Marek Tulej

List of Publications by Year
in descending order

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112	2,249	218677	289244
papers	citations	26 h-index	40 g-index

123	123	123	1195
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Improved limit of detection of a high-resolution fs-LIMS instrument through mass-selective beam blanking. International Journal of Mass Spectrometry, 2022, 474, 116803.	1.5	1
2	Multiwavelength Ablation/Ionization and Mass Spectrometric Analysis of 1.88 Ga Gunflint Chert. Astrobiology, 2022, 22, 369-386.	3.0	4
3	Toward Detecting Polycyclic Aromatic Hydrocarbons on Planetary Objects with ORIGIN. Planetary Science Journal, 2022, 3, 43.	3.6	5
4	High Mass Resolution fs-LIMS Imaging and Manifold Learning Reveal Insight Into Chemical Diversity of the 1.88ÂGa Gunflint Chert. Frontiers in Space Technologies, 2022, 3, .	1.4	1
5	Correlation Network Analysis for Amino Acid Identification in Soil Samples With the ORIGIN Space-Prototype Instrument. Frontiers in Astronomy and Space Sciences, 2022, 9, .	2.8	2
6	The ORIGIN Space Instrument for Detecting Biosignatures and Habitability Indicators on a Venus Life Finder Mission. Aerospace, 2022, 9, 312.	2.2	8
7	Determination of the microscopic mineralogy of inclusion in an amygdaloidal pillow basalt by fs-LIMS. Journal of Analytical Atomic Spectrometry, 2021, 36, 80-91.	3.0	7
8	Description of the Mass Spectrometer for the Jupiter Icy Moons Explorer Mission. , 2021, , .		12
9	Investigation of the Surface Composition by Laser Ablation/Ionization Mass Spectrometry. , 2021, , .		4
10	Current Progress in Femtosecond Laser Ablation/Ionisation Time-of-Flight Mass Spectrometry. Applied Sciences (Switzerland), 2021, 11, 2562.	2.5	16
11	Detecting the elemental and molecular signatures of life: Laser-based mass spectrometry technologies. , 2021, 53, .		3
12	Improved plasma stoichiometry recorded by laser ablation ionization mass spectrometry using a doubleâ€pulse femtosecond laser ablation ion source. Rapid Communications in Mass Spectrometry, 2021, 35, e9094.	1.5	4
13	Characterization of femtosecond laser ablation processes on as-deposited SnAg solder alloy using laser ablation ionization mass spectrometry. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 180, 106145.	2.9	2
14	Quantitative elemental analysis with the LMS-GT; a next-generation LIMS-TOF instrument. International Journal of Mass Spectrometry, 2021, 470, 116662.	1.5	4
15	On Topological Analysis of fs-LIMS Data. Implications for in Situ Planetary Mass Spectrometry. Frontiers in Artificial Intelligence, 2021, 4, 668163.	3.4	7
16	Chemical identification of microfossils from the 1.88â€Ga Gunflint chert: Towards empirical biosignatures using laser ablation ionization mass spectrometer. Journal of Chemometrics, 2021, 35, e3370.	1.3	7
17	The chemical composition and homogeneity of the Allende matrix. Planetary and Space Science, 2021, 204, 105251.	1.7	9
18	Laser Ablation Ionization Mass Spectrometry: A Space Prototype System for In Situ Sulphur Isotope Fractionation Analysis on Planetary Surfaces. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	8

