

# Hirotsugu Ogi

## List of Publications by Citations

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105  
papers

1,690  
citations

24  
h-index

39  
g-index

109  
ext. papers

1,932  
ext. citations

4.5  
avg, IF

4.65  
L-index

#	Paper	IF	Citations
105	Distinguishing crystal-like amyloid fibrils and glass-like amorphous aggregates from their kinetics of formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 14446-51	11.5	200
104	Complete mode identification for resonance ultrasound spectroscopy. <i>Journal of the Acoustical Society of America</i> , <b>2002</b> , 112, 2553-7	2.2	117
103	Field dependence of coupling efficiency between electromagnetic field and ultrasonic bulk waves. <i>Journal of Applied Physics</i> , <b>1997</b> , 82, 3940-3949	2.5	93
102	Contactless mode-selective resonance ultrasound spectroscopy: Electromagnetic acoustic resonance. <i>Journal of the Acoustical Society of America</i> , <b>1999</b> , 106, 660-665	2.2	88
101	170-MHz electrodeless quartz crystal microbalance biosensor: capability and limitation of higher frequency measurement. <i>Analytical Chemistry</i> , <b>2009</b> , 81, 8068-73	7.8	68
100	Concentration dependence of IgG-protein A affinity studied by wireless-electrodeless QCM. <i>Biosensors and Bioelectronics</i> , <b>2007</b> , 22, 3238-42	11.8	67
99	Isolated electrodeless high-frequency quartz crystal microbalance for immunosensors. <i>Analytical Chemistry</i> , <b>2006</b> , 78, 6903-9	7.8	64
98	Noncontact monitoring of surface-wave nonlinearity for predicting the remaining life of fatigued steels. <i>Journal of Applied Physics</i> , <b>2001</b> , 90, 438-442	2.5	59
97	Elastic constants of body-centered-cubic titanium monocrystals. <i>Journal of Applied Physics</i> , <b>2004</b> , 95, 4642-4644	2.5	57
96	Ultrasonic attenuation and grain-size evaluation using electromagnetic acoustic resonance. <i>Journal of the Acoustical Society of America</i> , <b>1995</b> , 98, 458-464	2.2	55
95	Ultrasonication-dependent acceleration of amyloid fibril formation. <i>Journal of Molecular Biology</i> , <b>2011</b> , 412, 568-77	6.5	54
94	Nonspecific-adsorption behavior of polyethylenglycol and bovine serum albumin studied by 55-MHz wireless-electrodeless quartz crystal microbalance. <i>Biosensors and Bioelectronics</i> , <b>2009</b> , 24, 3148-52	11.8	54
93	Wireless-electrodeless quartz-crystal-microbalance biosensors for studying interactions among biomolecules: a review. <i>Proceedings of the Japan Academy Series B: Physical and Biological Sciences</i> , <b>2013</b> , 89, 401-17	4	46
92	Noncontact measurement of ultrasonic attenuation during rotating fatigue test of steel. <i>Journal of Applied Physics</i> , <b>1997</b> , 81, 3677-3684	2.5	42
91	Complete set of elastic and piezoelectric coefficients of quartz at low temperatures. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 113508	2.5	35
90	Activation of TiO <sub>2</sub> photocatalyst by single-bubble sonoluminescence for water treatment. <i>Ultrasonics</i> , <b>2002</b> , 40, 649-50	3.5	35
89	Effects of flow rate on sensitivity and affinity in flow injection biosensor systems studied by 55-MHz wireless quartz crystal microbalance. <i>Analytical Chemistry</i> , <b>2008</b> , 80, 5494-500	7.8	33

