

Kazuyoshi Tsuchiya

List of Publications by Year in descending order

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117
papers

954
citations

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117
times ranked

1214
citing authors

#	ARTICLE	IF	CITATIONS
1	Preparation of free-standing V ₂ O ₅ nanosheets for ammonia sensing application: A potential candidate for flexible sensors. <i>Journal of Science: Advanced Materials and Devices</i> , 2022, 7, 100415.	3.1	4
2	Nanoimprint assisted free standing porous vanadium oxide nanosheet based ammonia sensor. <i>Applied Surface Science</i> , 2021, 541, 148271.	6.1	15
3	Investigation on CH ₄ sensing characteristics of hierarchical V ₂ O ₅ nanoflowers operated at relatively low temperature using chemiresistive approach. <i>Analytica Chimica Acta</i> , 2020, 1106, 148-160.	5.4	41
4	Cadmium metavanadate mixed oxide nanorods for the chemiresistive detection of methane molecules. <i>New Journal of Chemistry</i> , 2020, 44, 12473-12485.	2.8	13
5	Advanced Artificial Electronic Skin Based pH Sensing System for Heatstroke Detection. <i>ACS Sensors</i> , 2020, 5, 911-916.	7.8	11
6	Sub-ppm level detection of trimethylamine using V ₂ O ₃ -Cu ₂ O mixed oxide thin films. <i>Ceramics International</i> , 2019, 45, 19528-19533.	4.8	17
7	Network mixed metal oxide (V ⁴⁺ and Ti ⁴⁺) nanostructures as potential material for the detection of trimethylamine. <i>New Journal of Chemistry</i> , 2019, 43, 11069-11081.	2.8	23
8	Multiscale numerical study on origin of magnetoelectric effect in view of localization of microstructural strain field for multiferroic composite materials. <i>Computational Materials Science</i> , 2019, 158, 159-169.	3.0	12
9	Statistical investigation of homogenized physical properties of polycrystalline multiferroic composites. <i>Acta Mechanica</i> , 2019, 230, 1387-1401.	2.1	3
10	Study on Improvement of Piezoelectricity in Perovskite Thin Films Using the First-Principles Calculations. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2019, 14, 280-285.	0.5	0
11	Template-free synthesis of vanadium sesquioxide (V ₂ O ₃) nanosheets and their room-temperature sensing performance. <i>Journal of Materials Chemistry A</i> , 2018, 6, 6402-6413.	10.3	61
12	Surfactant free controllable synthesis of 2D "1D ZnO hierarchical nanostructure and its gas sensing properties. <i>Applied Surface Science</i> , 2018, 449, 838-845.	6.1	22
13	ZnO hierarchical 3D-flower like architectures and their gas sensing properties at room temperature. <i>Applied Surface Science</i> , 2018, 449, 314-321.	6.1	32
14	V ₂ O ₅ nanofibers: Potential contestant for high performance xylene sensor. <i>Journal of Alloys and Compounds</i> , 2018, 731, 805-812.	5.5	29
15	Ultrafast Fabrication of Microneedle Array for Transdermal Ion Detection. , 2018, , .		0
16	Vanadium Oxide Nanoparticles For Dimethylamine Vapour Detection. , 2018, , .		5
17	Computational and experimental investigation of the crystal orientation control effect on the electric permittivity and magnetic permeability of multiferroic composite materials. <i>Acta Mechanica</i> , 2017, 228, 2879-2893.	2.1	8
18	ZnO-Based Microfluidic pH Sensor: A Versatile Approach for Quick Recognition of Circulating Tumor Cells in Blood. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 5193-5203.	8.0	53

