

# Michisato Toyoda

## List of Publications by Year in descending order

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98  
papers

1,076  
citations

471371

17  
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526166

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102  
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102  
docs citations

102  
times ranked

729  
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-turn time-of-flight mass spectrometers with electrostatic sectors. <i>Journal of Mass Spectrometry</i> , 2003, 38, 1125-1142.	0.7	98
2	Miniaturized High-Resolution Time-of-Flight Mass Spectrometer MULTUM-S II with an Infinite Flight Path. <i>Analytical Chemistry</i> , 2010, 82, 8456-8463.	3.2	72
3	Construction of a novel stigmatic MALDI imaging mass spectrometer. <i>Applied Surface Science</i> , 2008, 255, 1257-1263.	3.1	46
4	Construction of a new multi-turn time-of-flight mass spectrometer. , 2000, 35, 163-167.		41
5	Contribution of hydroxymethanesulfonate (HMS) to severe winter haze in the North China Plain. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 5887-5897.	1.9	40
6	Perfect space and time focusing ion optics for multiturn time of flight mass spectrometers. <i>International Journal of Mass Spectrometry</i> , 2000, 197, 179-189.	0.7	38
7	Application of a multi-turn time-of-flight mass spectrometer, MULTUM II, to organic compounds ionized by matrix-assisted laser desorption/ionization. <i>Journal of Mass Spectrometry</i> , 2004, 39, 86-90.	0.7	29
8	A compact sector-type multi-turn time-of-flight mass spectrometer "MULTUM II"™. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2004, 519, 331-337.	0.7	29
9	Development of Multi-Turn Time-of-Flight Mass Spectrometers and Their Applications. <i>European Journal of Mass Spectrometry</i> , 2010, 16, 397-406.	0.5	29
10	Ion optics for multi-turn time-of-flight mass spectrometers with variable mass resolution. <i>Journal of Mass Spectrometry</i> , 1997, 32, 1179-1185.	0.7	27
11	A Simple Multi-Turn Time of Flight Mass Spectrometer 'MULTUM II'. <i>Journal of the Mass Spectrometry Society of Japan</i> , 2003, 51, 349-353.	0.0	27
12	Differences between the internal energy depositions induced by collisional activation and by electron transfer of W(CO) <sub>6</sub> <sup>2+</sup> ions on collision with Ar and K targets. <i>Journal of Chemical Physics</i> , 2006, 124, 224320.	1.2	26
13	High molecular weight organic compounds (HMW-OCs) in severe winter haze: Direct observation and insights on the formation mechanism. <i>Environmental Pollution</i> , 2016, 218, 289-296.	3.7	25
14	High-energy collision induced dissociation fragmentation pathways of peptides, probed using a multiturn tandem time-of-flight mass spectrometer "MULTUM-TOF/TOF". <i>Review of Scientific Instruments</i> , 2007, 78, 074101.	0.6	24
15	Metabolomic Analysis of Gingival Crevicular Fluid Using Gas Chromatography/Mass Spectrometry. <i>Mass Spectrometry</i> , 2016, 5, A0047-A0047.	0.2	23
16	Novel Ion Extraction Method for Imaging Mass Spectrometry. <i>Journal of the Mass Spectrometry Society of Japan</i> , 2011, 59, 57-61.	0.0	19
17	A space time-of-flight mass spectrometer for exobiologically-oriented applications. <i>Advances in Space Research</i> , 1999, 23, 341-348.	1.2	18
18	Computer program "TRIO-DRAW" for displaying ion trajectory and flight time. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1999, 427, 375-381.	0.7	18