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19	Three-Dimensional Composition Analysis of SnAg Solder Bumps Using Ultraviolet Femtosecond Laser Ablation Ionization Mass Spectrometry. Analytical Chemistry, 2020, 92, 1355-1362.	6.5	9
20	Chemical analysis of a lunar meteorite by laser ablation mass spectrometry. Planetary and Space Science, 2020, 182, 104816.	1.7	9
21	Isotope abundance ratio measurements using femtosecond laser ablation ionization mass spectrometry. Journal of Mass Spectrometry, 2020, 55, e4660.	1.6	10
22	The Detection of Elemental Signatures of Microbes in Martian Mudstone Analogs Using High Spatial Resolution Laser Ablation Ionization Mass Spectrometry. Astrobiology, 2020, 20, 1224-1235.	3.0	15
23	Decisions and Trade-Offs in the Design of a Mass Spectrometer for Jupiter's Icy Moons. , 2020, , .		3
24	ORIGIN: a novel and compact Laser Desorption â€“ Mass Spectrometry system for sensitive in situ detection of amino acids on extraterrestrial surfaces. Scientific Reports, 2020, 10, 9641.	3.3	24
25	UV postâ€ionization laser ablation ionization mass spectrometry for improved nmâ€depth profiling resolution on Cr/Ni reference standard. Rapid Communications in Mass Spectrometry, 2020, 34, e8803.	1.5	16
26	The LMS-GT instrument â€“ a new perspective for quantification with the LIMS-TOF measurement technique. Journal of Analytical Atomic Spectrometry, 2019, 34, 2061-2073.	3.0	15
27	Novel 2D binning approach for advanced LIMS depth profiling analysis. Journal of Analytical Atomic Spectrometry, 2019, 34, 1564-1570.	3.0	9
28	Reviewâ€"Laser Ablation Ionization Mass Spectrometry (LIMS) for Analysis of Electrodeposited Cu Interconnects. Journal of the Electrochemical Society, 2019, 166, D3190-D3199.	2.9	17
29	A method for improvement of mass resolution and isotope accuracy for laser ablation timeâ€ofâ€flight mass spectrometers. Journal of Chemometrics, 2019, 33, e3081.	1.3	9
30	(Invited) Towards Spatially Resolved Chemical Analysis of Sn/Ag Solder Bumps By Means of Laser Ablation Ionization Mass Spectrometry (LIMS). ECS Meeting Abstracts, 2019, , .	0.0	0
31	Combining Anisotropic Etching and PDMS Casting for Three-Dimensional Analysis of Laser Ablation Processes. Analytical Chemistry, 2018, 90, 2692-2700.	6.5	16
32	A low energy ion beam facility for mass spectrometer calibration: First results. Review of Scientific Instruments, 2018, 89, 013305.	1.3	3
33	Towards femtosecond laser ablation ionization mass spectrometric approaches for chemical depth-profiling analysis of lead-free Sn solder bumps with minimized side-wall contributions. Journal of Analytical Atomic Spectrometry, 2018, 33, 283-293.	3.0	13
34	Insights into Laser Ablation Processes of Heterogeneous Samples: Toward Analysis of Through-Silicon-Vias. Analytical Chemistry, 2018, 90, 6666-6674.	6.5	9
35	Depth Profiling and Cross-Sectional Laser Ablation Ionization Mass Spectrometry Studies of Through-Silicon-Vias. Analytical Chemistry, 2018, 90, 5179-5186.	6.5	19
36	0.2 to 10ÂkeV electrons interacting with water ice: Radiolysis, sputtering, and sublimation. Planetary and Space Science, 2018, 155, 91-98.	1.7	23

