

Takashi Tanaka

List of Publications by Year in descending order

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Version: 2024-02-01

51
papers

3,163
citations

361413

20
h-index

223800

46
g-index

51
all docs

51
docs citations

51
times ranked

3261
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | A compact X-ray free-electron laser emitting in the sub-Ångström region. <i>Nature Photonics</i> , 2012, 6, 540-544. | 31.4 | 1,542 |
| 2 | SPECTRA: a synchrotron radiation calculation code. <i>Journal of Synchrotron Radiation</i> , 2001, 8, 1221-1228. | 2.4 | 348 |
| 3 | Two-colour hard X-ray free-electron laser with wide tunability. <i>Nature Communications</i> , 2013, 4, 2919. | 12.8 | 172 |
| 4 | Extreme ultraviolet free electron laser seeded with high-order harmonic of Ti:sapphire laser. <i>Optics Express</i> , 2011, 19, 317. | 3.4 | 123 |
| 5 | Cryogenic permanent magnet undulators. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2004, 7, . | 1.8 | 119 |
| 6 | New soft X-ray beamline BL07LSU at SPring-8. <i>Journal of Synchrotron Radiation</i> , 2014, 21, 352-365. | 2.4 | 110 |
| 7 | Performance upgrade in the JAEA actinide science beamline BL23SU at SPring-8 with a new twin-helical undulator. <i>Journal of Synchrotron Radiation</i> , 2012, 19, 388-393. | 2.4 | 109 |
| 8 | Proposal for a Pulse-Compression Scheme in X-Ray Free-Electron Lasers to Generate a Multiterawatt, Attosecond X-Ray Pulse. <i>Physical Review Letters</i> , 2013, 110, 084801. | 7.8 | 82 |
| 9 | Proposal to Generate an Isolated Monocycle X-Ray Pulse by Counteracting the Slippage Effect in Free-Electron Lasers. <i>Physical Review Letters</i> , 2015, 114, 044801. | 7.8 | 44 |
| 10 | Numerical methods for characterization of synchrotron radiation based on the Wigner function method. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2014, 17, . | 1.8 | 42 |
| 11 | Undulator commissioning by characterization of radiation in x-ray free electron lasers. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2012, 15, . | 1.8 | 37 |
| 12 | Magnetic characterization for cryogenic permanent-magnet undulators: a first result. <i>Journal of Synchrotron Radiation</i> , 2007, 14, 416-420. | 2.4 | 34 |
| 13 | <i>SIMPLEX</i> : simulator and postprocessor for free-electron laser experiments. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 1319-1326. | 2.4 | 30 |
| 14 | <i>In situ</i> correction of field errors induced by temperature gradient in cryogenic undulators. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2009, 12, . | 1.8 | 28 |
| 15 | High-energy electron irradiation of NdFeB permanent magnets: Dependence of radiation damage on the electron energy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2007, 574, 401-406. | 1.6 | 24 |
| 16 | Coherent mode decomposition using mixed Wigner functions of Hermite-Gaussian beams. <i>Optics Letters</i> , 2017, 42, 1576. | 3.3 | 24 |
| 17 | Pure-type superconducting permanent-magnet undulator. <i>Journal of Synchrotron Radiation</i> , 2005, 12, 442-447. | 2.4 | 23 |
| 18 | Synthesizing high-order harmonics to generate a sub-cycle pulse in free-electron lasers. <i>Applied Physics Letters</i> , 2016, 109, . | 3.3 | 22 |