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19	A Novel Sperm-Activating and Attracting Factor from the Ascidian <i>Ascidia sydneiensis</i> . <i>Organic Letters</i> , 2013, 15, 294-297.	2.4	17
20	Detailed Structural Analysis of Lipids Directly on Tissue Specimens Using a MALDI-SpiralTOF-Reflectron TOF Mass Spectrometer. <i>PLoS ONE</i> , 2012, 7, e37107.	1.1	17
21	High-energy collision-induced dissociation of phosphopeptides using a multi-turn tandem time-of-flight mass spectrometer <i>MULTUM</i> TOF/TOF™. <i>Journal of Mass Spectrometry</i> , 2008, 43, 535-537.	0.7	15
22	Development of a stigmatic mass microscope using laser desorption-ionization and a multi-turn time-of-flight mass spectrometer. <i>Journal of Biomedical Optics</i> , 2011, 16, 046007.	1.4	15
23	A Tandem Time-of-Flight Mass Spectrometer: Combination of a Multi-Turn Time-of-Flight and a Quadratic Field Mirror. <i>European Journal of Mass Spectrometry</i> , 2005, 11, 181-187.	0.5	14
24	Study of the dissociation of a charge-reduced phosphopeptide formed by electron transfer from an alkali metal target. <i>Rapid Communications in Mass Spectrometry</i> , 2008, 22, 567-572.	0.7	14
25	High-Resolution Time-of-Flight Spectra Obtained Using the MULTUM II Multi-Turn Type Time-of-Flight Mass Spectrometer with an Electron Ionization Ion Source. <i>European Journal of Mass Spectrometry</i> , 2005, 11, 261-266.	0.5	13
26	Potential crossing position in electron transfer of a doubly charged ion and an alkali metal target measured using thermometer molecule W(CO) <sub>6</sub> . <i>International Journal of Mass Spectrometry</i> , 2007, 266, 122-128.	0.7	13
27	Design of a new multi-turn ion optical system <i>IRIS</i> ™ for a time-of-flight mass spectrometer. <i>Journal of Mass Spectrometry</i> , 2009, 44, 594-604.	0.7	13
28	Development of a Multi-Turn Time-of-Flight Mass Spectrometer 'MULTUM Linear plus'. <i>Journal of the Mass Spectrometry Society of Japan</i> , 2000, 48, 312-317.	0.0	13
29	Polychlorinated biphenyls (PCBs) analysis using a miniaturized high-resolution time-of-flight mass spectrometer <i>MULTUM-S II</i> . <i>Journal of Environmental Monitoring</i> , 2012, 14, 1664.	2.1	12
30	A Chemical Approach to Searching for Bioactive Ingredients in Cigarette Smoke. <i>Chemical and Pharmaceutical Bulletin</i> , 2013, 61, 85-89.	0.6	12
31	Improved Quantitative Dynamic Range of Time-of-Flight Mass Spectrometry by Simultaneously Waveform-Averaging and Ion-Counting Data Acquisition. <i>Journal of the American Society for Mass Spectrometry</i> , 2018, 29, 1403-1407.	1.2	12
32	Instrumentation and Method Development for On-Site Analysis of Helium Isotopes. <i>Analytical Chemistry</i> , 2017, 89, 7535-7540.	3.2	11
33	Analysis of Nonvolatile Molecules in Supercritical Carbon Dioxide Using Proton-Transfer-Reaction Ionization Time-of-Flight Mass Spectrometry. <i>Analytical Chemistry</i> , 2021, 93, 6589-6593.	3.2	11
34	Development of a tandem time-of-flight mass spectrometer with an electrospray ionization ion source. <i>Journal of Mass Spectrometry</i> , 2010, 45, 937-943.	0.7	10
35	Mass Spectrometry Imaging and Structural Analysis of Lipids Directly on Tissue Specimens by Using a Spiral Orbit Type Tandem Time-of-Flight Mass Spectrometer, <i>SpiralTOF-TOF</i> . <i>Mass Spectrometry</i> , 2012, 1, A0013-A0013.	0.2	9
36	Development of novel ion detector that combines a microchannel plate with an avalanche diode. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020, 971, 164110.	0.7	9