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37	First experimental data of sulphur ions sputtering water ice. Icarus, 2018, 312, 1-6.	2.5	13
38	Flight electronics of GC-mass spectrometer for investigation of volatiles in the lunar regolith. , 2018, , .		7
39	Chemical and Optical Identification of Micrometer-Sized 1.9 Billion-Year-Old Fossils by Combining a Miniature Laser Ablation Ionization Mass Spectrometry System with an Optical Microscope. Astrobiology, 2018, 18, 1071-1080.	3.0	35
40	Mass spectrometric analysis of the Mg plasma produced by double-pulse femtosecond laser irradiation. Journal of Analytical Atomic Spectrometry, 2018, 33, 1292-1303.	3.0	17
41	Toward Three-Dimensional Chemical Imaging of Ternary Cuâ€“Snâ€“Pb Alloys Using Femtosecond Laser Ablation/Ionization Mass Spectrometry. Analytical Chemistry, 2017, 89, 1632-1641.	6.5	47
42	High-speed microstrip multi-anode multichannel plate detector system. Review of Scientific Instruments, 2017, 88, 045114.	1.3	35
43	Sputtering of water ice films: A re-assessment with singly and doubly charged oxygen and argon ions, molecular oxygen, and electrons. Icarus, 2017, 291, 36-45.	2.5	17
44	Shielding an MCP Detector for a Space-Borne Mass Spectrometer Against the Harsh Radiation Environment in Jupiterâ€™s Magnetosphere. IEEE Transactions on Nuclear Science, 2017, 64, 605-613.	2.0	11
45	Improved detection sensitivity for heavy trace elements using a miniature laser ablation ionisation mass spectrometer. Journal of Analytical Atomic Spectrometry, 2017, 32, 2182-2188.	3.0	19
46	Fully automatic and precise data analysis developed for timeâ€ofâ€flight mass spectrometry. Journal of Mass Spectrometry, 2017, 52, 580-590.	1.6	38
47	Testing the Radiation Hardness of Thick-Film Resistors for a Time-Of-Flight Mass Spectrometer at Jupiter with 18 MeV Protons. , 2017, , .		3
48	Mass spectrometry of planetary exospheres at high relative velocity: direct comparison of open- and closed-source measurements. Geoscientific Instrumentation, Methods and Data Systems, 2017, 6, 1-8.	1.6	19
49	Quantitative measurement of the chemical composition of geological standards with a miniature laser ablation/ionization mass spectrometer designed forin situapplication in space research. Measurement Science and Technology, 2016, 27, 035904.	2.6	32
50	Towards matrixâ€free femtosecondâ€laser desorption mass spectrometry for in situ space research. Rapid Communications in Mass Spectrometry, 2016, 30, 1031-1036.	1.5	25
51	Laser Ablation/Ionisation Mass Spectrometry: Sensitive and Quantitative Chemical Depth Profiling of Solid Materials. Chimia, 2016, 70, 268.	0.6	18
52	Surface charging of thick porous water ice layers relevant for ion sputtering experiments. Planetary and Space Science, 2016, 126, 63-71.	1.7	11
53	Experimental investigation of the radiation shielding efficiency of a MCP detector in the radiation environment near Jupiterâ€™s moon Europa. Nuclear Instruments & Methods in Physics Research B, 2016, 383, 21-37.	1.4	13
54	Towards Structural Analysis of Polymeric Contaminants in Electrodeposited Cu films. Electrochimica Acta, 2016, 199, 394-402.	5.2	23

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55	Mineralogical determination in situ of a highly heterogeneous material using a miniaturized laser ablation mass spectrometer with high spatial resolution. International Journal of Astrobiology, 2016, 15, 133-146.	1.6	18
56	Detection efficiency of microchannel plates for eâ" and Ï€â" in the momentum range from 17.5 to 345 MeV/c. Review of Scientific Instruments, 2015, 86, 083310.	1.3	16
57	Prototype of the gas chromatographâ€"mass spectrometer to investigate volatile species in the lunar soil for the Luna-Resurs mission. Planetary and Space Science, 2015, 111, 126-133.	1.7	25
58	High depth-resolution laser ablation chemical analysis of additive-assisted Cu electroplating for microchip architectures. Journal of Analytical Atomic Spectrometry, 2015, 30, 2371-2374.	3.0	21
59	High-Resolution Chemical Depth Profiling of Solid Material Using a Miniature Laser Ablation/Ionization Mass Spectrometer. Analytical Chemistry, 2015, 87, 2037-2041.	6.5	54
60	Chemical Composition of Micrometer-Sized Filaments in an Aragonite Host by a Miniature Laser Ablation/Ionization Mass Spectrometer. Astrobiology, 2015, 15, 669-682.	3.0	44
61	CAMAM: A Miniature Laser Ablation Ionisation Mass Spectrometer and Microscopeâ€Camera System for In Situ Investigation of the Composition and Morphology of Extraterrestrial Materials. Geostandards and Geoanalytical Research, 2014, 38, 441-466.	3.1	34
62	Probing the Allende meteorite with a miniature laser-ablation mass analyser for space application. Planetary and Space Science, 2014, 101, 196-209.	1.7	41
63	High Energy Electron Radiation Exposure Facility at PSI. Journal of Applied Mathematics and Physics, 2014, 02, 910-917.	0.4	11
64	Coupling of LMS with a fs-laser ablation ion source: elemental and isotope composition measurements. Journal of Analytical Atomic Spectrometry, 2013, 28, 1256.	3.0	73
65	Highly accurate isotope composition measurements by a miniature laser ablation mass spectrometer designed for in situ investigations on planetary surfaces. Planetary and Space Science, 2013, 87, 1-13.	1.7	55
66	Performance evaluation of a miniature laser ablation timeâ€ofâ€flight mass spectrometer designed for in situ investigations in planetary space research. Journal of Mass Spectrometry, 2013, 48, 1-15.	1.6	76
67	Performance evaluation of a miniature laser ablation timeâ€ofâ€flight mass spectrometer designed for in situ investigations in planetary space research. Journal of Mass Spectrometry, 2013, 48, i.	1.6	55
68	On Applicability of a Miniaturised Laser Ablation Time of Flight Mass Spectrometer for Trace Elements Measurements. International Journal of Spectroscopy, 2012, 2012, 1-14.	1.6	15
69	A neutral gas mass spectrometer for the investigation of lunar volatiles. Planetary and Space Science, 2012, 74, 264-269.	1.7	43
70	Mass spectrometric analysis in planetary science: Investigation of the surface and the atmosphere. Solar System Research, 2012, 46, 408-422.	0.7	25
71	Two-Color Photodetachment Study of the A³Îâ"X³Î£^{â"} Origin Band of C₅H^{â"}. Journal of Physical Chemistry A, 2011, 115, 6878-6881.	2.5	6
72	Constraints on the exosphere of CoRoT-7b. Astronomy and Astrophysics, 2011, 525, A24.	5.1	28

