-273.	0.1	11