

Wataru Yashiro

List of Publications by Year in descending order

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118
papers

2,391
citations

257450

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223800

46
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118
all docs

118
docs citations

118
times ranked

1268
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | On the origin of visibility contrast in x-ray Talbot interferometry. Optics Express, 2010, 18, 16890. | 3.4 | 315 |
| 2 | Phase Tomography by X-ray Talbot Interferometry for Biological Imaging. Japanese Journal of Applied Physics, 2006, 45, 5254-5262. | 1.5 | 310 |
| 3 | High-speed X-ray phase imaging and X-ray phase tomography with Talbot interferometer and white synchrotron radiation. Optics Express, 2009, 17, 12540. | 3.4 | 148 |
| 4 | Four-dimensional X-ray phase tomography with Talbot interferometry and white synchrotron radiation: dynamic observation of a living worm. Optics Express, 2011, 19, 8423. | 3.4 | 112 |
| 5 | Efficiency of capturing a phase image using cone-beam x-ray Talbot interferometry. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 2025. | 1.5 | 82 |
| 6 | X-ray phase imaging: from synchrotron to hospital. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130023. | 3.4 | 78 |
| 7 | Osteocyte-directed bone demineralization along canaliculi. Bone, 2016, 84, 279-288. | 2.9 | 78 |
| 8 | Hard-X-Ray Phase-Difference Microscopy Using a Fresnel Zone Plate and a Transmission Grating. Physical Review Letters, 2009, 103, 180801. | 7.8 | 63 |
| 9 | X-ray Phase Imaging Using Lau Effect. Applied Physics Express, 2011, 4, 066603. | 2.4 | 61 |
| 10 | Fabrication of large area diffraction grating using LIGA process. Microsystem Technologies, 2008, 14, 1311-1315. | 2.0 | 58 |
| 11 | Grating-Based X-ray Phase Imaging Using Multiline X-ray Source. Japanese Journal of Applied Physics, 2009, 48, 076512. | 1.5 | 55 |
| 12 | Wavefront measurement for a hard-X-ray nanobeam using single-grating interferometry. Optics Express, 2012, 20, 24977. | 3.4 | 52 |
| 13 | Differential Phase X-ray Imaging Microscopy with X-ray Talbot Interferometer. Applied Physics Express, 0, 1, 117002. | 2.4 | 50 |
| 14 | Effects of unresolvable edges in grating-based X-ray differential phase imaging. Optics Express, 2015, 23, 9233. | 3.4 | 49 |
| 15 | X-Ray Phase Imaging with Single Phase Grating. Japanese Journal of Applied Physics, 2007, 46, L89-L91. | 1.5 | 48 |
| 16 | Distribution of unresolvable anisotropic microstructures revealed in visibility-contrast images using x-ray Talbot interferometry. Physical Review B, 2011, 84, . | 3.2 | 45 |
| 17 | Effect of beam hardening on a visibility-contrast image obtained by X-ray grating interferometry. Optics Express, 2015, 23, 23462. | 3.4 | 44 |
| 18 | Sub-10-ms X-ray tomography using a grating interferometer. Applied Physics Express, 2017, 10, 052501. | 2.4 | 31 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Millisecond-order X-ray phase tomography with a fringe-scanning method. <i>Applied Physics Express</i> , 2018, 11, 122501. | 2.4 | 31 |
| 20 | X-ray diffraction from an atomic plane. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2000, 56, 163-167. | 0.3 | 30 |
| 21 | Hard-X-ray Phase-Difference Microscopy with a Low-Brilliance Laboratory X-ray Source. <i>Applied Physics Express</i> , 2011, 4, 062502. | 2.4 | 29 |
| 22 | Hard-x-ray phase-imaging microscopy using the self-imaging phenomenon of a transmission grating. <i>Physical Review A</i> , 2010, 82, . | 2.5 | 26 |
| 23 | Millisecond-order X-ray phase tomography with compressed sensing. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 112503. | 1.5 | 26 |
| 24 | Multibeam x-ray optical system for high-speed tomography. <i>Optica</i> , 2020, 7, 514. | 9.3 | 26 |
| 25 | Structural study of Si(111) 21Å–21 -(Ag+Au) surface by X-ray diffraction. <i>Surface Science</i> , 2001, 493, 214-220. | 1.9 | 25 |
| 26 | Sensitivity of X-ray Phase Imaging Based on Talbot Interferometry. <i>Japanese Journal of Applied Physics</i> , 2008, 47, 8077. | 1.5 | 24 |
| 27 | Iterative reconstruction in x-ray computed laminography from differential phase measurements. <i>Optics Express</i> , 2011, 19, 16560. | 3.4 | 23 |
| 28 | Encapsulation of atomic-scale Bi wires in epitaxial silicon without loss of structure. <i>Physical Review B</i> , 2005, 72, . | 3.2 | 22 |
| 29 | Effectiveness of X-ray grating interferometry for non-destructive inspection of packaged devices. <i>Journal of Applied Physics</i> , 2013, 114, 134901. | 2.5 | 20 |
| 30 | Osteogenic capillaries orchestrate growth plate-independent ossification of the malleus. <i>Development (Cambridge)</i> , 2015, 142, 3912-20. | 2.5 | 20 |
| 31 | A metallic glass grating for X-ray grating interferometers fabricated by imprinting. <i>Applied Physics Express</i> , 2014, 7, 032501. | 2.4 | 18 |
| 32 | High-speed rotating device for X-ray tomography with 10 ms temporal resolution. <i>Journal of Synchrotron Radiation</i> , 2021, 28, 322-326. | 2.4 | 16 |
| 33 | Fabrication of High Aspect Ratio X-ray Grating Using X-ray Lithography. <i>Journal of Solid Mechanics and Materials Engineering</i> , 2009, 3, 416-423. | 0.5 | 15 |
| 34 | Talbot-defocus multiscan tomography using the synchrotron X-ray microscope to study the lacuno-canalicular network in mouse bone. <i>Biomedical Optics Express</i> , 2013, 4, 917. | 2.9 | 15 |
| 35 | Effect of insufficient temporal coherence on visibility contrast in X-ray grating interferometry. <i>Optics Express</i> , 2018, 26, 1012. | 3.4 | 15 |
| 36 | New method to characterize mesoscopic range and very small strain with using multi-wave X-ray diffraction. <i>Surface Science</i> , 2004, 550, 93-105. | 1.9 | 14 |