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73	A miniature mass analyser for in-situ elemental analysis of planetary materialâ€“performance studies. Analytical and Bioanalytical Chemistry, 2011, 399, 2185-2200.	3.7	50
74	Characterization of C4H in the A2Î and X2Î£+ states by double resonance four-wave mixing. Journal of Chemical Physics, 2011, 134, 164303.	3.0	15
75	Study of the main geochemical characteristics of Phobosâ€™ regolith using laser time-of-flight mass spectrometry. Solar System Research, 2010, 44, 376-384.	0.7	44
76	Degenerate and twoâ€color resonant fourâ€wave mixing of C₂^{â^’} in a molecular beam environment. Journal of Raman Spectroscopy, 2010, 41, 853-858.	2.5	17
77	Effect of long duration UV irradiation on diamondlike carbon surfaces in the presence of a hydrocarbon gaseous atmosphere. Journal of Applied Physics, 2010, 108, .	2.5	12
78	Rotationally Resolved Ground State Vibrational Levels of HC2S Studied by Two-Color Resonant Four-Wave Mixing. Journal of Physical Chemistry A, 2010, 114, 3329-3333.	2.5	6
79	Electronic transitions of the C₅H^{â^’}anion. Molecular Physics, 2010, 108, 865-871.	1.7	5
80	Selective Detection of Radicals and Ions in a Slit-Jet Discharge by Degenerate and Two-Color Four-Wave Mixing. Journal of Physical Chemistry A, 2009, 113, 13402-13406.	2.5	6
81	Electronic spectra of radicals in a supersonic slit-jet discharge by degenerate and two-color four-wave mixing. Physical Chemistry Chemical Physics, 2008, 10, 136-141.	2.8	17
82	TheËœA²Î_{3/2}â^’ËœX²Î_{3/2}electronic transition of HC₄S isotopologues. Molecular Physics, 2008, 106, 2709-2715.	1.7	3
83	Time-resolved investigation of the Î½1 ro-vibrational Raman band of H2CO with fs-CARS. Journal of Raman Spectroscopy, 2007, 38, 147-153.	2.5	7
84	Multiplex spectroscopy of stable and transient species in a molecular beam. Journal of Raman Spectroscopy, 2007, 38, 1022-1031.	2.5	19
85	Investigation of Coriolis Perturbations on the ro-vibrational ν 1 Band of H2CO with fs-CARS. Springer Series in Chemical Physics, 2007, , 567-569.	0.2	0
86	Neutral molecular ZnX (X=O, OH, N) compounds in a molecular beam. Journal of Molecular Structure, 2006, 782, 67-72.	3.6	8
87	Degenerate and two-color resonant four-wave mixing applied to the rotational characterization of high-lying vibrational states of formaldehyde (Ãƒ,1A2). Journal of Raman Spectroscopy, 2006, 37, 376-383.	2.5	17
88	Comparative study of degenerate four-wave mixing and cavity ringdown signal intensities of formaldehyde in a molecular beam. Journal of Raman Spectroscopy, 2006, 37, 680-688.	2.5	11
89	Investigation of Coriolis Perturbations on the ro-vibrational Î½1 Band of H2CO with fs-CARS. , 2006, , .		0
90	Photo-fragment excitation spectroscopy (PHOFEX) by DFWM and LIF: propensities for H2CO ? HCO + H near the So threshold. Journal of Raman Spectroscopy, 2005, 36, 109-115.	2.5	16