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|----|---|------|-----------|
| 19 | Universal representation of undulator phase errors. <i>Physical Review Accelerators and Beams</i> , 2018, 21, . | 1.6 | 22 |
| 20 | Attosecond single-cycle undulator light: a review. <i>Reports on Progress in Physics</i> , 2019, 82, 025901. | 20.1 | 21 |
| 21 | Universal function for the brilliance of undulator radiation considering the energy spread effect. <i>Journal of Synchrotron Radiation</i> , 2009, 16, 380-386. | 2.4 | 20 |
| 22 | Major upgrade of the synchrotron radiation calculation code <i>SPECTRA</i>. <i>Journal of Synchrotron Radiation</i> , 2021, 28, 1267-1272. | 2.4 | 20 |
| 23 | Radiation-induced magnetization reversal causing a large flux loss in undulator permanent magnets. <i>Scientific Reports</i> , 2016, 6, 37937. | 3.3 | 19 |
| 24 | Simple scheme for harmonic suppression by undulator segmentation. <i>Journal of Synchrotron Radiation</i> , 2002, 9, 266-269. | 2.4 | 14 |
| 25 | Using irregularly spaced current peaks to generate an isolated attosecond X-ray pulse in free-electron lasers. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1273-1281. | 2.4 | 14 |
| 26 | Optimization of asymmetric figure-8 undulator as circularly polarized light source. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2004, 7, . | 1.8 | 13 |
| 27 | Lightweight-compact variable-gap undulator with force cancellation system based on multipole monolithic magnets. <i>Review of Scientific Instruments</i> , 2017, 88, 073302. | 1.3 | 12 |
| 28 | In-vacuum figure-8 undulator for hard X-rays with both horizontal and vertical polarization. <i>Journal of Synchrotron Radiation</i> , 1998, 5, 412-413. | 2.4 | 10 |
| 29 | Composite period undulator to improve the wavelength tunability of free electron lasers. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2011, 14, . | 1.8 | 10 |
| 30 | Segmented Undulator for Extensive Polarization Controls in ~ 1 nm-rad Emittance Rings. <i>E-Journal of Surface Science and Nanotechnology</i> , 2019, 17, 41-48. | 0.4 | 9 |
| 31 | Enhancing the Radiation Resistance of Undulator Permanent Magnets by Tilting the Easy Axis of Magnetization. <i>Physical Review Letters</i> , 2018, 121, 124801. | 7.8 | 8 |
| 32 | Shortening the pulse duration in seeded free-electron lasers by chirped microbunching. <i>Optics Express</i> , 2019, 27, 30875. | 3.4 | 7 |
| 33 | Phase combination for self-cancellation of magnetic force in undulators. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2014, 17, . | 1.8 | 6 |
| 34 | Undulator Development for SPring-8-II. <i>Synchrotron Radiation News</i> , 2015, 28, 45-49. | 0.8 | 6 |
| 35 | Current status and future perspectives of accelerator-based x-ray light sources. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 093001. | 2.2 | 6 |
| 36 | Difference frequency generation in free electron lasers. <i>Optics Letters</i> , 2018, 43, 4485. | 3.3 | 6 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | A new undulator scheme providing various polarization states with low on-axis power density. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 659, 537-542. | 1.6 | 5 |
| 38 | Spectrum splitting for fast polarization switching of undulator radiation. Journal of Synchrotron Radiation, 2016, 23, 751-757. | 2.4 | 5 |
| 39 | Simulation of magnetization process of Pure-type superconductor magnet undulator based on T-method. Physica C: Superconductivity and Its Applications, 2015, 518, 106-110. | 1.2 | 4 |
| 40 | Isolated single-cycle extreme-ultraviolet pulses from undulator radiation. Optics Letters, 2020, 45, 5234. | 3.3 | 4 |
| 41 | Development of an undulator with a variable magnetic field profile. Journal of Synchrotron Radiation, 2021, 28, 404-409. | 2.4 | 3 |
| 42 | Numerical methods for free electron laser simulations. Journal of Electromagnetic Waves and Applications, 2018, 32, 371-401. | 1.6 | 1 |
| 43 | Overview of Undulator Concepts for Attosecond Single-Cycle Light. Journal of Physics: Conference Series, 2018, 1067, 032016. | 0.4 | 1 |
| 44 | Demonstration of high-performance pole pieces made of monocrystalline dysprosium for short-period undulators. Journal of Synchrotron Radiation, 2019, 26, 1220-1225. | 2.4 | 1 |
| 45 | Thermal demagnetization in in-vacuum undulators and effect of magnetic configuration on choice of magnet grade. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 995, 165112. | 1.6 | 1 |
| 46 | Electron bunch compression with an optical laser. Physical Review Accelerators and Beams, 2019, 22, . | 1.6 | 1 |
| 47 | Proposal to generate a pair of intense independently tunable attosecond pulses from undulator radiation. Optics Letters, 2022, 47, 1411-1414. | 3.3 | 1 |
| 48 | Perspectives of synchrotron radiation sources with superconductivity. Physica C: Superconductivity and Its Applications, 2007, 463-465, 1327-1332. | 1.2 | 0 |
| 49 | Reducing the group velocity of coherent radiation for upconverting the single-cycle electron density modulation. Applied Physics Letters, 2016, 108, . | 3.3 | 0 |
| 50 | High gain harmonic generation free electron lasers enhanced by pseudoenergy bands. Physical Review Accelerators and Beams, 2017, 20, . | 1.6 | 0 |
| 51 | Recent progress of the synchrotron radiation code SPECTRA. , 2017, , . | | 0 |