

# Hirotsugu Ogi

## List of Publications by Year in descending order

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108  
papers

2,144  
citations

218381

26  
h-index

233125

45  
g-index

109  
all docs

109  
docs citations

109  
times ranked

1870  
citing authors

#	ARTICLE	IF	CITATIONS
1	Distinguishing crystal-like amyloid fibrils and glass-like amorphous aggregates from their kinetics of formation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14446-14451.	3.3	256
2	Complete mode identification for resonance ultrasound spectroscopy. Journal of the Acoustical Society of America, 2002, 112, 2553-2557.	0.5	142
3	Field dependence of coupling efficiency between electromagnetic field and ultrasonic bulk waves. Journal of Applied Physics, 1997, 82, 3940-3949.	1.1	117
4	Contactless mode-selective resonance ultrasound spectroscopy: Electromagnetic acoustic resonance. Journal of the Acoustical Society of America, 1999, 106, 660-665.	0.5	103
5	Elastic constants of body-centered-cubic titanium monocrystals. Journal of Applied Physics, 2004, 95, 4642-4644.	1.1	83
6	170-MHz Electrodeless Quartz Crystal Microbalance Biosensor: Capability and Limitation of Higher Frequency Measurement. Analytical Chemistry, 2009, 81, 8068-8073.	3.2	79
7	Concentration dependence of IgG-protein A affinity studied by wireless-electrodeless QCM. Biosensors and Bioelectronics, 2007, 22, 3238-3242.	5.3	78
8	Isolated Electrodeless High-Frequency Quartz Crystal Microbalance for Immunosensors. Analytical Chemistry, 2006, 78, 6903-6909.	3.2	76
9	Ultrasonic attenuation and grain-size evaluation using electromagnetic acoustic resonance. Journal of the Acoustical Society of America, 1995, 98, 458-464.	0.5	74
10	Noncontact monitoring of surface-wave nonlinearity for predicting the remaining life of fatigued steels. Journal of Applied Physics, 2001, 90, 438-442.	1.1	70
11	Ultrasonication-Dependent Acceleration of Amyloid Fibril Formation. Journal of Molecular Biology, 2011, 412, 568-577.	2.0	66
12	Nonspecific-adsorption behavior of polyethylenglycol and bovine serum albumin studied by 55-MHz wireless-electrodeless quartz crystal microbalance. Biosensors and Bioelectronics, 2009, 24, 3148-3152.	5.3	62
13	Wireless-electrodeless quartz-crystal-microbalance biosensors for studying interactions among biomolecules: A review. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2013, 89, 401-417.	1.6	59
14	Noncontact measurement of ultrasonic attenuation during rotating fatigue test of steel. Journal of Applied Physics, 1997, 81, 3677-3684.	1.1	52
15	Complete set of elastic and piezoelectric coefficients of $\hat{\Gamma}$ -quartz at low temperatures. Journal of Applied Physics, 2007, 102, .	1.1	44
16	Activation of TiO <sub>2</sub> photocatalyst by single-bubble sonoluminescence for water treatment. Ultrasonics, 2002, 40, 649-650.	2.1	42
17	Replacement-free mass-amplified sandwich assay with 180-MHz electrodeless quartz-crystal microbalance biosensor. Biosensors and Bioelectronics, 2011, 26, 4819-4822.	5.3	39
18	Nucleus factory on cavitation bubble for amyloid $\hat{\Gamma}^2$ fibril. Scientific Reports, 2016, 6, 22015.	1.6	39