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|----|---|-----|-----------|
| 37 | Demonstration of Stroboscopic X-ray Talbot Interferometry Using Polychromatic Synchrotron and Laboratory X-ray Sources. <i>Applied Physics Express</i> , 2013, 6, 096601. | 2.4 | 14 |
| 38 | Effect of surface structure on crystal-truncation-rod scattering under the Bragg condition. <i>Physical Review B</i> , 2000, 62, 3630-3638. | 3.2 | 13 |
| 39 | X-ray Bragg magnifier microscope as a linear shift invariant imaging system: image formation and phase retrieval. <i>Optics Express</i> , 2014, 22, 21508. | 3.4 | 13 |
| 40 | Development of Multi-colored Neutron Talbot-Lau Interferometer with Absorption Grating Fabricated by Imprinting Method of Metallic Glass. <i>Journal of the Physical Society of Japan</i> , 2017, 86, 044001. | 1.6 | 13 |
| 41 | Darwin's theory for the grazing incidence geometry. <i>Surface Science</i> , 2001, 490, 394-408. | 1.9 | 12 |
| 42 | High aspect ratio grating by isochronal imprinting of less viscous workable Gd-based metallic glass for neutron phase imaging. <i>Intermetallics</i> , 2016, 78, 55-63. | 3.9 | 12 |
| 43 | Experimental Evaluation of Neutron Absorption Grating Fabricated by Oblique Evaporation of Gadolinium for Phase Imaging. <i>Physics Procedia</i> , 2017, 88, 217-223. | 1.2 | 11 |
| 44 | A multi-beam X-ray imaging detector using a branched optical fiber bundle. <i>Japanese Journal of Applied Physics</i> , 2020, 59, 038003. | 1.5 | 11 |
| 45 | High-speed multi-beam X-ray imaging using a lens coupling detector system. <i>Applied Physics Express</i> , 2020, 13, 077002. | 2.4 | 11 |
| 46 | Exploring Frontiers of 4D X-ray Tomography. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 8868. | 2.5 | 11 |
| 47 | Biomedical imaging by Talbot-type x-ray phase tomography. , 2006, 6318, 259. | | 10 |
| 48 | X-ray phase laminography with Talbot interferometer. <i>Proceedings of SPIE</i> , 2010, , . | 0.8 | 9 |
| 49 | High-speed X-ray phase tomography with Talbot interferometer and fringe scanning method. <i>AIP Conference Proceedings</i> , 2012, , . | 0.4 | 9 |
| 50 | Hard X-ray imaging microscopy with self-imaging phenomenon. <i>Microscopy (Oxford, England)</i> , 2018, 67, 303-316. | 1.5 | 9 |
| 51 | Interface reconstructed structure of Ag/Si(111) revealed by X-ray diffraction. <i>Surface Science</i> , 2001, 493, 194-199. | 1.9 | 8 |
| 52 | Direct Phase Measurement of the X-Ray Specular Reflection Using Modulation under the Bragg Condition. <i>Japanese Journal of Applied Physics</i> , 2002, 41, L592-L594. | 1.5 | 8 |
| 53 | A Phase Retrieval Method for Noncrystalline Layers on Crystal Surfaces. <i>Japanese Journal of Applied Physics</i> , 2003, 42, 6658-6662. | 1.5 | 8 |
| 54 | A probe-positioning method with two-dimensional calibration pattern for micro-multi-point probes. <i>Review of Scientific Instruments</i> , 2003, 74, 2722-2725. | 1.3 | 8 |