88	Replacement-free mass-amplified sandwich assay with 180-MHz electrodeless quartz-crystal microbalance biosensor. <i>Biosensors and Bioelectronics</i> , <b>2011</b> , 26, 4819-22	11.8	32
87	Nucleus factory on cavitation bubble for amyloid $\beta$ fibril. <i>Scientific Reports</i> , <b>2016</b> , 6, 22015	4.9	32
86	Multichannel wireless-electrodeless quartz-crystal microbalance immunosensor. <i>Analytical Chemistry</i> , <b>2010</b> , 82, 3957-62	7.8	28
85	Ultrasonic attenuation peak in steel and aluminum alloy during rotating bending fatigue. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2000</b> , 31, 1121-1128 <sup>2,3</sup>	2.3	26
84	Microtubule severing by katanin p60 AAA+ ATPase requires the C-terminal acidic tails of both $\beta$ and $\beta$ tubulins and basic amino acid residues in the AAA+ ring pore. <i>Journal of Biological Chemistry</i> , <b>2015</b> , 290, 11762-70	5.4	25
83	Ultrafast propagation of $\beta$ amyloid fibrils in oligomeric cloud. <i>Scientific Reports</i> , <b>2014</b> , 4, 6960	4.9	25
82	Elastic stiffness mapping by resonance-ultrasound microscopy with isolated piezoelectric oscillator. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 464-466	3.4	25
81	Ultrahigh-Frequency, Wireless MEMS QCM Biosensor for Direct, Label-Free Detection of Biomarkers in a Large Amount of Contaminants. <i>Analytical Chemistry</i> , <b>2019</b> , 91, 9398-9402	7.8	22
80	Ultrasonication-based rapid amplification of $\beta$ synuclein aggregates in cerebrospinal fluid. <i>Scientific Reports</i> , <b>2019</b> , 9, 6001	4.9	19
79	Seed-dependent deposition behavior of A $\beta$ peptides studied with wireless quartz-crystal-microbalance biosensor. <i>Analytical Chemistry</i> , <b>2011</b> , 83, 4982-8	7.8	19
78	Low-temperature elastic and piezoelectric constants of paratellurite ( $\text{TeO}_2$ ). <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 6201-6206	2.5	19
77	Drastic acceleration of fibrillation of insulin by transient cavitation bubble. <i>Ultrasonics Sonochemistry</i> , <b>2017</b> , 36, 206-211	8.9	18
76	Resonance acoustic microbalance with naked-embedded quartz (RAMNE-Q) biosensor fabricated by microelectromechanical-system process. <i>Biosensors and Bioelectronics</i> , <b>2012</b> , 33, 139-45	11.8	17
75	Replacement-free electrodeless quartz crystal microbalance biosensor using nonspecific-adsorption of streptavidin on quartz. <i>Analytical Chemistry</i> , <b>2009</b> , 81, 4015-20	7.8	17
74	Vibration analysis of an elastic-sphere oscillator contacting semi-infinite viscoelastic solids in resonant ultrasound microscopy. <i>Journal of Applied Physics</i> , <b>2004</b> , 95, 8366-8375	2.5	14
73	Acoustic study of dislocation rearrangement at later stages of fatigue: Noncontact prediction of remaining life. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 1849-1854	2.5	14
72	MEMS hydrogen gas sensor with wireless quartz crystal resonator. <i>Sensors and Actuators B: Chemical</i> , <b>2021</b> , 334, 129651	8.5	14
71	Wireless electrodeless piezomagnetic biosensor with an isolated nickel oscillator. <i>Biosensors and Bioelectronics</i> , <b>2006</b> , 21, 2001-5	11.8	10

