

Kenji Kikuchi

List of Publications by Year in descending order

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121
papers

2,112
citations

257450

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265206

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125
all docs

125
docs citations

125
times ranked

1765
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase Equilibria and Microstructure on γ ' Phase in Co-Ni-Al-W System. Materials Transactions, 2008, 49, 1474-1479.	1.2	254
2	Abnormal Grain Growth Induced by Cyclic Heat Treatment. Science, 2013, 341, 1500-1502.	12.6	216
3	Ultra-large single crystals by abnormal grain growth. Nature Communications, 2017, 8, 354.	12.8	135
4	Giant elastocaloric effect covering wide temperature range in columnar-grained $\text{Cu}_{71.5}\text{Al}_{17.5}\text{Mn}_{11}$ shape memory alloy. APL Materials, 2016, 4, 106106.	5.1	79
5	Iron-based superelastic alloys with near-constant critical stress temperature dependence. Science, 2020, 369, 855-858.	12.6	77
6	Experimental and Thermodynamic Studies of the Fe-Si Binary System. ISIJ International, 2012, 52, 540-548.	1.4	75
7	Machine learning assisted design of β -strengthened Co-base superalloys with multi-performance optimization. Npj Computational Materials, 2020, 6, .	8.7	56
8	Cooling-induced shape memory effect and inverse temperature dependence of superelastic stress in $\text{Co}_2\text{Cr}(\text{Ga},\text{Si})$ ferromagnetic Heusler alloys. Applied Physics Letters, 2013, 103, .	3.3	45
9	Reorientation of a Nonspherical Capsule in Creeping Shear Flow. Physical Review Letters, 2012, 108, 138102.	7.8	43
10	Cryogenic superelasticity with large elastocaloric effect. NPG Asia Materials, 2018, 10, e457-e457.	7.9	42
11	Phase Equilibria and Phase Transition of the Ni-Fe-Ga Ferromagnetic Shape Memory Alloy System. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 767-776.	2.2	40
12	Influence of Co Addition on Martensitic and Magnetic Transitions in Ni-Fe-Ga β -Based Shape Memory Alloys. Materials Transactions, 2005, 46, 734-737.	1.2	38
13	Feasibility of tension braces using Cu-Al-Mn superelastic alloy bars. Structural Control and Health Monitoring, 2014, 21, 1304-1315.	4.0	38
14	Swimming mediated by ciliary beating: comparison with a squirmer model. Journal of Fluid Mechanics, 2019, 874, 774-796.	3.4	36
15	Martensitic Transformation and Superelasticity in Fe-Mn-Al-Based Shape Memory Alloys. Shape Memory and Superelasticity, 2017, 3, 322-334.	2.2	35
16	Numerical methods for simulating blood flow at macro, micro, and multi scales. Journal of Biomechanics, 2016, 49, 2221-2228.	2.1	33
17	Cell adhesion during bullet motion in capillaries. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 311, H395-H403.	3.2	32
18	Upward swimming of a sperm cell in shear flow. Physical Review E, 2016, 93, 032402.	2.1	30