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91	Optical diagnostics of diesel spray injections and combustion in a high-pressure high-temperature cell. Applied Physics B: Lasers and Optics, 2005, 80, 1039-1045.	2.2	28
92	Feshbach resonances of the C3Hâ¯anion: laser autodetachment spectroscopy andab initiocalculations. Molecular Physics, 2004, 102, 1881-1889.	1.7	9
93	Collision induced rotational energy transfer. A new scaling law probed by fs CARS. , 2004, , 69-72.		0
94	Stimulated emission pumping by two-color resonant four-wave mixing: rotational characterization of vibrationally excited HCO (Xƒ 2 Aâ€²). Journal of Raman Spectroscopy, 2003, 34, 1037-1044.	2.5	16
95	Determination of theortho-/para deuterium concentration ratio with femtosecond CARS. Journal of Raman Spectroscopy, 2003, 34, 989-993.	2.5	19
96	Rotationally inelastic collisions between N2 and rare gases: an extension of the angular momentum scaling law. Chemical Physics Letters, 2003, 373, 251-257.	2.6	12
97	Collision induced rotational energy transfer probed by time-resolved coherent anti-Stokes Raman scattering. Journal of Chemical Physics, 2003, 118, 8223-8233.	3.0	41
98	Rotational structure of the origin band in the1Aâ€² â†¥1Ïƒ+electronic transition of C4Hâ¯and C4Dâ¯. Molecular Physics, 2003, 101, 583-588.	1.7	14
99	Photodetachment spectroscopy of the C2nHâ¯ (n=2â€“4) anions in the vicinity of their electron detachment threshold. Journal of Chemical Physics, 2002, 116, 6126-6131.	3.0	52
100	Pressure-dependent N2 Q-branch fs-CARS measurements. Journal of Raman Spectroscopy, 2002, 33, 861-865.	2.5	48
101	Feshbach states of the propadienylidene anion H2CCCÃ¢â‚¬â€œ. Physical Chemistry Chemical Physics, 2001, 3, 4674-4678.	2.8	8
102	Electronic transition of C3Hâ¯in the vicinity of the lowest photodetachment threshold. Molecular Physics, 2001, 99, 1397-1405.	1.7	15
103	Photodetachment Spectrum of Iâ€“3documentclass{aastex} usepackage{amsbsy} usepackage{amsfonts} usepackage{amssymb} usepackage{bm} usepackage{mathrsfs} usepackage{pifont} usepackage{stmaryrd} usepackage{textcomp} usepackage{portland,xspace} usepackage{amsmath,amsxtra} usepackage[OT2,OT1]{fontenc} ewcommandcyr{ enewcommandmdefault{wncyr} enewcommandsfdefault{wncyss} enewcommandencodingdefault{OT2} ormalfont selectfont} eclareTextFontCommand{textcyr}	4.5	51
104	Theoretical and experimental study of the A2Îuâ€“X2Îg band system of C7â¯. Journal of Chemical Physics, 2000, 113, 9586-9592.	3.0	20
105	Electronic transitions of C3â¯ above the photodetachment threshold. Journal of Chemical Physics, 2000, 112, 3747-3753.	3.0	28
106	Spectroscopy of excited states of carbon anions above the photodetachment threshold. Faraday Discussions, 2000, 115, 383-393.	3.2	18
107	Electronic spectra of carbon chain anions: C2nHâ¯â€‰(n=5â€“12). Journal of Chemical Physics, 1999, 111, 9280-9286.	3.0	21
108	The LIF Excitation Spectrum of Jet-Cooled 2,6-Dicyano-3, 5-Dimethylaniline. Journal of Fluorescence, 1999, 9, 123-132.	2.5	5

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109	Electronic Spectra of the Carbon Chain Anions C2n-1H-(n= 5â^'8) in the Gas Phase. Journal of Physical Chemistry A, 1999, 103, 9712-9716.	2.5	18
110	Electronic spectra of linear carbon anions. Chemical Physics, 1998, 228, 293-299.	1.9	44
111	Electronic spectroscopy of carbon chains and relevance to astrophysics. Faraday Discussions, 1998, 109, 109-119.	3.2	35
112	Gas-Phase Electronic Transitions of Carbon Chain Anions Coinciding with Diffuse Interstellar Bands. Astrophysical Journal, 1998, 506, L69-L73.	4.5	146