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19	Ultrasonic attenuation peak in steel and aluminum alloy during rotating bending fatigue. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 1121-1128.	1.1	38
20	Effects of Flow Rate on Sensitivity and Affinity in Flow Injection Biosensor Systems Studied by 55-MHz Wireless Quartz Crystal Microbalance. Analytical Chemistry, 2008, 80, 5494-5500.	3.2	38
21	Microtubule Severing by Katanin p60 AAA+ ATPase Requires the C-terminal Acidic Tails of Both $\alpha$ - and $\beta$ -Tubulins and Basic Amino Acid Residues in the AAA+ Ring Pore. Journal of Biological Chemistry, 2015, 290, 11762-11770.	1.6	37
22	Ultrahigh-Frequency, Wireless MEMS QCM Biosensor for Direct, Label-Free Detection of Biomarkers in a Large Amount of Contaminants. Analytical Chemistry, 2019, 91, 9398-9402.	3.2	34
23	Multichannel Wireless-Electrodeless Quartz-Crystal Microbalance Immunosensor. Analytical Chemistry, 2010, 82, 3957-3962.	3.2	32
24	MEMS hydrogen gas sensor with wireless quartz crystal resonator. Sensors and Actuators B: Chemical, 2021, 334, 129651.	4.0	30
25	Ultrafast propagation of $\beta$ -amyloid fibrils in oligomeric cloud. Scientific Reports, 2014, 4, 6960.	1.6	29
26	Ultrasonication-based rapid amplification of $\beta$ -synuclein aggregates in cerebrospinal fluid. Scientific Reports, 2019, 9, 6001.	1.6	28
27	Elastic stiffness mapping by resonance-ultrasound microscopy with isolated piezoelectric oscillator. Applied Physics Letters, 2003, 83, 464-466.	1.5	25
28	Acoustic study of dislocation rearrangement at later stages of fatigue: Noncontact prediction of remaining life. Journal of Applied Physics, 2002, 91, 1849-1854.	1.1	22
29	Low-temperature elastic and piezoelectric constants of paratellurite ( $\beta$ -TeO <sub>2</sub> ). Journal of Applied Physics, 2004, 96, 6201-6206.	1.1	22
30	Replacement-Free Electrodeless Quartz Crystal Microbalance Biosensor Using Nonspecific-Adsorption of Streptavidin on Quartz. Analytical Chemistry, 2009, 81, 4015-4020.	3.2	21
31	Seed-Dependent Deposition Behavior of $\beta$ -Peptides Studied with Wireless Quartz-Crystal-Microbalance Biosensor. Analytical Chemistry, 2011, 83, 4982-4988.	3.2	21
32	Drastic acceleration of fibrillation of insulin by transient cavitation bubble. Ultrasonics Sonochemistry, 2017, 36, 206-211.	3.8	20
33	Resonance acoustic microbalance with naked-embedded quartz (RAMNE-Q) biosensor fabricated by microelectromechanical-system process. Biosensors and Bioelectronics, 2012, 33, 139-145.	5.3	19
34	Vibration analysis of an elastic-sphere oscillator contacting semi-infinite viscoelastic solids in resonant ultrasound microscopy. Journal of Applied Physics, 2004, 95, 8366-8375.	1.1	14
35	Disaggregation Behavior of Amyloid $\beta$ Fibrils by Anthocyanins Studied by Total-Internal-Reflection-Fluorescence Microscopy Coupled with a Wireless Quartz-Crystal Microbalance Biosensor. Analytical Chemistry, 2021, 93, 11176-11183.	3.2	13
36	Optimized sonoreactor for accelerative amyloid-fibril assays through enhancement of primary nucleation and fragmentation. Ultrasonics Sonochemistry, 2021, 73, 105508.	3.8	12