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19	Two-Way Shape Memory Effect Induced by Bending Deformation in Ductile Cu-Al-Mn Alloys. <i>Materials Transactions</i> , 2002, 43, 1676-1683.	1.2	29
20	Damping Properties of Ductile Cu-Al-Mn-Based Shape Memory Alloys. <i>Materials Transactions</i> , 2005, 46, 118-122.	1.2	29
21	Superplasticity of Cu-Al-Mn-Ni Shape Memory Alloy. <i>Materials Transactions</i> , 2007, 48, 2914-2918.	1.2	29
22	Hemodynamics in the Microcirculation and in Microfluidics. <i>Annals of Biomedical Engineering</i> , 2015, 43, 238-257.	2.5	29
23	Martensitic Transformation and Magnetic Properties of Cu-Ga-Mn β Alloys. <i>Materials Transactions</i> , 2004, 45, 2780-2784.	1.2	28
24	Phase Equilibria and Ternary Intermetallic Compound with L12 Structure in Co-W-Ga System. <i>Journal of Phase Equilibria and Diffusion</i> , 2009, 30, 587-594.	1.4	25
25	A jumping shape memory alloy under heat. <i>Scientific Reports</i> , 2016, 6, 21754.	3.3	23
26	Martensitic Transformations and Superelastic Behavior at Low Temperatures in Ti ₅₀ –Ni ₄₀ –Cu ₁₀ Shape Memory Alloys. <i>Materials Transactions</i> , 2016, 57, 269-277.		
27	Elastocaloric switching effect induced by reentrant martensitic transformation. <i>Applied Physics Reviews</i> , 2020, 7, .	11.3	22
28	Micro-PIV (micro particle image velocimetry) visualization of red blood cells (RBCs) sucked by a female mosquito. <i>Measurement Science and Technology</i> , 2011, 22, 064002.	2.6	21
29	Superelasticity at Low Temperatures in Cu-17Al-15Mn (at%) Shape Memory Alloy. <i>Materials Transactions</i> , 2011, 52, 1713-1715.	1.2	20
30	Shape Memory Effect Associated with FCC–HCP Martensitic Transformation in Co-Al Alloys. <i>Materials Transactions</i> , 2003, 44, 2732-2735.	1.2	19
31	Elasto-hydrodynamic interaction of two swimming spermatozoa. <i>Physics of Fluids</i> , 2020, 32, .	4.0	19
32	Cilia and centrosomes: Ultrastructural and mechanical perspectives. <i>Seminars in Cell and Developmental Biology</i> , 2021, 110, 61-69.	5.0	18
33	Burst mode pumping: A new mechanism of drinking in mosquitoes. <i>Scientific Reports</i> , 2018, 8, 4885.	3.3	17
34	Membrane tension of red blood cells pairwise interacting in simple shear flow. <i>Journal of Biomechanics</i> , 2013, 46, 548-553.	2.1	16
35	Numerical analysis of a red blood cell flowing through a thin micropore. <i>Physical Review E</i> , 2014, 89, 013008.	2.1	16
36	Effect of chain transfer agents on the kinetics and mechanism of particle nucleation in the emulsion polymerization of vinyl pivalate. <i>Colloid and Polymer Science</i> , 2007, 285, 523-534.	2.1	15

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37	Dynamic Recovery and Superelasticity of Columnar-Grained Cu-Al-Mn Shape Memory Alloy. <i>Metals</i> , 2017, 7, 141.	2.3	15
38	Effect of Thermomechanical Processing on Texture and Superelasticity in Fe-Ni-Co-Al-Ti-B Alloy. <i>Shape Memory and Superelasticity</i> , 2018, 4, 102-111.	2.2	15
39	Vulnerability of the skin barrier to mechanical rubbing. <i>International Journal of Pharmaceutics</i> , 2020, 587, 119708.	5.2	15
40	A full GPU implementation of a numerical method for simulating capsule suspensions. <i>Journal of Biomechanical Science and Engineering</i> , 2014, 9, 14-00039-14-00039.	0.3	14
41	Effect of Fluid Viscosity on the Cilia-Generated Flow on a Mouse Tracheal Lumen. <i>Annals of Biomedical Engineering</i> , 2017, 45, 1048-1057.	2.5	14
42	Study on the initial stage of emulsion polymerization of vinyl acetate using poly(vinyl alcohol) as a protective colloid. <i>Colloid and Polymer Science</i> , 2003, 281, 337-342.	2.1	13
43	Orientation Dependence of Plasticity and Fracture in Single-Crystal Superelastic Cu-Al-Mn SMA Bars. <i>Journal of Materials in Civil Engineering</i> , 2021, 33, .	2.9	13
44	Orientation Dependence of Superelasticity and Stress Hysteresis in Cu-Al-Mn Alloy. <i>Materials Transactions</i> , 2020, 61, 55-60.	1.2	13
45	Rheotaxis and migration of an unsteady microswimmer. <i>Journal of Fluid Mechanics</i> , 2022, 930, .	3.4	13
46	Stress- and Magnetic Field-Induced Martensitic Transformation at Cryogenic Temperatures in Fe-Mn-Al-Ni Shape Memory Alloys. <i>Shape Memory and Superelasticity</i> , 2017, 3, 467-475.	2.2	12
47	Simulation of the nodal flow of mutant embryos with a small number of cilia: comparison of mechanosensing and vesicle transport hypotheses. <i>Royal Society Open Science</i> , 2018, 5, 180601.	2.4	12
48	Swimming of Spermatozoa in a Maxwell Fluid. <i>Micromachines</i> , 2019, 10, 78.	2.9	12
49	Flexible and Tough Superelastic Co-Cr Alloys for Biomedical Applications. <i>Advanced Materials</i> , 2022, 34, e2202305.	21.0	11
50	Two- and Three-Dimensional Grain Growth in the Cu-Al-Mn Shape Memory Alloy. <i>Materials Transactions</i> , 2013, 54, 2044-2048.	1.2	10
51	Hydrodynamic interaction between two red blood cells in simple shear flow: its impact on the rheology of a semi-dilute suspension. <i>Computational Mechanics</i> , 2014, 54, 933-941.	4.0	10
52	Nutrient uptake in a suspension of squirmers. <i>Journal of Fluid Mechanics</i> , 2016, 789, 481-499.	3.4	10
53	Bacterial biomechanics—From individual behaviors to biofilm and the gut flora. <i>APL Bioengineering</i> , 2020, 4, 041504.	6.2	10
54	Effect of additives on the initial stage of emulsion polymerization of styrene (St) using poly(vinyl) Tj ETQq0 0 0 rgBTj/Overlock 10 Tf 50	2.1	9