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37	Development of a Miniature Double Focusing Mass Spectrograph Using a Focal Plane Detector. Journal of the Mass Spectrometry Society of Japan, 2006, 54, 1-9.	0.0	8
38	Comparison of mass spectra of peptides in different matrices using matrix-assisted laser desorption/ionization and a multi-turn time-of-flight mass spectrometer, MULTUM-IMG. Rapid Communications in Mass Spectrometry, 2008, 22, 1461-1466.	0.7	8
39	High-energy electron transfer dissociation (HE-ETD) using alkali metal targets for sequence analysis of post-translational peptides. Journal of the American Society for Mass Spectrometry, 2010, 21, 1482-1489.	1.2	8
40	Separation of Isobaric Compounds Using a Spiral Orbit Type Time-of-Flight Mass Spectrometer, MALDI-SpiralTOF. Mass Spectrometry, 2014, 3, S0027-S0027.	0.2	8
41	High-energy collision-activated and electron-transfer dissociation of gas-phase complexes of tryptophan with Na <sup>+</sup> , K <sup>+</sup> , and Ca <sup>2+</sup> . European Physical Journal D, 2014, 68, 1.	0.6	8
42	New Method for Improving LC/Time-of-Flight Mass Spectrometry Detection Limits Using Simultaneous Ion Counting and Waveform Averaging. Analytical Chemistry, 2020, 92, 6579-6586.	3.2	8
43	Construction of a Palmtop Size Multi-Turn Time-of-Flight Mass Spectrometer "MULTUM-S". Journal of the Mass Spectrometry Society of Japan, 2007, 55, 363-368.	0.0	8
44	Ion Optical Evaluation of a Miniature Double-Focusing Mass Spectrograph. European Journal of Mass Spectrometry, 2008, 14, 7-15.	0.5	7
45	Development of an Ion Trap/Multi-Turn Time-of-Flight Mass Spectrometer with Potential-Lift. European Journal of Mass Spectrometry, 2009, 15, 249-260.	0.5	7
46	Signal-to-Noise Performance Evaluation of a New 12-Bit Digitizer on a Time-of-Flight Mass Spectrometer. European Journal of Mass Spectrometry, 2015, 21, 13-17.	0.5	7
47	A new approach for accurate mass assignment on a multi-turn time-of-flight mass spectrometer. European Journal of Mass Spectrometry, 2017, 23, 385-392.	0.5	7
48	Development of Stigmatic Time-of-Flight Imaging Mass Spectrometer. Journal of the Mass Spectrometry Society of Japan, 2013, 61, 23-33.	0.0	7
49	Development of a Potential-Lift Ion Source.. Journal of the Mass Spectrometry Society of Japan, 2000, 48, 357-359.	0.0	7
50	Third-order transfer matrix for crossed electric and magnetic fields calculated algebraically using a symbolic computation program. International Journal of Mass Spectrometry and Ion Processes, 1995, 146-147, 195-216.	1.9	6
51	Experimental and theoretical study on gas-phase ion/molecule reactions of silver trimer cation, Ag <sub>3</sub> <sup>+</sup> , with 12-crown-4. Journal of Chemical Physics, 2005, 123, 024314.	1.2	6
52	N-Terminal Derivatization with Structures Having High Proton Affinity for Discrimination between Leu and Ile Residues in Peptides by High-Energy Collision-Induced Dissociation. Mass Spectrometry, 2016, 5, A0051-A0051.	0.2	6
53	Evaluation of a Delay-Line Detector Combined with Analog-to-Digital Converters as the Ion Detection System for Stigmatic Imaging Mass Spectrometry. Japanese Journal of Applied Physics, 2011, 50, 056701.	0.8	6
54	Real time monitoring of gases emitted from soils using a multi-turn time-of-flight mass spectrometer "MULTUM-S II". Environmental Sciences: Processes and Impacts, 2014, 16, 2752-2757.	1.7	5

