

Takahiro Namazu

List of Publications by Year in descending order

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127
papers

1,359
citations

394421

19
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414414

32
g-index

129
all docs

129
docs citations

129
times ranked

1105
citing authors

#	ARTICLE	IF	CITATIONS
1	Strength of carbon nanotubes depends on their chemical structures. Nature Communications, 2019, 10, 3040.	12.8	148
2	Mechanical property measurements of nanoscale structures using an atomic force microscope. Ultramicroscopy, 2002, 91, 111-118.	1.9	95
3	Piezoresistive effect in p-type 3C-SiC at high temperatures characterized using Joule heating. Scientific Reports, 2016, 6, 28499.	3.3	55
4	Fatigue Life Prediction Criterion for Micro-Nanoscale Single-Crystal Silicon Structures. Journal of Microelectromechanical Systems, 2009, 18, 129-137.	2.5	49
5	Highly sensitive pressure sensors employing 3C-SiC nanowires fabricated on a free standing structure. Materials and Design, 2018, 156, 16-21.	7.0	49
6	The Piezoresistive Effect in Top-Down Fabricated p-Type 3C-SiC Nanowires. IEEE Electron Device Letters, 2016, 37, 1029-1032.	3.9	45
7	Strain-induced reversible modulation of the magnetic anisotropy in perpendicularly magnetized metals deposited on a flexible substrate. Applied Physics Express, 2016, 9, 043004.	2.4	41
8	Quasi-static bending test of nano-scale SiO ₂ wire at intermediate temperatures using AFM-based technique. Sensors and Actuators A: Physical, 2003, 104, 78-85.	4.1	40
9	Piezoresistive effect of p-type silicon nanowires fabricated by a top-down process using FIB implantation and wet etching. RSC Advances, 2015, 5, 82121-82126.	3.6	39
10	Thermomechanical tensile characterization of Ti-Ni shape memory alloy films for design of MEMS actuator. Sensors and Actuators A: Physical, 2007, 139, 178-186.	4.1	38
11	Thermoresistive properties of p-type 3C-SiC nanoscale thin films for high-temperature MEMS thermal-based sensors. RSC Advances, 2015, 5, 106083-106086.	3.6	38
12	Nano strain-amplifier: Making ultra-sensitive piezoresistance in nanowires possible without the need of quantum and surface charge effects. Applied Physics Letters, 2016, 109, .	3.3	36
13	Mechanical Properties of Polycrystalline Titanium Nitride Films Measured by XRD Tensile Testing. IEEE Transactions on Sensors and Micromachines, 2005, 125, 374-379.	0.1	31
14	Ti-Ni shape memory alloy film-actuated microstructures for a MEMS probe card. Journal of Micromechanics and Microengineering, 2007, 17, 154-162.	2.6	31
15	High thermosensitivity of silicon nanowires induced by amorphization. Materials Letters, 2016, 177, 80-84.	2.6	28
16	Focused Ion Beam Induced Surface Damage Effect on the Mechanical Properties of Silicon Nanowires. Journal of Engineering Materials and Technology, Transactions of the ASME, 2013, 135, .	1.4	23
17	Ultra-high strain in epitaxial silicon carbide nanostructures utilizing residual stress amplification. Applied Physics Letters, 2017, 110, 141906.	3.3	21
18	Design and Development of a Biaxial Tensile Test Device for a Thin Film Specimen. Journal of Engineering Materials and Technology, Transactions of the ASME, 2012, 134, .	1.4	20