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55	<i>In situ</i> heating SEM observation of the bainitic transformation process in Cu-17Al-11Mn (at.%) alloys. <i>Microscopy</i> (Oxford, England), 2016, 65, 159-168.	1.5	9
56	Biomechanics of <i>Tetrahymena</i> escaping from a dead end. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018, 285, 20172368.	2.6	9
57	The shape-effect of flagella is more important than bottom-heaviness on passive gravitactic orientation in <i>Chlamydomonas reinhardtii</i> . <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	9
58	Inhomogeneous distribution of <i>Chlamydomonas</i> in a cylindrical container with a bubble plume. <i>Biology Open</i> , 2016, 5, 154-160.	1.2	8
59	Passive swimming of a microcapsule in vertical fluid oscillation. <i>Physical Review E</i> , 2018, 98, 023108.	2.1	8
60	Influence of additives on model emulsion polymerization of vinyl acetate (VAc) using poly(vinyl) Tj ETQq0 0 0 rgBT J Overlock 10 Tf 50 54	2.1	7
61	Microstructure and Mechanical Properties in B-Doped Fe-31.9Ni-9.6Co-4.7Ti Alloys. <i>Shape Memory and Superelasticity</i> , 2016, 2, 228-234.	2.2	7
62	Deformation of a micro-torque swimmer. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20150604.	2.1	6
63	Cyclic Properties of Superelasticity in Cu-Al-Mn Single-Crystalline Sheets with Bainite Precipitates. <i>Shape Memory and Superelasticity</i> , 2018, 4, 428-434.	2.2	6
64	Diffusive Promotion by Velocity Gradient of Cytoplasmic Streaming (CPS) in <i>Nitella</i> Internodal Cells. <i>PLoS ONE</i> , 2015, 10, e0144938.	2.5	6
65	A numerical model of a red blood cell infected by <i>Plasmodium falciparum</i> malaria: coupling cell mechanics with ligand-receptor interactions. <i>Science and Technology of Advanced Materials</i> , 2016, 17, 454-461.	6.1	5
66	Morphological and chemical analysis of bainite in Cu-17Al-11Mn (at.%) alloys by using orthogonal FIB-SEM and double-EDS STEM. <i>Microscopy</i> (Oxford, England), 2016, 65, 243-252.	1.5	5
67	Biaxial fluid oscillations can propel a microcapsule swimmer in an arbitrary direction. <i>Physical Review E</i> , 2018, 98, .	2.1	5
68	Mechanical roles of anterograde and retrograde intestinal peristalses after feeding in a larval fish (<i>Danio rerio</i>). <i>American Journal of Physiology - Renal Physiology</i> , 2020, 318, G1013-G1021.	3.4	5
69	Effect of Al Content on Abnormal Grain Growth and Superelasticity in Fe-Mn-Al-Cr-Ni Shape Memory Alloys with Near-Zero Temperature-Dependence of Transformation Stress. <i>Shape Memory and Superelasticity</i> , 2021, 7, 402-413.	2.2	5
70	The bubble-induced population dynamics of fermenting yeasts. <i>Journal of the Royal Society Interface</i> , 2020, 17, 20200735.	3.4	5
71	Texture Formation in a Polycrystalline Fe-Ni-Co-Al-Ti-B Shape Memory Alloy. <i>ISIJ International</i> , 2020, 60, 2973-2982.	1.4	5
72	Thermosensitive poly(methyl methacrylate) emulsion prepared in the presence of poly(vinyl alcohol) with a cloud point as a protective colloid. <i>Colloid and Polymer Science</i> , 2004, 283, 111-116.	2.1	4