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| 55 | Surface bismuth removal after Bi nanoline encapsulation in silicon. <i>Surface Science</i> , 2005, 595, L311-L317. | 1.9 | 8 |
| 56 | X-ray phase imaging using a Gd-based absorption grating fabricated by imprinting technique. <i>Japanese Journal of Applied Physics</i> , 2016, 55, 048003. | 1.5 | 8 |
| 57 | Efficient phase imaging using wavelength-resolved neutron Talbot-Lau interferometry with TOF method. <i>Europhysics Letters</i> , 2018, 123, 12002. | 2.0 | 8 |
| 58 | Probing Surface Morphology using X-ray Grating Interferometry. <i>Scientific Reports</i> , 2019, 9, 14120. | 3.3 | 8 |
| 59 | Fabrication of X-ray absorption grating using an ultracentrifuge machine. <i>Japanese Journal of Applied Physics</i> , 2019, 58, 088003. | 1.5 | 7 |
| 60 | Fabrication of multi-blade crystals for hard-X-ray multi-beam imaging system. <i>Japanese Journal of Applied Physics</i> , 2020, 59, 092001. | 1.5 | 7 |
| 61 | Sensitivity of x-ray phase tomography based on Talbot and Talbot-Lau interferometer. <i>Proceedings of SPIE</i> , 2008, , . | 0.8 | 6 |
| 62 | X-ray phase tomography with a Talbot interferometer in combination with an X-ray imaging microscope. <i>Journal of Physics: Conference Series</i> , 2009, 186, 012044. | 0.4 | 6 |
| 63 | X-ray elastography by visualizing propagating shear waves. <i>Applied Physics Express</i> , 2020, 13, 042004. | 2.4 | 6 |
| 64 | X-ray Talbot-Lau interferometer for high-speed phase imaging and tomography using white synchrotron radiation. , 2012, , . | | 5 |
| 65 | Grazing-incidence ultrasmall-angle X-ray scattering imaging with X-ray transmission gratings: A feasibility study. <i>Japanese Journal of Applied Physics</i> , 2014, 53, 05FH04. | 1.5 | 5 |
| 66 | Edge-illumination x-ray phase contrast imaging with Pt-based metallic glass masks. <i>Review of Scientific Instruments</i> , 2017, 88, 063705. | 1.3 | 5 |
| 67 | RECIPROCAL-LATTICE SPACE IMAGING OF X-RAY INTENSITIES DIFFRACTED FROM NANOWIRES. <i>Materials Research Society Symposia Proceedings</i> , 2004, 840, Q6.4.1. | 0.1 | 4 |
| 68 | Development of the Talbot-Lau interferometry system available for clinical use. <i>AIP Conference Proceedings</i> , 2012, , . | 0.4 | 4 |
| 69 | Photon detection efficiency of laboratory-based x-ray phase contrast imaging techniques for mammography: a Monte Carlo study. <i>Physics in Medicine and Biology</i> , 2017, 62, 7394-7406. | 3.0 | 4 |
| 70 | Fabrication of Multiple Slit Using Stacked-Sliced Method for Hard X-ray Talbot-Lau Interferometer. <i>Japanese Journal of Applied Physics</i> , 2008, 47, 7412-7414. | 1.5 | 3 |
| 71 | Fabrication of the X-Ray Mask using the Silicon Dry Etching. <i>Journal of Advanced Mechanical Design, Systems and Manufacturing</i> , 2008, 2, 246-251. | 0.7 | 3 |
| 72 | Four-dimensional x-ray phase tomography with Talbot interferometer and white synchrotron light. <i>Proceedings of SPIE</i> , 2010, , . | 0.8 | 3 |