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19	Microneedle pH Sensor: Direct, Label-Free, Real-Time Detection of Cerebrospinal Fluid and Bladder pH. ACS Applied Materials & Interfaces, 2017, 9, 21651-21659.	8.0	55
20	Influence of Al doping on the structural, morphological, optical, and gas sensing properties of ZnO nanorods. Journal of Alloys and Compounds, 2017, 698, 555-564.	5.5	162
21	Microneedles based biosensor for living cells: A novel approach. , 2017, , .		0
22	Multiscale numerical study on ferroelectric nonlinear response of PZT thin films (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622		
23	Fabrication of Metal Microneedle Produced by Ion Sputter Deposition. Journal of the Japan Society for Precision Engineering, 2016, 82, 1010-1013.	0.1	0
24	Effect of Off-axis Polarization Treatment on Magnetoelectric Property of Multiferroic Composite Materials. Journal of Smart Processing, 2016, 5, 9-15.	0.1	0
25	Development of one electrode type pH sensor measuring in microscopic region. International Journal of Applied Electromagnetics and Mechanics, 2016, 52, 1417-1424.	0.6	0
26	Optical characteristics of poly(tetrafluoroethylene) thin film prepared by a vacuum evaporation. Japanese Journal of Applied Physics, 2016, 55, 02BB04.	1.5	4
27	A novel electrolyte free solid state pH sensor for Bio-MEMS applications. , 2016, , .		0
28	Multiscale numerical investigation on effective physical properties of multiferroic BaTiO3/CoFe2O4 composites. International Journal of Applied Electromagnetics and Mechanics, 2016, 52, 1245-1250.	0.6	2
29	ä°ä°¥ä°-%éã«ãšãã, PZT äcešé»æCE-ä«ä1/2“è-èãšã, ^ã³éÿ³éÿjç%°1æ€šè ©•ä³/4j. Journal of Smart Processing, 2016, 5, 53-580		
30	Development of Au-Pt Buffer Layer Substrate to Improve PZT Piezoelectric Property. Journal of Smart Processing, 2016, 5, 16-22.	0.1	0
31	Observation of the permeation on the subcutaneous during the administration of drug and design of a needle. , 2015, , .		0
32	Stiff consideration of a micro painless needle with polygon section. , 2015, , .		0
33	Search of the best slot rate of the slot addition type PZT actuator in a hollow tube micro pump. , 2015, , .		0
34	Multiscale simulation of domain switching behavior in polycrystalline ferroelectric materials. Computational Materials Science, 2015, 106, 100-110.	3.0	8
35	Evaluation of additive element to improve PZT piezoelectricity by using first-principles calculation. , 2015, , .		0
36	Growth prediction method for new biocompatible piezoelectric thin films. , 2014, , .		0

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37	Evaluation of enzyme immobilization methods on microglucose sensors integrated to a microfluidic device. , 2014, , .		0
38	Observation of the permeation on the subcutaneous during the administration of drug and development of a needle. , 2014, , .		0
39	Selection of the best shape for a micro painless needle. , 2014, , .		1
40	Homogenization modeling of domain switching in ferroelectric materials. Acta Mechanica, 2014, 225, 2969-2986.	2.1	9
41	Interaction between carbon nanotubes and human cell. Precision Engineering, 2014, 38, 116-120.	3.4	0
42	Qualitative measurement of pain by analysing the salivary alpha amylase. Precision Engineering, 2014, 38, 257-260.	3.4	4
43	The Painless Injection Tube: From Bio-mimetic Technology to Medical Engineering. , 2014, , 71-94.		2
44	Process Crystallographic Simulation for Biocompatible Piezoelectric Material Design and Generation. Archives of Computational Methods in Engineering, 2013, 20, 155-183.	10.2	7
45	Two-step homogenization simulation for multidomain and multigrain structures in piezoelectric materials. Acta Materialia, 2013, 61, 7304-7312.	7.9	1
46	Development of a New Piezoelectric Actuator with Slits. ISRN Materials Science, 2013, 2013, 1-9.	1.0	0
47	Development of the micro region pH sensor using Ag/AgIO electrode method. , 2013, , .		4
48	Influence of chirality of carbon nanotubes to human cell. , 2013, , .		0
49	Creation of the high functional painless micro needle using the sputtering method. , 2013, , .		0
50	Design and evaluation of The MOSFET type glucose biosensing system. Advanced Materials Letters, 2013, 4, 108-114.	0.6	0
51	Piezoelectric-fluid interaction finite element analysis of a valve-less piezoelectric pump. WIT Transactions on Modelling and Simulation, 2013, , .	0.0	0
52	Research on the surface in Au-Pt buffer layer for the high piezoelectric PZT. , 2012, , .		1
53	Multiscale finite element simulations of piezoelectric materials based on two- and three-dimensional electron backscatter diffraction-measured microstructures. Journal of Intelligent Material Systems and Structures, 2012, 23, 563-573.	2.5	14
54	Influence of carbon nanotubes (CNTs) to human cell. , 2012, , .		0