70	Young's modulus mapping on SCS-6 SiCf/Ti-6Al-4V composite by electromagnetic-resonance-ultrasound microscopy. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 6472-6476	2.5	10
69	Picosecond ultrasound spectroscopy for studying elastic modulus of thin films: a review. <i>Nondestructive Testing and Evaluation</i> , <b>2011</b> , 26, 267-280	2	9
68	Nano-plate biosensor array using ultrafast heat transport through proteins. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 278, 15-20	8.5	9
67	Acceleration of deposition of A $\beta$ (1-40) peptide on ultrasonically formed A $\beta$ (1-42) nucleus studied by wireless quartz-crystal-microbalance biosensor. <i>Biosensors and Bioelectronics</i> , <b>2013</b> , 40, 200-5	11.8	8
66	Effect of elastic anisotropy on contact stiffness in resonance ultrasound microscopy. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 204107	3.4	8
65	Snoek relaxation and dislocation damping in aged Fe-Cu-Ni steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2001</b> , 32, 1671-1677	2.3	8
64	Enhancement of sensitivity of Pd-based hydrogen-gas sensor by plasma exposure studied by wireless quartz resonator. <i>Japanese Journal of Applied Physics</i> , <b>2020</b> , 59, SKKB02	1.4	7
63	Viscoelasticity Response during Fibrillation of Amyloid $\beta$ Peptides on a Quartz-Crystal-Microbalance Biosensor. <i>Langmuir</i> , <b>2018</b> , 34, 5474-5479	4	6
62	Optimized sonoreactor for accelerative amyloid-fibril assays through enhancement of primary nucleation and fragmentation. <i>Ultrasonics Sonochemistry</i> , <b>2021</b> , 73, 105508	8.9	6
61	Optimized Ultrasonic Irradiation Finds Out Ultrastable A $\beta$ Oligomers. <i>Journal of Physical Chemistry B</i> , <b>2017</b> , 121, 2603-2613	3.4	5
60	Accelerated crystallization of colloidal glass by mechanical oscillation. <i>Scientific Reports</i> , <b>2017</b> , 7, 1369	4.9	5
59	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> , <b>2015</b> , 54, 096601	1.4	5
58	Thermal Mode Spectroscopy for Thermal Diffusivity of Millimeter-Size Solids. <i>Physical Review Letters</i> , <b>2016</b> , 117, 195901	7.4	5
57	Mechanism of affinity-enhanced protein adsorption on bio-nanocapsules studied by viscoelasticity measurement with wireless QCM biosensor. <i>Japanese Journal of Applied Physics</i> , <b>2020</b> , 59, SKKB03	1.4	5
56	High-Frequency Electrodeless Quartz Crystal Microbalance Chip with a Bare Quartz Resonator Encapsulated in a Silicon Microchannel. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 07HD03	1.4	5
55	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> , <b>2021</b> , 60, SDDB03	1.4	5
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> , <b>2015</b> , 54, 068001	1.4	4
53	Measurement of elastic-stiffness tensor of an anisotropic thin film by electromagnetic acoustic resonance. <i>Ultrasonics</i> , <b>2002</b> , 40, 333-6	3.5	4

52	Mechanical oscillation accelerating nucleation and nuclei growth in hard-sphere colloidal glass. <i>Scientific Reports</i> , <b>2019</b> , 9, 12836	4.9	3
51	Calibration-free portable Young's-modulus tester with isolated langasite oscillator. <i>Ultrasonics</i> , <b>2014</b> , 54, 1963-6	3.5	3
50	Elastic properties of a crossply SiC f /Ti composite at elevated temperatures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2001</b> , 32, 425-429	2.3	3
49	Elastic stiffnesses of an NbTi/Cu-composite superconductive wire. <i>Journal of Applied Physics</i> , <b>2000</b> , 88, 2378-2381	2.5	3
48	Interplanar stiffness in defect-free monocrystalline graphite. <i>Physical Review Materials</i> , <b>2020</b> , 4,	3.2	3
47	Time-Resolved Observation of Evolution of Amyloid- $\beta$ Oligomer with Temporary Salt Crystals. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 6176-6184	6.4	3
46	Disaggregation Behavior of Amyloid $\beta$ Fibrils by Anthocyanins Studied by Total-Internal-Reflection-Fluorescence Microscopy Coupled with a Wireless Quartz-Crystal Microbalance Biosensor. <i>Analytical Chemistry</i> , <b>2021</b> , 93, 11176-11183	7.8	3
45	Nucleation and fibrillation dynamics of A $\beta$ -40 peptides on liquid-solid surface studied by total-internal-reflection fluorescence microscopy coupled with quartz-crystal microbalance biosensor. <i>Japanese Journal of Applied Physics</i> , <b>2015</b> , 54, 07HE01	1.4	2
44	Laser-Induced Coherent Acoustic Phonons for Measuring Elastic Constants of Ultra-Thin Films. <i>Journal of Solid Mechanics and Materials Engineering</i> , <b>2008</b> , 2, 1420-1426		2
43	Brightened single-bubble sonoluminescence by phase-adjusted high-frequency acoustic pulse. <i>Physical Review E</i> , <b>2003</b> , 67, 056301	2.4	2
42	Half-Time Heat Map Reveals Ultrasonic Effects on Morphology and Kinetics of Amyloidogenic Aggregation Reaction. <i>ACS Chemical Neuroscience</i> , <b>2021</b> , 12, 3456-3466	5.7	2
41	Imaging of local stiffness of damaged polycrystalline copper: nondestructive evaluation by resonance ultrasound microscopy. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , <b>2007</b> , 54, 1514-20	3.2	1
40	Relationship between Elastic Constants and Microstructure of Nanocrystalline CVD Diamond Thin Films. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , <b>2006</b> , 72, 1819-1824		1
39	Advanced Resonant-Ultrasound Spectroscopy for Studying Anisotropic Elastic Constants of Thin Films. <i>Materials Research Society Symposia Proceedings</i> , <b>2005</b> , 875, 1		1
38	Noncontact Measurement of Ultrasonic Velocity and Attenuation in Polycrystalline Pure Copper During Initial Stage of Deformation. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , <b>1998</b> , 62, 820-826	0.4	1
37	Development of HANABI, an ultrasonication-forced amyloid fibril inducer.. <i>Neurochemistry International</i> , <b>2021</b> , 153, 105270	4.4	0
36	Spontaneous nucleation on flat surface by depletion force in colloidal suspension. <i>Scientific Reports</i> , <b>2021</b> , 11, 8929	4.9	0
35	Acceleration of amyloid fibril formation by multichannel sonochemical reactor. <i>Japanese Journal of Applied Physics</i> , <b>2022</b> , 61, SG1002	1.4	0