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| 73 | X-ray phase imaging-From static observation to dynamic observation-. AIP Conference Proceedings, 2012, , . | 0.4 | 3 |
| 74 | X-ray Phase Microtomography by Single Transmission Grating. AIP Conference Proceedings, 2007, , . | 0.4 | 2 |
| 75 | Phase Tomography Using X-ray Talbot Interferometer. AIP Conference Proceedings, 2007, , . | 0.4 | 2 |
| 76 | X-ray Phase Measurements with Talbot Interferometry and Its Applications. , 2010, , . | | 2 |
| 77 | Nano-Resolution X-ray Tomography for Deciphering Wiring Diagram of Mammalian Brain. , 2011, , . | | 2 |
| 78 | Research toward the development of compact neutron interference imaging instrument with gratings. Journal of Physics: Conference Series, 2012, 340, 012035. | 0.4 | 2 |
| 79 | Quantitative visibility-contrast tomography in the X-ray Talbot interferometry. , 2012, , . | | 2 |
| 80 | X-ray Reciprocal-Lattice Space Imaging Method for Quick analysis of Buried Crystalline Nanostructure - a Diffraction Method Fixed at an Angular Position. Transactions of the Materials Research Society of Japan, 2008, 33, 625-628. | 0.2 | 2 |
| 81 | Determination of crystal orientation by an area-detector image for surface X-ray diffraction. Journal of Applied Crystallography, 2005, 38, 319-323. | 4.5 | 1 |
| 82 | Fabrication of Gratings for an X-ray Talbot Interferometer. , 2006, , . | | 1 |
| 83 | High-Speed X-ray Phase Imaging with Grating Interferometer and White Synchrotron Light. , 2010, , . | | 1 |
| 84 | X-ray Phase Imaging and Tomography Using a Fresnel Zone Plate and a Transmission Grating. , 2011, , . | | 1 |
| 85 | X-ray phase laminography with a grating interferometer using iterative reconstruction. AIP Conference Proceedings, 2012, , . | 0.4 | 1 |
| 86 | Solving Ill-Posed Linear Systems With Constraints on Statistical Moments. IEEE Signal Processing Letters, 2012, 19, 103-106. | 3.6 | 1 |
| 87 | An improved phase shift reconstruction algorithm of fringe scanning technique for X-ray microscopy. Review of Scientific Instruments, 2015, 86, 023707. | 1.3 | 1 |
| 88 | Development of grating-based x-ray phase tomography under the ERATO project. Proceedings of SPIE, 2016, , . | 0.8 | 1 |
| 89 | Strain Field under the SiO ₂ /Si Interface Revealed by a Multiple-Wave X-ray Diffraction Phenomenon. Transactions of the Materials Research Society of Japan, 2007, 32, 227-229. | 0.2 | 1 |
| 90 | Dynamic X-ray elastography using a pulsed photocathode source. Scientific Reports, 2021, 11, 24128. | 3.3 | 1 |