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55	Fluctuation of salivary α -amylase affected by the time change of injection. , 2012, , .		0
56	Investigation for effective XRD profile factors for high piezo-electric property. , 2012, , .		0
57	Design of ring type trench PZT for tube type micropump by using FEM analysis. , 2012, , .		0
58	First-Principles Study on Crystal Structure and Material Properties of Perovskite Nonoxides ABX ₃ (X =) Tj ETQq0 0 0,rgBT /Overlock 10 T	0.2	0
59	Establishment of pain evaluation test on the expression of Substance P during injection. , 2011, , .		0
60	Design of high functional ring type PZT for micropump by using FEM analysis. , 2011, , .		0
61	Development of sputtering conditions for PZT micro actuator with high piezoelectric property by Au-Pt buffer layer. , 2011, , .		2
62	Design of biocompatible high-piezoelectric BaTiO ₃ with additives. , 2011, , .		2
63	First-principles study on novel lead-free piezoelectric materials. , 2011, , .		0
64	A multiscale finite element simulation of piezoelectric materials using realistic crystal morphology. , 2011, , .		2
65	Development of SMA thin film deposited on buffer layer. , 2010, , .		0
66	An Investigation on Multiscale Finite Element Modelling for EBSD Crystal Morphology of Piezoelectric Materials(<Special Issue>M & M 2009 Conference). Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 401-403.	0.2	0
67	Configuration design of piezo actuator for Hollow tube type micropump. , 2010, , .		0
68	Design and development of a biocompatible painless microneedle by the ion sputtering deposition method. Precision Engineering, 2010, 34, 461-466.	3.4	38
69	Crystal Growth Prediction by First-Principles Calculations for Epitaxial Piezoelectric Thin Films. Journal of Computational Science and Technology, 2009, 3, 264-274.	0.4	3
70	Proposition of a First-Principles Aided Triple-Scale Analysis for Biocompatible Piezoelectric Thin Films. Journal of Computational Science and Technology, 2009, 3, 499-508.	0.4	0
71	Biocompatible Lead-Free Piezoelectric Crystal Structure Analysis and Functional Characterization Based on First-Principles Calculation. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2009, 75, 7-12.	0.2	1
72	A Proposition on Material Properties Estimation of Piezoelectric Thin Films Utilizing Dual-Points Concurrent Displacement Measurement. Zairyo/Journal of the Society of Materials Science, Japan, 2009, 58, 815-820.	0.2	0

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73	Optimization of crystal microstructure in piezoelectric ceramics by multiscale finite element analysis. Acta Materialia, 2008, 56, 1991-2002.	7.9	33
74	Development and fluidic simulation of microneedles for painless pathological interfacing with living systems. Journal of Applied Physics, 2008, 103, 114701.	2.5	27
75	Proposition of a First-Principles Aided Triple-Scale Analysis for Biocompatible Piezoelectric Thin Films. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2008, 74, 1405-1410.	0.2	2
76	Crystal Morphology Analysis of Piezoelectric Ceramics by Electron BackScatter Diffraction Method and Application to Multiscale Finite Element Analysis. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2008, 74, 342-347.	0.2	2
77	Crystal Growth Prediction by First-Principles Calculations for Epitaxial Piezoelectric Thin Films. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2008, 74, 763-769.	0.2	3
78	First-Principles Study on Crystal Structure and Piezoelectricity of Perovskite-Type Silicon Oxides. Journal of Solid Mechanics and Materials Engineering, 2008, 2, 1427-1435.	0.5	6
79	Crystal Morphology Analysis of Piezoelectric Ceramics Using Electron BackScatter Diffraction Method and Its Application to Multiscale Finite Element Analysis. Journal of Computational Science and Technology, 2008, 2, 568-577.	0.4	5
80	Development of valve-less tube-type micropump with PZT actuator. Proceedings of SPIE, 2008, , .	0.8	4
81	Development of automatic blood extraction device with a micro-needle for blood-sugar level measurement. , 2008, , .		1
82	Biocompatibility Evaluation of Piezoelectric Materials through Cytotoxicity Test. Zairyo/Journal of the Society of Materials Science, Japan, 2008, 57, 899-904.	0.2	2
83	Numerical Investigation on Identification of Piezoelectric Strain Constants on Basis of Displacement Response in Piezoelectric Thin Films. Zairyo/Journal of the Society of Materials Science, Japan, 2008, 57, 297-303.	0.2	1
84	Optimum Design of Micro Crystal Morphology in Piezoelectric Ceramics by Multiscale Finite Element Analysis. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2007, 73, 50-56.	0.2	0
85	A Proposal for Optimization of Crystal Orientations in Piezoelectric Ceramics by Multiscale Finite Element Analysis through Crystallographic Homogenization Method. Journal of Solid Mechanics and Materials Engineering, 2007, 1, 1147-1156.	0.5	0
86	Identification of Material Properties of PZT Single Crystals through Crystallographic Homogenization Method. Journal of Solid Mechanics and Materials Engineering, 2007, 1, 140-151.	0.5	2
87	A Study on Bio-Compatible Piezoelectric Materials by First Principles Calculation. Journal of Solid Mechanics and Materials Engineering, 2007, 1, 191-201.	0.5	5
88	Development of a blood extraction device for a miniature SMBG system. Proceedings of SPIE, 2007, , .	0.8	2
89	Design of painless microneedle for blood extraction system. Proceedings of SPIE, 2007, , .	0.8	3
90	Proposal of A New Bimorph Piezoelectric Actuator for Blood Extraction Pump in Health Monitoring System. Zairyo/Journal of the Society of Materials Science, Japan, 2007, 56, 477-482.	0.2	3