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73	Polymerization of vinyl acetate in fatty acids and properties of poly (vinyl alcohols) derived from the poly (vinyl acetates). Colloid and Polymer Science, 2005, 283, 799-804.	2.1	4
74	Measurement of distributions of cesium and rubidium in rice grains using micro-PIXE for detailed examinations of contaminated food. International Journal of PIXE, 2014, 24, 17-27.	0.4	4
75	Velocity profile of thin film flows measured using a confocal microscopy particle image velocimetry system with simultaneous multi depth position. Measurement Science and Technology, 2015, 26, 025301.	2.6	4
76	Collective spreading of red blood cells flowing in a microchannel. Journal of Biomechanics, 2018, 69, 64-69.	2.1	4
77	Depth measurement of molecular permeation using inclined confocal microscopy. PLoS ONE, 2019, 14, e0214504.	2.5	4
78	Impact of rheological properties on bacterial streamer formation. Journal of the Royal Society Interface, 2021, 18, 20210546.	3.4	4
79	Studies on radioactive cesium and alkali elements in lentinula edodes (Shiitake) based on PIXE analysis. International Journal of PIXE, 2013, 23, 147-152.	0.4	3
80	Accumulation and localization of alkali elements in Lentinula edodes studied by PIXE analysis. International Journal of PIXE, 2014, 24, 197-204.	0.4	3
81	BCC/FCC Martensitic Transformation and Superelasticity in Fe-Based Alloys. Materia Japan, 2015, 54, 398-404.	0.1	3
82	Martensitic Transformation and Metamagnetic Transition in Co-V-(Si, Al) Heusler Alloys. Metals, 2021, 11, 226.	2.3	3
83	Non-biodegradable objects may boost microbial growth in water bodies by harnessing bubbles. Royal Society Open Science, 2021, 8, 210646.	2.4	3
84	Influence of Respiratory Gas Density on Tidal Volume during Mechanical Ventilation: A Laboratory Investigation and Observational Study in Children. Tohoku Journal of Experimental Medicine, 2022, 256, 271-281.	1.2	3
85	Role of electrolytes in the preparation of nanoparticles via the emulsion polymerization of vinyl pivalate. Journal of Colloid and Interface Science, 2009, 338, 480-485.	9.4	2
86	Magnetic Properties and Phase Diagram of Ni ₅₀ Mn _{50-x} Ga _{x/2} In _{x/2} Magnetic Shape Memory Alloys. Shape Memory and Superelasticity, 2016, 2, 371-379.	2.2	2
87	Elastohydrodynamic phase-lock in two rotating cilia. Journal of Biomechanical Science and Engineering, 2018, 13, 17-00467-17-00467.	0.3	2
88	Harnessing random low Reynolds number flow for net migration. Physical Review E, 2020, 101, 063101.	2.1	2
89	Microbial Brazil nut effect. Soft Matter, 2021, 17, 10428-10436.	2.7	2
90	Melting Point of Pure Cr and Phase Equilibria in the Cr-Si Binary System. Journal of Phase Equilibria and Diffusion, 2022, 43, 229-242.	1.4	2