#	ARTICLE	IF	CITATIONS
19	Influences of Exothermic Reactive Layer and Metal Interlayer on Fracture Behavior of Reactively Bonded Solder Joints. Journal of Engineering Materials and Technology, Transactions of the ASME, 2015, 137, .	1.4	20
20	Effect of Zr content on mechanical properties of Ti-Ni-Zr shape memory alloy films prepared by dc magnetron sputtering. Vacuum, 2008, 83, 664-667.	3.5	18
21	Al/Ni Self-Propagating Exothermic Film for MEMS Application. Materials Science Forum, 2010, 638-642, 2142-2147.	0.3	18
22	Nano-Scale Tensile Testing and Sample Preparation Techniques for Silicon Nanowires. Japanese Journal of Applied Physics, 2013, 52, 110118.	1.5	16
23	Importance of Bonding Atmosphere for Mechanical Reliability of Reactively Bonded Solder Joints. Journal of Engineering Materials and Technology, Transactions of the ASME, 2016, 138, .	1.4	16
24	Temperature Dependence on Tensile Mechanical Properties of Sintered Silver Film. Materials, 2020, 13, 4061.	2.9	15
25	Influences of pretreatment and hard baking on the mechanical reliability of SU-8 microstructures. Journal of Micromechanics and Microengineering, 2013, 23, 105016.	2.6	14
26	Charge screening strategy for domain pattern control in nano-scale ferroelectric systems. Scientific Reports, 2017, 7, 5236.	3.3	14
27	Crack-Less Wafer-Level Packaging Using Flash Heating Technique for Micro Devices. Materials Science Forum, 0, 706-709, 1979-1983.	0.3	13
28	Quasistatic and dynamic mechanical properties of Al-Si-Cu structural films in uniaxial tension. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2012, 30, 031804.	1.2	13
29	A Simple Experimental Technique for Measuring the Poisson's Ratio of Microstructures. Journal of Microelectromechanical Systems, 2013, 22, 625-636.	2.5	13
30	Thermal property measurement of solder joints fabricated by self-propagating exothermic reaction in Al/Ni multilayer film. Japanese Journal of Applied Physics, 2015, 54, 06FP15.	1.5	13
31	Influence of bonding pressure on thermal resistance in reactively-bonded solder joints. Japanese Journal of Applied Physics, 2016, 55, 06GP17.	1.5	13
32	Tensile mechanical properties of sintered porous silver films and their dependence on porosity. Japanese Journal of Applied Physics, 2019, 58, SDDL08.	1.5	13
33	Degradation Mechanism of Pressure-Assisted Sintered Silver by Thermal Shock Test. Energies, 2021, 14, 5532.	3.1	13
34	Thermal Annealing Effect on Elastic-Plastic Behavior of Al-Si-Cu Structural Films Under Uniaxial and Biaxial Tension. Journal of Microelectromechanical Systems, 2013, 22, 1414-1427.	2.5	12
35	Tension-Torsion Combined Loading Test Equipment for a Minute Beam Specimen. Journal of Engineering Materials and Technology, Transactions of the ASME, 2013, 135, .	1.4	12
36	Mechanical reliability of FIB-fabricated WC-Co cemented carbide nanowires evaluated by MEMS tensile testing. Engineering Fracture Mechanics, 2015, 150, 126-134.	4.3	12