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37	Young's modulus mapping on SCS-6 SiCf/Ti-6Al-4V composite by electromagnetic-resonance-ultrasound microscopy. <i>Journal of Applied Physics</i> , 2003, 94, 6472-6476.	1.1	11
38	Wireless electrodeless piezomagnetic biosensor with an isolated nickel oscillator. <i>Biosensors and Bioelectronics</i> , 2006, 21, 2001-2005.	5.3	11
39	Time-Resolved Observation of Evolution of Amyloid- $\beta^2$ Oligomer with Temporary Salt Crystals. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 6176-6184.	2.1	11
40	Sensitive label-free immunoglobulin G detection using a MEMS quartz crystal microbalance biosensor with a 125 MHz wireless quartz resonator. <i>Japanese Journal of Applied Physics</i> , 2021, 60, SDDB03.	0.8	11
41	Picosecond ultrasound spectroscopy for studying elastic modulus of thin films: a review. <i>Nondestructive Testing and Evaluation</i> , 2011, 26, 267-280.	1.1	10
42	Acceleration of deposition of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0006.gif" overflow="scroll"} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle A \langle \text{mml:msub} \langle \text{mml:mrow} \langle \text{mml:mi} \rangle \hat{2} \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle$ peptide on ultrasonically formed $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0007.gif" overflow="scroll"} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle A \langle \text{mml:msub} \langle \text{mml:mrow} \langle \text{mml:mi} \rangle \hat{2} \langle \text{mml:mrow} \rangle$	5.3	10
43	Nano-plate biosensor array using ultrafast heat transport through proteins. <i>Sensors and Actuators B: Chemical</i> , 2019, 278, 15-20.	4.0	10
44	Half-Time Heat Map Reveals Ultrasonic Effects on Morphology and Kinetics of Amyloidogenic Aggregation Reaction. <i>ACS Chemical Neuroscience</i> , 2021, 12, 3456-3466.	1.7	10
45	Snoek relaxation and dislocation damping in aged Fe-Cu-Ni steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2001, 32, 1671-1677.	1.1	9
46	Enhancement of sensitivity of Pd-based hydrogen-gas sensor by plasma exposure studied by wireless quartz resonator. <i>Japanese Journal of Applied Physics</i> , 2020, 59, SKKB02.	0.8	9
47	Effect of elastic anisotropy on contact stiffness in resonance ultrasound microscopy. <i>Applied Physics Letters</i> , 2005, 87, 204107.	1.5	8
48	Thermal Mode Spectroscopy for Thermal Diffusivity of Millimeter-Size Solids. <i>Physical Review Letters</i> , 2016, 117, 195901.	2.9	8
49	Viscoelasticity evolution in protein layers during binding reactions evaluated using high-frequency wireless and electrodeless quartz crystal microbalance biosensor without dissipation. <i>Japanese Journal of Applied Physics</i> , 2015, 54, 096601.	0.8	7
50	Accelerated crystallization of colloidal glass by mechanical oscillation. <i>Scientific Reports</i> , 2017, 7, 1369.	1.6	7
51	Viscoelasticity Response during Fibrillation of Amyloid $\beta^2$ Peptides on a Quartz-Crystal-Microbalance Biosensor. <i>Langmuir</i> , 2018, 34, 5474-5479.	1.6	7
52	Mechanism of affinity-enhanced protein adsorption on bio-nanocapsules studied by viscoelasticity measurement with wireless QCM biosensor. <i>Japanese Journal of Applied Physics</i> , 2020, 59, SKKB03.	0.8	7
53	Interplanar stiffness in defect-free monocrystalline graphite. <i>Physical Review Materials</i> , 2020, 4, .	0.9	7
54	Relationship between viscosity change and specificity in protein binding reaction studied by high-frequency wireless and electrodeless MEMS biosensor. <i>Japanese Journal of Applied Physics</i> , 2015, 54, 068001.	0.8	6