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55	Third-order ion trajectory calculations of Wien filters. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1995, 146-147, 217-222.	1.9	4
56	Simulation of ion trajectories using the surface-charge method on a special purpose computer. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009, 600, 466-470.	0.7	4
57	Letter: High-Energy Electron Transfer Dissociation Using a Tandem Time-of-Flight Mass Spectrometer with an Electrospray Ionization Ion Source. <i>European Journal of Mass Spectrometry</i> , 2010, 16, 551-556.	0.5	4
58	Construction of a Newly Designed Small-Size Mass Spectrometer for Helium Isotope Analysis: Toward the Continuous Monitoring Of $^3\text{He}/^4\text{He}$ Ratios In Natural Fluids. <i>Mass Spectrometry</i> , 2012, 1, A0009-A0009.	0.2	4
59	Observation of Accumulated Metal Cation Distribution in Fish by Novel Stigmatic Imaging Time-of-Flight Mass Spectrometer. <i>Journal of the Physical Society of Japan</i> , 2014, 83, 023001.	0.7	4
60	Development of a Miniaturized Multi-Turn Time-of-Flight Mass Spectrometer with a Pulsed Fast Atom Bombardment Ion Source. <i>European Journal of Mass Spectrometry</i> , 2014, 20, 215-220.	0.5	4
61	Development on Multi-Turn TOF-SIMS with a Femto-Second Laser for Post-Ionization: First Application of OPTIMA (Osaka Post-Ionization MAss spectrometer) for Presolar SiCs. , 2017, , .		4
62	High throughput isotope abundance ratio determination based on simultaneous ion counting and waveform averaging. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2019, 942, 162427.	0.7	4
63	Gas chromatography/miniaturized time-of-flight mass spectrometry technique for high-throughput quantitative on-site field analysis. <i>International Journal of Mass Spectrometry</i> , 2021, 463, 116555.	0.7	4
64	Development of novel projection-type imaging mass spectrometer. <i>Review of Scientific Instruments</i> , 2021, 92, 053706.	0.6	4
65	Development of an Ion Trap for an Ion Source of a Time-of-Flight Mass Spectrometer.. <i>Journal of the Mass Spectrometry Society of Japan</i> , 2002, 50, 217-222.	0.0	4
66	Ion/Molecule Reactions of Silver Cluster Cations with Crown Ethers in a Cylindrical Ion Trap. <i>Japanese Journal of Applied Physics</i> , 2004, 43, 7282-7286.	0.8	3
67	Dissociation channels of silver bromide cluster $\text{Ag}_2\text{Br}$ , silver cluster $\text{Ag}_3$ and their ions studied by using alkali metal target. <i>European Physical Journal D</i> , 2007, 45, 279-287.	0.6	3
68	Development of a tandem time-of-flight mass spectrometer "MULTUM-TOF/TOF" at Osaka University: Combination of a multi-turn time-of-flight mass spectrometer and a quadratic-field ion mirror. <i>Physics Procedia</i> , 2008, 1, 401-411.	1.2	3
69	Multi-Turn Time-of-Flight Mass Spectrometers. <i>Journal of the Mass Spectrometry Society of Japan</i> , 2012, 60, 87-102.	0.0	3
70	Evaluation of microchannel plate gain drops caused by high ion fluxes in time-of-flight mass spectrometry: A novel evaluation method using a multi-turn time-of-flight mass spectrometer. <i>Journal of Mass Spectrometry</i> , 2021, 56, e4706.	0.7	3
71	Mass spectrometric multiple soil-gas flux measurement system with a portable high-resolution mass spectrometer (MULTUM) coupled to an automatic chamber for continuous field observations. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 6657-6673.	1.2	3
72	Simulation of Beam Profile of Multi-Turn Time-of-Flight Mass Spectrometers. <i>Journal of the Mass Spectrometry Society of Japan</i> , 2007, 55, 17-24.	0.0	3