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37	3Câ€“SiC on glass: an ideal platform for temperature sensors under visible light illumination. RSC Advances, 2016, 6, 87124-87127.	3.6	12
38	Uniaxial tensile and shear deformation tests of goldâ€“tin eutectic solder film. Science and Technology of Advanced Materials, 2007, 8, 146-152.	6.1	11
39	Size effect in self-propagating exothermic reaction of Al/Ni multilayer block on a Si wafer. Japanese Journal of Applied Physics, 2017, 56, 06GN11.	1.5	11
40	Fatigue life evaluation for singleâ€“and polyâ€“crystalline silicon films by pulsatingâ€“tension cyclic loading test. Surface and Interface Analysis, 2008, 40, 993-997.	1.8	9
41	Influence of polymer infiltration and pyrolysis process on mechanical strength of polycarbosilane-derived silicon carbide ceramics. Journal of Materials Science, 2011, 46, 3046-3051.	3.7	9
42	Influences of film composition and annealing on the mechanical and electrical properties of Wâ€“Mo thin films. Journal of Materials Science, 2012, 47, 2725-2730.	3.7	9
43	Micro-Raman spectroscopic analysis of single crystal silicon microstructures for surface stress mapping. Japanese Journal of Applied Physics, 2015, 54, 106601.	1.5	9
44	Steady-state analytical model of suspended p-type 3Câ€“SiC bridges under consideration of Joule heating. Journal of Micromechanics and Microengineering, 2017, 27, 075008.	2.6	9
45	Effect of thickening outermost layers in Al/Ni multilayer film on thermal resistance of reactively bonded solder joints. Japanese Journal of Applied Physics, 2017, 56, 06GN16.	1.5	9
46	Influence of gallium ion beam acceleration voltage on the bend angle of amorphous silicon cantilevers. Japanese Journal of Applied Physics, 2016, 55, 06GL02.	1.5	9
47	Raman Spectrum Curve Fitting for Estimating Surface Stress Distribution in Single-Crystal Silicon Microstructure. Japanese Journal of Applied Physics, 2009, 48, 04C021.	1.5	8
48	Domain structure of tetragonal Pb(Zr,Ti)O ₃ nanorods and its size dependence. Japanese Journal of Applied Physics, 2015, 54, 10NA07.	1.5	8
49	Thermomechanical behavior of Tiâ€“Ni shape memory alloy films deposited by DC magnetron sputtering. Vacuum, 2006, 80, 726-731.	3.5	7
50	Influence of Gas Flow Ratio in PEâ€“CVD Process on Mechanical Properties of Silicon Nitride Film. IEEJ Transactions on Electrical and Electronic Engineering, 2008, 3, 281-289.	1.4	7
51	Effect of Cu content on the shape memory behavior of Tiâ€“Niâ€“Cu alloy thin films prepared by triple-source dc magnetron sputtering. Thin Solid Films, 2010, 518, S26-S28.	1.8	6
52	Titanium-Nickel Shape Memory Alloy Spring Actuator for Forward-Looking Active Catheter. Journal of Metallurgy, 2011, 2011, 1-9.	1.1	6
53	Self-aligned fabrication process for active membrane made of photosensitive nanocomposite. , 2012, , .		6
54	Development of a two-dimensional scanning micro-mirror utilizing magnetic polymer composite. Japanese Journal of Applied Physics, 2016, 55, 06GP01.	1.5	6

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55	Temperature behavior of exothermic reaction of Al/Ni multilayer powder materials based on cold-rolling and pulverizing method. Japanese Journal of Applied Physics, 2017, 56, 06GN07.	1.5	6
56	Comparison of mechanical characteristics of focused ion beam fabricated silicon nanowires. Japanese Journal of Applied Physics, 2017, 56, 06GN17.	1.5	6
57	Influence of bonded area size on cracking in reacted NiAl layer for crack-free reactive soldering. Japanese Journal of Applied Physics, 2020, 59, S11L01.	1.5	6
58	Development of Novel MEMS Soldering Technique Using Self-Propagating Exothermic Reaction in Al/Ni Multilayer Films. Zairyo/Journal of the Society of Materials Science, Japan, 2007, 56, 932-937.	0.2	6
59	Comparison of sintered silver die attach failure between thermal shock test and mechanical cycling test. Japanese Journal of Applied Physics, 2022, 61, SD1029.	1.5	6
60	Fabrication and evaluation of polymer MEMS mirror based on the mechanical characteristic of polymer containing magnetic particles. , 2011, , .		5
61	Formation of silicon carbide nanowire on insulator through direct wet oxidation. Materials Letters, 2017, 196, 280-283.	2.6	5
62	New local joining technique for metal materials using exothermic heat of Al/Ni multilayer powder. Japanese Journal of Applied Physics, 2018, 57, 06HJ10.	1.5	5
63	Mechanical shock-induced self-propagating exothermic reaction in Ti/Si multilayer nanofilms for low-power reactive bonding. Japanese Journal of Applied Physics, 2020, 59, S11L09.	1.5	5
64	Cylindrical film deposition system for three-dimensional titanium-nickel shape memory alloy microstructure. Vacuum, 2008, 83, 703-707.	3.5	4
65	Self-propagating explosive Al/Ni flakes fabricated by dual-source sputtering to mesh substrate. Japanese Journal of Applied Physics, 2014, 53, 06JM01.	1.5	4
66	Fabrication of micron-sized Al/Ni tetrapod particles with self-propagating exothermic function. Japanese Journal of Applied Physics, 2015, 54, 06FP10.	1.5	4
67	Cathodoluminescence Spectroscopic Stress Analysis for Silicon Oxide Film and Its Damage Evaluation. Materials, 2020, 13, 4490.	2.9	4
68	Extended x-ray absorption fine structure spectroscopy of stretched magnetic films on flexible substrate. Journal of Applied Physics, 2020, 127, .	2.5	4
69	Laser-induced multiple points ignition test in Al/Ni exothermic reactive film for crack propagation control. Japanese Journal of Applied Physics, 2021, 60, SCCL15.	1.5	4
70	Influence of 700 Å°C vacuum annealing on fracture behavior of micro/nanoscale focused ion beam fabricated silicon structures. Japanese Journal of Applied Physics, 2016, 55, 06GL03.	1.5	4
71	Thermoreflectance-based in-depth stress distribution measurement technique for single-crystal silicon structures. Japanese Journal of Applied Physics, 2016, 55, 06GP08.	1.5	4
72	Development of Scanning Probe Parallel Nanowriting System with Electron Beam Resist. , 2007, , .		3