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91	Development of MgSiO ₃ biocompatible piezoelectric film for bio-MEMS actuator. , 2006, , .		1
92	Evaluation of Ferroelectric Properties of Piezoelectric Ceramics Based on Crystallographic Homogenization Method and Crystal Orientation Analysis by SEM-EBSD Technique. JSME International Journal Series A-Solid Mechanics and Material Engineering, 2006, 49, 209-215.	0.4	4
93	Development of blood extraction pump by shape memory alloy actuator for bio-MEMS. , 2006, 6416, 78.		3
94	Development of a blood vessel searching device for HMS. , 2006, , .		0
95	Fabrication of Smart Material PZT Thin Films by RF Magnetron Sputtering Method in Micro Actuators. JSME International Journal Series A-Solid Mechanics and Material Engineering, 2006, 49, 201-208.	0.4	8
96	A Proposal for Optimization of Crystal Orientations in Piezoelectric Ceramics by Multiscale Finite Element Analysis Based on a Crystallographic Homogenization Method. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 1296-1301.	0.2	0
97	Structure Evaluation of Bio-Compatible Lead-Free Piezoelectric Materials by Crystal System Distinction and First Principles Calculations. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 1472-1478.	0.2	5
98	Development of Fabrication Technique of Bio-Compatible Piezoelectric Material MgSiO ₃ by Using Helicon Wave Plasma Sputter. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 353-358.	0.2	5
99	Sputter Generating and Characterization of a Titanium Alloy Microneedle for Applying to Bio-MEM. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 471-477.	0.2	4
100	Development of wearable medical device for Bio-MEMS. , 2005, 6036, 168.		2
101	Identification of Ferroelectric Properties of PZT Single Crystal Based on a Crystallographic Homogenization Method. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2005, 71, 724-731.	0.2	1
102	A Study on Bio-Compatible Piezoelectric Materials by First Principles Calculation. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2005, 71, 944-951.	0.2	8
103	Development of Blood Extraction System for Bio-MEM. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2005, 71, 603-609.	0.2	7
104	Fabrication of Smart Material PZT thin Films by RF Magnetron Sputtering, Method in Micro Actuators. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2005, 71, 66-72.	0.2	1
105	Development of Blood Extraction System for Health Monitoring System. Biomedical Microdevices, 2005, 7, 347-353.	2.8	82
106	Development of blood extraction system designed by female mosquito's blood sampling mechanism for bio-MEMS. , 2005, 5651, 379.		4
107	Development of the MOSFET hybrid biosensor for self-monitoring of blood glucose. , 2005, 6036, 226.		0
108	Development of blood extraction system for health monitoring system. , 2004, , .		2

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109	Development of RF magnetron sputtering method to fabricate PZT thin film actuator. Precision Engineering, 2003, 27, 258-264.	3.4	21
110	Development of Deposition Technique for PZT Thin Film Actuator in MEMS. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2003, 69, 1601-1605.	0.2	1
111	Study for piezoelectric characterization of PZT actuators deposited by RF magnetron sputtering for MEMS. , 2002, 4936, 225.		0
112	<title>Ion beam sputter deposition of TiNi shape memory alloy thin films</title>. , 1999, , .		1
113	Fabrication of TiNi shape memory alloy microactuators by ion beam sputter deposition. Nanotechnology, 1998, 9, 67-71.	2.6	18
114	<title>Growth and characterization of shape memory alloy thin films for micropositioning and microactuation</title>. , 1998, , .		2
115	<title>Ion sputter deposition of shape memory alloy films for microactuators</title>. , 1997, 3223, 160.		2
116	Fabrication of microstructures by ion beam micromachining. Proceedings of SPIE, 1996, 2880, 248.	0.8	0
117	Improvement of surface roughness by oxygen ion beam machining. Nanotechnology, 1995, 6, 158-161.	2.6	0