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| 91 | Three-Dimensional Observation of Polymer Blends with X-ray Phase Tomography. AIP Conference Proceedings, 2007, , . | 0.4 | 0 |
| 92 | Fabrication of High Precision X-ray Mask Using Silicon Dry Etching. , 2007, , . | | 0 |
| 93 | Oxidation process dependence of strain field under the SiO ₂ /Si(001) interface revealed by X-ray multiple-wave diffraction. Journal of Physics: Conference Series, 2007, 83, 012009. | 0.4 | 0 |
| 94 | X-ray Phase Imaging Microscopy using a Fresnel Zone Plate and a Transmission Grating. , 2010, , . | | 0 |
| 95 | Nano-resolution x-ray tomography for deciphering a wiring diagram of the mouse cerebral cortex. Neuroscience Research, 2010, 68, e331-e332. | 1.9 | 0 |
| 96 | <i>In situ</i> observation of x-ray irradiation effect by using a multiwave x-ray diffraction phenomenon. Journal of Applied Physics, 2011, 110, . | 2.5 | 0 |
| 97 | Microstructure Analysis Using Visibility Contrast in X-ray Talbot Interferometry. , 2011, , . | | 0 |
| 98 | Theoretical description of the intensity of crystal-truncation-rod scattering modulated by a Bragg reflection. IOP Conference Series: Materials Science and Engineering, 2011, 24, 012020. | 0.6 | 0 |
| 99 | Preface-International workshop on X-ray and neutron phase imaging with gratings (XNPIC). , 2012, , . | | 0 |
| 100 | Theoretical aspect of X-ray phase microscopy with transmission gratings. , 2012, , . | | 0 |
| 101 | Analysis of moiré fringes by Wiener filtering: An extension to the Fourier method. , 2012, , . | | 0 |
| 102 | Evaluation of gratings for X-ray and neutron phase imaging techniques by using x-ray projection microscope. , 2012, , . | | 0 |
| 103 | Constructing a multi-scan synchrotron X-ray microscope to study the function of osteocyte canaliculi in mouse bone. , 2012, , . | | 0 |
| 104 | Advanced features of X-ray imaging by MIRRORCLE-CV4. , 2012, , . | | 0 |
| 105 | Recent progress in four-dimensional phase tomography with grating interferometry. Proceedings of SPIE, 2012, , . | 0.8 | 0 |
| 106 | Small-Angle X-ray Scattering Imaging Using Gratings. Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan, 2015, 66, 603-607. | 0.2 | 0 |
| 107 | Formation of extremely high-aspect Si sub-micron patterns with smooth wall for MEMS and X-ray devices. , 2017, , . | | 0 |
| 108 | Optical Imaging with Moiré Fringes. Vacuum and Surface Science, 2018, 61, 727-732. | 0.1 | 0 |

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| 109 | Optimizing Imprinting Condition for High Aspect Grating of Pd-based Metallic Glass. Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2018, 65, 52-56. | 0.2 | 0 |
| 110 | 31st Japanese Society for Synchrotron Radiation Research Annual Meeting and Synchrotron Radiation Science Symposium (JSR2018). Synchrotron Radiation News, 2018, 31, 31-32. | 0.8 | 0 |
| 111 | Dynamic X-ray elastography: A new tool for characterizing soft materials. MRS Communications, 2021, 11, 46-50. | 1.8 | 0 |
| 112 | Regularized phase shift estimation in X-ray grating interferometry. OSA Continuum, 2021, 4, 2813. | 1.8 | 0 |
| 113 | Transmission X-ray Diffraction from Bismuth Lines Embedded in Silicon. Transactions of the Materials Research Society of Japan, 2008, 33, 619-622. | 0.2 | 0 |
| 114 | X-ray Diffraction from Buried Bi atomic wire formed on Si(001) - near the Bi LIII Absorption Edge. Transactions of the Materials Research Society of Japan, 2008, 33, 623-624. | 0.2 | 0 |
| 115 | Recent Progress in Solving the Phase Problem in Surface and Interface Crystallography. Transactions of the Materials Research Society of Japan, 2008, 33, 551-556. | 0.2 | 0 |
| 116 | Quantitative Analysis of the Strain Field beneath the $\text{Si}_3\text{N}_4/\text{Si}(001)$ Interface Formed by the Xe/NH ₃ Plasma Nitridation using a Multiple-Wave X-ray Diffraction Phenomenon. Transactions of the Materials Research Society of Japan, 2009, 34, 597-599. | 0.2 | 0 |
| 117 | Mesoscopic-Scale and Small Strain Field beneath SiO ₂ /Si Interface Revealed by a Multiple-Wave X-ray Diffraction Phenomenon - Depth of the Strain Field. E-Journal of Surface Science and Nanotechnology, 2011, 9, 47-50. | 0.4 | 0 |
| 118 | High-Sensitive X-Ray Imaging Microscopes with Transmission Gratings. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2013, 23, 227-236. | 0.0 | 0 |