- 34 2P069 The mechanism of ultrasonication-induced amyloid fibril formation(01C. Protein: Property). *Seibutsu Butsuri*, **2013**, 53, S170 ○
- 33 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- ○
- 32 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- ○
- 31 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
- 30 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
- 29 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
- 28 2P051 High Speed Amyloid Fibrilization Induced by Ultrasonication(The 48th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2010**, 50, S91 ○
- 27 Correlation Between Elastic Constants and Magnetic Anisotropy in Co/Pt Superlattice Thin Films. *Materials Research Society Symposia Proceedings*, **2005**, 875, 1
- 26 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
- 25 Observation of growth process of thin film on heated substrate by using resistive spectroscopy. *The Proceedings of Mechanical Engineering Congress Japan*, **2020**, 2020, J04109 ○
- 24 Measurement of Elastic Stiffness Tensor of an SiCf/Ti Cross-Ply Composite at Elevated Temperatures. *Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals*, **2000**, 64, 495-501 ○.4
- 23 350 Noncontact Measurement of Nonlinear Acoustics During Fatigue of Carbon Steels. *Proceedings of the 1992 Annual Meeting of JSME/MMD*, **2001**, 2001, 331-332
- 22 Elastic constants of lotus-type porous metal : measurement and micromechanics modeling. *Proceedings of the 1992 Annual Meeting of JSME/MMD*, **2002**, 2002, 73-74
- 21 Measurement of the elastic-stiffness tensor of SiC<sub>f</sub>/Ti composites at elevated temperatures and nondestructive evaluation of disbonding. *Proceedings of the 1992 Annual Meeting of JSME/MMD*, **2002**, 2002, 405-406
- 20 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 ○
- 19 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 ○
- 18 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 ○
- 17 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



- 16 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 ○
- 15 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 ○
- 14 Evaluation of Wall Thinning using Mode Conversion of Guided Wave. *The Proceedings of Mechanical Engineering Congress Japan*, **2019**, 2019, J40146 ○
- 13 Deposition of Semicontinuous Film on Silicon Substrate using Noncontacting Piezoelectric Resonance Method. *The Proceedings of Mechanical Engineering Congress Japan*, **2019**, 2019, J04303 ○
- 12 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 ○
- 11 Quantitative Young-Modulus Mapping by Resonant Ultrasound Microscopy. *Materia Japan*, **2016**, 55, 577-577 ○.1
- 10 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
- 9 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
- 8 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- ○
- 7 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- ○
- 6 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- ○
- 5 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- ○
- 4 OS02-4-2 Temperature dependences of elastic constants and internal friction of quartz near  $\beta$  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- ○
- 3 SURFACE-WAVE NONLINEARITY MEASURED WITH EMAT FOR FATIGUED STEELS **2011**, 75-89
- 2 J0430104 Microstructure Dependence of Internal Friction in Plasma Sprayed CoNiCrAlY. *The Proceedings of Mechanical Engineering Congress Japan*, **2014**, 2014, \_J0430104--\_J0430104- ○
- 1 Principle and Applications of Wireless Quartz-crystal-microbalance Biosensors. *Ieice Ess Fundamentals Review*, **2018**, 11, 180-185 ○.1