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55	High-Frequency Electrodeless Quartz Crystal Microbalance Chip with a Bare Quartz Resonator Encapsulated in a Silicon Microchannel. Japanese Journal of Applied Physics, 2011, 50, 07HD03.	0.8	6
56	Measurement of elastic-stiffness tensor of an anisotropic thin film by electromagnetic acoustic resonance. Ultrasonics, 2002, 40, 333-336.	2.1	5
57	Optimized Ultrasonic Irradiation Finds Out Ultrastable $\text{Al}^{2+}$ Oligomers. Journal of Physical Chemistry B, 2017, 121, 2603-2613.	1.2	5
58	Mechanical oscillation accelerating nucleation and nuclei growth in hard-sphere colloidal glass. Scientific Reports, 2019, 9, 12836.	1.6	4
59	Development of HANABI, an ultrasonication-forced amyloid fibril inducer. Neurochemistry International, 2022, 153, 105270.	1.9	4
60	Elastic stiffnesses of an Nb-Ti/Cu-composite superconductive wire. Journal of Applied Physics, 2000, 88, 2378-2381.	1.1	3
61	Elastic properties of a crossply SiC f /Ti composite at elevated temperatures. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 425-429.	1.1	3
62	Brightened single-bubble sonoluminescence by phase-adjusted high-frequency acoustic pulse. Physical Review E, 2003, 67, 056301.	0.8	3
63	Imaging of Local Stiffness of Damaged Polycrystalline Copper: Nondestructive Evaluation by Resonance Ultrasound Microscopy. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 1514-1520.	1.7	3
64	Calibration-free portable Young's-modulus tester with isolated langasite oscillator. Ultrasonics, 2014, 54, 1963-1966.	2.1	3
65	Advanced Resonant-Ultrasound Spectroscopy for Studying Anisotropic Elastic Constants of Thin Films. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	2
66	Laser-Induced Coherent Acoustic Phonons for Measuring Elastic Constants of Ultra-Thin Films. Journal of Solid Mechanics and Materials Engineering, 2008, 2, 1420-1426.	0.5	2
67	Nucleation-fibrillation dynamics of $\text{Al}^{2+}$ peptides on liquid-solid surface studied by total-internal-reflection fluorescence microscopy coupled with quartz-crystal microbalance biosensor. Japanese Journal of Applied Physics, 2015, 54, 07HE01.	0.8	2
68	Relationship between Elastic Constants and Microstructure of Nanocrystalline CVD Diamond Thin Films. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2006, 72, 1819-1824.	0.2	1
69	Spontaneous nucleation on flat surface by depletion force in colloidal suspension. Scientific Reports, 2021, 11, 8929.	1.6	1
70	Noncontact Measurement of Ultrasonic Velocity and Attenuation in Polycrystalline Pure Copper During Initial Stage of Deformation. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 1998, 62, 820-826.	0.2	1
71	Acceleration of amyloid fibril formation by multichannel sonochemical reactor. Japanese Journal of Applied Physics, 2022, 61, SC1002.	0.8	1
72	Correlation Between Elastic Constants and Magnetic Anisotropy in Co/Pt Superlattice Thin Films. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	0

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73	Elastic Constants and Graphitic Grain Boundaries of Nanocrystalline CVD-Diamond Thin Films: Resonant Ultrasound Spectroscopy and Micromechanics Calculation. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	0
74	Elastic Constant and Microstructure of Oxide Thin Films Studied by Brillouin Oscillation. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2009, 75, 72-78.	0.2	0
75	170 MHz electrodeless quartz crystal microbalance for highly sensitive biosensors. , 2009, , .		0
76	Measurements of Thin-Film Elastic Constants. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2009, 75, 397-403.	0.2	0
77	Development of Wavelength-Tunable Picosecond Ultrasound Method for Evaluating Ultrasonic Attenuation in Oxide Thin Films. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2010, 76, 1444-1451.	0.2	0
78	2P051 High Speed Amyloid Fibrilization Induced by Ultrasonication(The 48th Annual Meeting of the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf .	0.0	0
79	Reusable high-frequency electrodeless QCM biosensor with a bare quartz resonator embedded in a silicon microchannel. , 2011, , .		0
80	OS02-2-5 Picosecond Ultrasound Spectroscopy for High Purity Boron Nitrides. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS02-2-5-.	0.0	0
81	OS02F016 Picosecond ultrasound at low temperatures for Pd thin films. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS02F016-_OS02F016-.	0.0	0
82	2P069 The mechanism of ultrasonication-induced amyloid fibril formation(01C. Protein: Property). Seibutsu Butsuri, 2013, 53, S170.	0.0	0
83	Notice of Removal: Monitoring of morphological change of deposited metallic thin film through internal friction of noncontacting piezoelectric oscillator. , 2017, , .		0
84	Principle and Applications of Wireless Quartz-crystal-microbalance Biosensors. leice Ess Fundamentals Review, 2018, 11, 180-185.	0.1	0
85	Measurement of Elastic Stiffness Tensor of an SiC<SUB>f</SUB>/Ti Cross-Ply Composite at Elevated Temperatures. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2000, 64, 495-501.	0.2	0
86	350 Noncontact Measurement of Nonlinear Acoustics During Fatigue of Carbon Steels. Proceedings of the 1992 Annual Meeting of JSME/MMD, 2001, 2001, 331-332.	0.0	0
87	Elastic constants of lotus-type porous metal : measurement and micromechanics modeling. Proceedings of the 1992 Annual Meeting of JSME/MMD, 2002, 2002, 73-74.	0.0	0
88	Measurement of the elastic-stiffness tensor of SiC_f/Ti composites at elevated temperatures and nondestructive evaluation of disbonding. Proceedings of the 1992 Annual Meeting of JSME/MMD, 2002, 2002, 405-406.	0.0	0
89	OS06W0137 Acoustic spectroscopy for measuring anisotropic elastic constants of thin films. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, _OS06W0137-_OS06W0137.	0.0	0
90	OS6(5)-22(OS06W0137) Acoustic Spectroscopy for Measuring Anisotropic Elastic Constants of Thin Films. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 237.	0.0	0