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91	Surface sulfate groups on poly(methyl methacrylate) and poly(vinyl acetate) particles from soap-free emulsion polymerization. <i>E-Polymers</i> , 2005, 5, .	3.0	1
92	Effects of a vascular disrupting agent for cancer treatment on normal tissue evaluated by PIXE analysis using quantum dots. <i>International Journal of PIXE</i> , 2014, 24, 59-65.	0.4	1
93	How do <i>C. elegans</i> worms survive in highly viscous habitats?. <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	1
94	Cryogenic Superelasticity and Concomitant Elastocaloric Effect. <i>Materia Japan</i> , 2019, 58, 44-46.	0.1	1
95	Phase Stability of the L12 Compound and Microstructural Changes in Co-(W or Mo)-Ta Ternary Alloys. <i>Materials Research Society Symposia Proceedings</i> , 2008, 1128, 60801.	0.1	0
96	Martensitic Transformation Behaviors with Various Ni Contents in $Ti_{50-x}Ni_{40+x}Cu_{10}$ Alloys. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2015, 79, 434-440.	0.4	0
97	Response to the Letter to the Editor "Hemodynamics in the Microcirculation" by A. G. Koutsiaris. <i>Annals of Biomedical Engineering</i> , 2016, 44, 1323-1323.	2.5	0
98	Effects of Liquid Indium Particles on Recrystallization and Grain Growth of $\hat{\pm}Fe$ in Fe-In Alloys. <i>Materials Transactions</i> , 2018, 59, 188-197.	1.2	0
99	Effects of Liquid Indium Particles on Recrystallization and Grain Growth of $\hat{\pm}Fe$ in Fe-In Alloys. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2019, 83, 166-175.	0.4	0
100	BCC-HCP-FCC Multiple Transformations and $\hat{\mu}$ Loop in the Fe-Cr-Co-Mn System. <i>Journal of Phase Equilibria and Diffusion</i> , 2021, 42, 735-747.	1.4	0
101	2115 Development of superelastic medical guidewires with functionally graded properties. <i>The Proceedings of the JSME Annual Meeting</i> , 2007, 2007.1, 167-168.	0.0	0
102	2117 Superelasticity of Co-Ni-Al ferromagnetic shape memory alloys. <i>The Proceedings of the JSME Annual Meeting</i> , 2007, 2007.1, 171-172.	0.0	0
103	2116 High-Temperature Shape Memory Effect in Co-Al System. <i>The Proceedings of the JSME Annual Meeting</i> , 2007, 2007.1, 169-170.	0.0	0
104	1016 Superplasticity in Cu-Al-Mn-Based Shape Memory Alloy. <i>The Proceedings of the JSME Annual Meeting</i> , 2008, 2008.1, 45-46.	0.0	0
105	2E15 Numerical analysis of a red blood cell flowing through a micro flow channel. <i>The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME</i> , 2014, 2014.26, 439-440.	0.0	0
106	PS8-15 Mechanics of nodal cilia in early mouse embryo(PS8: Poster Short Presentation VIII,Poster) <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50</i> <i>Technology in Biomechanics</i> , 2015, 2015.8, 366.	0.0	0
107	2B41 Effect of Rheological Properties on Ciliary motion and Flow in the airway. <i>The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME</i> , 2015, 2015.27, 373-374.	0.0	0
108	PS8-14 Visualization of intestinal peristalsis of mosquito midgut by using micro X-ray imaging(PS8:) <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50</i> <i>Biomechanics Emerging Science and Technology in Biomechanics</i> , 2015, 2015.8, 365.	0.0	0

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109	PS1-10 Swimming behavior of a model ciliate near a fluid-air or a fluid-solid interface(PS1: Poster) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 231.	0.0	0
110	1A16 Numerical Simulation of the Nodal Ciliary Motion Driven by the Dynein Motor Protein. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 13-14.	0.0	0
111	2B35 Effect of aeration on the distribution of Chlamydomonas. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 371-372.	0.0	0
112	PS3-7 DEVELOPMENT OF A NUMERICAL MODEL OF CYTOSKELETON DYNAMICS(PS3: Poster Short) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Emerging Science and Technology in Biomechanics, 2015, 2015.8, 268.	0.0	0
113	1316 Flow on a ciliary respiratory epithelium. The Proceedings of the Fluids Engineering Conference, 2015, 2015, _1316-1_-_1316-2_.	0.0	0
114	OS2-2 A NUMEIRICAL SIMULATION OF CYTOADHESION AND ROSETTE FORMATION OF RED BLOOD CELLS INFECTED BY MALARIA(OS2: Integrated Nano-Biomechanics). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 74.	0.0	0
115	PS8-13 Effect of mucous viscosity on ciliary beat in the tracheal lumen(PS8: Poster Short Presentation) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 Science and Technology in Biomechanics, 2015, 2015.8, 364.	0.0	0
116	1D35 Rheology of a red blood cell suspension in a simple shear flow. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2015, 2015.27, 165-166.	0.0	0
117	Viscous Effect of Filter Feeding on C. elegans. The Proceedings of the JSME Conference on Frontiers in Bioengineering, 2019, 2019.30, 2B14.	0.0	0
118	Development of mechanical model for nodal cilia axoneme. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2019, 2019.32, 1G33.	0.0	0
119	Abnormal Grain Growth Induced by Cyclic Heat Treatment and Fabrication of Cu-Based Shape Memory Alloy Single Crystal. Materia Japan, 2019, 58, 137-143.	0.1	0
120	Bio-imaging pioneers Newly Bio-fluidmechanics. The Proceedings of Autumn Conference of Tohoku Branch, 2020, 2020.56, s3.	0.0	0
121	Shear-induced migration of a transmembrane protein within a vesicle. The Proceedings of the JSME Conference on Frontiers in Bioengineering, 2020, 2020.31, 2A24.	0.0	0