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73	Shape control of self-organized porous silica submicron particles and their strength evaluation. Japanese Journal of Applied Physics, 2016, 55, 06GP12.	1.5	3
74	Fabrication of Tetragonal Pb(Zr,Ti)O ₃ Nanorods by Focused Ion Beam and Characterization of the Domain Structure. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 1642-1646.	3.0	3
75	Exothermically reactive titanium-silica nanoparticles. Japanese Journal of Applied Physics, 2020, 59, S1106.	1.5	3
76	A simple determination method of in-plane Poisson's ratio for MEMS materials by means of on-chip pure bending test. , 2007, , .		2
77	Mechanical Characteristics of Al-Si-Cu Structural Films by Uniaxial Tensile Test with Elongation Measurement Image Analysis. Materials Research Society Symposia Proceedings, 2008, 1129, 1.	0.1	2
78	In-Situ Cathodoluminescence Spectroscopy of Silicon Oxide Thin Film Under Uniaxial Tensile Loading. Journal of Nanoscience and Nanotechnology, 2011, 11, 2861-2866.	0.9	2
79	X-ray Absorption Studies on the Growth Process of Radio-Frequency-Magnetron-Sputtered Boron Nitride Films: Effects of Bias Voltage and Substrate Temperature. Japanese Journal of Applied Physics, 2013, 52, 045602.	1.5	2
80	Influence of Zeta potential on pore arrangement in porous oxide particles produced using ultrasonic atomization method. Japanese Journal of Applied Physics, 2021, 60, SCCL10.	1.5	2
81	Fabrication of Ti-Ni Shape Memory Alloy Films by Unbalanced Magnetron Sputtering and Their Joule Heat Induced Shape Memory Behavior. Journal of the Vacuum Society of Japan, 2008, 51, 312-315.	0.3	2
82	Effect of Substrate Temperature on the Shape Memory Behavior of Ti-Ni-Cu Ternary Alloy Sputtered Films. Materials Science Forum, 0, 706-709, 1903-1908.	0.3	1
83	Dual-axis polymer-MEMS mirror made of Photosensitive Nanocomposite. , 2013, , .		1
84	Possibility of cemented carbide as structural material for MEMS. , 2014, , .		1
85	Design and fabrication of electrothermal SiC nanoresonators for high-resolution nanoparticle sensing. , 2016, , .		1
86	The Influence of Mechanical Property on the Heat-Cycle Reliability of Sintered Silver Die Attach. , 2020, , .		1
87	Effect of molten salt reduction on exothermic characteristics of titanium/reduced-silica nanoparticles. Japanese Journal of Applied Physics, 2021, 60, SCCL09.	1.5	1
88	OS5-3-1 MEMS Hermetic Package with Lead-Free Solder Film Line Heated by Al/Ni Exothermic Structure. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2007, 2007.6, _OS5-3-1-1-_OS5-3-1-4.	0.0	1
89	Compressive Low Cycle Fatigue Behavior of Ni ₂ MnGa Ferromagnetic Shape Memory Alloy Single Crystals. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2004, 68, 932-938.	0.4	0
90	Development of the Novel Elongation-Measurement Device with In-Plane Bimorph Actuator for the Tensile Test. , 2009, , .		0