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91	OS2(3)-11(OS02W0120) Change of Ultrasonic Attenuation and Microstructure Evolution During Creep of Nickel Base Superalloy. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 161.	0.0	0
92	Measurement of elastic constants of copper thin films and microstructure evaluation by acoustic-resonance method. Proceedings of the 1992 Annual Meeting of JSME/MMD, 2003, 2003, 439-440.	0.0	0
93	OS02W0120 Change of ultrasonic attenuation and microstructure evolution during creep of nickel base superalloy. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, OS02W0120- OS02W0120.	0.0	0
94	Ab-Initio Calculation Model for Nanocrystalline Diamond with Non-sp <sup>3</sup> Bonded Region and Its Effect on Elastic Properties. Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A, 2009, 75, 1424-1429.	0.2	0
95	J0406-1-2 Resonance Measurements for Nanostructures and Their Application to Ultrahigh-Sensitive Biosensors. The Proceedings of the JSME Annual Meeting, 2009, 2009.6, 413-414.	0.0	0
96	OS02-1-1 Evaluation of Elastic Constant Changes in Ferritic Steel Pipes from Industrial Boiler by the RUS-EMAR. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, OS02-1-1-.	0.0	0
97	OS02-2-2 Low-temperature elastic anomaly of Pd thin films studied by picosecond ultrasound. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, OS02-2-2-.	0.0	0
98	OS02F023 Picosecond Ultrasound Spectroscopy for High Purity Boron Nitrides. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, OS02F023- OS02F023-.	0.0	0
99	OS02-4-3 High Temperature Elastic Properties of Thermal Barrier Coating by Resonance Ultrasound Spectroscopy. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, OS02-4-3-.	0.0	0
100	OS02-4-2 Temperature dependences of elastic constants and internal friction of $\alpha$ -quartz near $\alpha$ - $\beta$ phase transformation studied by antenna-transmission noncontacting acoustic resonance method. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, OS02-4-2-.	0.0	0
101	SURFACE-WAVE NONLINEARITY MEASURED WITH EMAT FOR FATIGUED STEELS. , 2011, , 75-89.		0
102	J0430104 Microstructure Dependence of Internal Friction in Plasma Sprayed CoNiCrAlY. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, J0430104- J0430104-.	0.0	0
103	Contactless Measurement of Ultrasonic Attenuation and Average Grain Size with Electromagnetic Acoustic Resonance. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 1994, 58, 1021-1028.	0.2	0
104	Quantitative Young-Modulus Mapping by Resonant Ultrasound Microscopy. Materia Japan, 2016, 55, 577-577.	0.1	0
105	Observation of Morphology Change of Metallic Films Deposited on Silica Glass Using Noncontact Piezoelectric Resonance Method. The Proceedings of Mechanical Engineering Congress Japan, 2018, 2018, J0410401.	0.0	0
106	Evaluation of Wall Thinning using Mode Conversion of Guided Wave. The Proceedings of Mechanical Engineering Congress Japan, 2019, 2019, J40146.	0.0	0
107	Deposition of Semicontinuous Film on Silicon Substrate using Noncontacting Piezoelectric Resonance Method. The Proceedings of Mechanical Engineering Congress Japan, 2019, 2019, J04303.	0.0	0
108	Observation of growth process of thin film on heated substrate by using resistive spectroscopy. The Proceedings of Mechanical Engineering Congress Japan, 2020, 2020, J04109.	0.0	0