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73	Computer program TRIO 2.0 for calculation and visualization of ion trajectories. Physics Procedia, 2008, 1, 325-332.	1.2	2
74	Development of a novel stigmatic imaging mass spectrometer using laser ionization and a multi-turn time-of-flight mass spectrometer. , 2010, , .		2
75	Desorption via large-amplitude intermolecular vibration driven by the intense picosecond THz pulses. , 2016, , .		2
76	High Spatial Resolution Laser Desorption/Ionization Mass Spectrometry Imaging of Organic Layers in an Organic Light-Emitting Diode. Mass Spectrometry, 2017, 5, A0052-A0052.	0.2	2
77	Charge-Remote Fragmentation of Phospholipids in a Multi-Turn Tandem Time-of-Flight Mass Spectrometer "MULTUM-TOF/TOF". Journal of the Mass Spectrometry Society of Japan, 2007, 55, 343-351.	0.0	2
78	Why Can Reflectron and Multi-Turn Time-of-Flight Mass Spectrometer Improve Their Mass Resolving Powers?. Journal of the Mass Spectrometry Society of Japan, 2008, 56, 49-54.	0.0	2
79	Development of a Tandem Mass Spectrometry Instrument for Probing High-Energy Electron Transfer Dissociation. Journal of the Mass Spectrometry Society of Japan, 2009, 57, 123-132.	0.0	2
80	Selective Extraction of a Monoisotopic Ion While Keeping the Other Ions in Flight on a Multi-Turn Time-of-Flight Mass Spectrometer. Mass Spectrometry, 2020, 9, A0088-A0088.	0.2	2
81	Unimolecular and Collision-Induced Dissociation of Singly-Charged Mono-Bromide Silver Clusters Ag <sub>x</sub> Br <sup>+</sup> (x = 2, 4, 6, 8, 10). European Journal of Mass Spectrometry, 2009, 15, 459-469.	0.5	1
82	Evaluation of a Delay-Line Detector Combined with Analog-to-Digital Converters as the Ion Detection System for Stigmatic Imaging Mass Spectrometry. Japanese Journal of Applied Physics, 2011, 50, 056701.	0.8	1
83	Rapid Sequencing of a Peptide Containing a Single Disulfide Bond Using High-Energy Collision-Induced Dissociation. European Journal of Mass Spectrometry, 2012, 18, 345-348.	0.5	1
84	Excitation frequency dependence of the desorption of hydrogen-bonded solids using picosecond THz free electron laser pulses. , 2017, , .		1
85	Development of an ion trap with a metastable atom bombardment ionization source to observe ion-molecule reactions. International Journal of Mass Spectrometry, 2018, 430, 80-86.	0.7	1
86	Ultra-High Mass Resolution Miniaturized Time-of-Flight Mass Spectrometer for Rapid Analysis of Polychlorinated Biphenyls. Comprehensive Analytical Chemistry, 2013, , 303-323.	0.7	1
87	Development of a TOF Mass Spectrometer Using a Sector Magnet and Detection of Cluster Dissociations.. Journal of the Mass Spectrometry Society of Japan, 2002, 50, 213-216.	0.0	1
88	Shinku/Journal of the Vacuum Society of Japan, 2007, 50, 2		
89	Measurement of Decay Lifetime of Metastable Dye Molecular Ions by Using Ion Trap. Journal of the Physical Society of Japan, 1997, 66, 1321-1323.	0.7	1
90	Stigmatic imaging mass spectrometry using a multi-turn time-of-flight mass spectrometer. , 2009, , .		0

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91	Development of a stigmatic imaging mass spectrometer using laser desorption/ionization. Proceedings of SPIE, 2011, , .	0.8	0
92	Tissue imaging with a stigmatic mass microscope using laser desorption/ionization. Proceedings of SPIE, 2012, , .	0.8	0
93	Development of Laser Ionization Imaging Mass Spectrometry for Multiple Drugs Administered to Cancer Cells. Microscopy and Microanalysis, 2015, 21, 2231-2232.	0.2	0
94	A Feasible Study of <i>In-Situ</i> Measurements of Light Isotopes and Organic Molecules with High Resolution Mass Spectrometer MULTUM on the OKEANOS Mission. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2021, 19, 477-484.	0.1	0
95	A method for expanding mass range on a multi-turn time-of-flight mass spectrometer by a lap superimposed spectrum. Mass Spectrometry, 2021, 10, A0098.	0.2	0
96	Development of a Multi-Turn Time-of-Flight Mass Spectrometer with a Proton Transfer Reaction Ion Source for the On-Site Real-Time Measurement of Volatile Organic Compounds. Journal of the Mass Spectrometry Society of Japan, 2021, 69, 68-74.	0.0	0
97	Development of an Ejection Method from a Linear Ion Trap Using Plate Electrodes Inserted between Rod Electrodes. Journal of the Mass Spectrometry Society of Japan, 2011, 59, 13-17.	0.0	0
98	Development of a Secondary Neutral Mass Spectrometer for Submicron Imaging Mass Spectrometry. , 2020, , .		0