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91	Development of a strain visualization system for microstructures using single fluorescent molecule tracking on a three-dimensional orientation microscope. Proceedings of SPIE, 2011, , .	0.8	0
92	Tensile Elongation Measurement Device with In-Plane Bimorph Actuation Mechanism. Journal of Nanoscience and Nanotechnology, 2011, 11, 2777-2784.	0.9	0
93	Measurement of stress and strain applied to electrochemically aligned collagen fibres by second-harmonic generation microscopy. , 2011, , .		0
94	Design and fabrication of polymer MEMS mirror based on the mechanical characteristic evaluation of polyimide materials. , 2011, , .		0
95	J032024 A new bonding method using Al/Ni exothermic nanolayers for crack-less solder bonding. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _J032024-1- _J032024-4.	0.0	0
96	Influences of Specimen Size and Annealing Temperature on Mechanical Reliability of FIB-Fabricated Si Nanowires for NEMS. , 2013, , .		0
97	Fabrication and Application of Self-propagating Exothermic Materials Generating Heat of 1000^ ^#x2103; within 0.1 sec. Materia Japan, 2014, 53, 616-620.	0.1	0
98	Fabrication of Polymer-Derived Silicon Oxycarbide Microparts and Their Mechanical Characteristics. Journal of Micro and Nano-Manufacturing, 2014, 2, .	0.7	0
99	ZrCuNiAl Metallic Glass Films Prepared by rf Magnetron Sputtering Using an Alloy Target. Journal of the Japan Society for Precision Engineering, 2015, 81, 276-280.	0.1	0
100	Fabrication of tetrapod-shaped Al/Ni microparticles with tunable self-propagating exothermic function. , 2015, , .		0
101	Plastic reshaping technique for silicon origami. , 2016, , .		0
102	Finely formed porous silica nanoparticles and their strength evaluation. , 2016, , .		0
103	Influences of Specimen Size and Temperature on Viscoelastic Tensile Properties of SU-8 Photoresist Films. Journal of Engineering Materials and Technology, Transactions of the ASME, 2016, 138, .	1.4	0
104	High-Cycle Fatigue Tests of Micro/Nano-Scale Single Crystal Silicon for Reliable Design of MEMS/NEMS. The Proceedings of the JSME Annual Meeting, 2004, 2004.1, 369-370.	0.0	0
105	307 Thermomechanical Constitutive Characterization of Ti-Ni SMA films for Design of MEMS actuator. The Proceedings of the Computational Mechanics Conference, 2006, 2006.19, 147-148.	0.0	0
106	OS5-3-2 Raman Spectroscopic Analysis of Surface Stress Distribution on Single Crystal Silicon Microstructures under Uniaxial Tensile Loading. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2007, 2007.6, _OS5-3-2-1- _OS5-3-2-4.	0.0	0
107	OS5-2-1 On-Chip Pure Bending Test for Measuring in-Plane Poisson's Ratio of MEMS Materials. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2007, 2007.6, _OS5-2-1-1- _OS5-2-1-4.	0.0	0
108	OS1910 Deformation-mode Dependency on the Fracture Strength of Single Crystal Silicon Microstructures. The Proceedings of the Materials and Mechanics Conference, 2012, 2012, _OS1910-1- _OS1910-3-.	0.0	0

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109	J032011 Development of Mechanical Characteristics Evaluation Technique for FIB-processed Nanostructures. The Proceedings of Mechanical Engineering Congress Japan, 2012, 2012, _J032011-1-_J032011-4.	0.0	0
110	20pm3-PM006 The evaluation of heat-affected zone on solder joints with self-propagating exothermic material Al-Ni multilayers. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2014, 2014.6, _20pm3-PM0-_20pm3-PM0.	0.0	0
111	J2240203 Cracking and deformation evaluation in Al/Ni heat-bonded solder joint for hermetic packages. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, _J2240203-_J2240203-.	0.0	0
112	J2240402 Tensile test of FIB-fabricated cemented carbide specimens and their mechanical properties. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, _J2240402-_J2240402-.	0.0	0
113	OS1117 Self-propagating Exothermic Multilayer Films Reacted by Mechanical Shock. The Proceedings of the Materials and Mechanics Conference, 2014, 2014, _OS1117-1-_OS1117-3_.	0.0	0
114	J2220204 Fabrication of porous Al tetrapod structures using powder injection mold technique and their exothermic performance evaluation. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, _J2220204-_J2220204-.	0.0	0
115	J2240105 Development of MEMS Device for Tensile Testing of Nanowire-Shaped Specimens. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, _J2240105-_J2240105-.	0.0	0
116	J2210205 Environmental resistance evaluation in Al/Ni heat-bonded solder joints. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _J2210205-_J2210205-.	0.0	0
117	J2210206 Comparison of heat performance characteristics in sputtered Ti/SiO multilayer films with those in Ti/Si multilayer films. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _J2210206-_J2210206-.	0.0	0
118	J2210203 Study of thermal characterization for thin-layer Sn-Ag solder joint fabricated by self-propagating exothermic reactive bonding technique. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _J2210203-_J2210203-.	0.0	0
119	OS12-1 MEMS and Nanotechnology for Experimental Mechanics(invited,Mechanical properties of nano-) Tj ETQq1 1 0.784314 rgBT /Ov Experimental Mechanics Asian Conference on Experimental Mechanics. 2015, 2015.14. 183.	0.0	0
120	Fabrication of Micro Particles with Self-propagating Exothermic Function during Intermetallic Compound Formation. Journal of the Society of Powder Technology, Japan, 2015, 52, 523-529.	0.1	0
121	J2210101 Influences of annealing temperature on the mechanical reliability of Au bonding wires. The Proceedings of Mechanical Engineering Congress Japan, 2015, 2015, _J2210101-_J2210101-.	0.0	0
122	Reactive Soldering Technique Using Self-Propagating Exothermic Material. Journal of Japan Institute of Electronics Packaging, 2015, 18, 474-478.	0.1	0
123	Fabrication of exothermic reactive submicron particles by using shape-controlled porous silica particles. The Proceedings of Mechanical Engineering Congress Japan, 2016, 2016, J2210205.	0.0	0
124	Direct evaluation of mechanical properties of Si nanowires and their process effect. The Proceedings of Mechanical Engineering Congress Japan, 2016, 2016, J2210304.	0.0	0
125	Evaluation on reactively-bonded solder joints fabricated by using Al/Ni free-standing multilayer. The Proceedings of Mechanical Engineering Congress Japan, 2016, 2016, J2210203.	0.0	0
126	Nanotech Laboratory, Department of Mechanical Engineering, Faculty of Engineering, Aichi Institute of Technology. Journal of Japan Institute of Electronics Packaging, 2018, 21, 186-186.	0.1	0

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127	ãfžã,ã,ãfãf»ãfŠãfŽææ-™ã®æ©Ÿæ¢°äjé¼æ€§è©•ã¼jæŠèj“. Journal of Smart Processing, 2020, 9, 3-8.	0.1	0