Aviv Amirav

List of Publications by Year
in descending order

106 papers	3,792 citations	101384 36 h-index	138251 58 g-index
107 all docs	107 docs citations	107 times ranked	1567 citing authors

#	Article	IF	Citations
1	Microscopic solvation effects on excitedâ€state energetics and dynamics of aromatic molecules in large van der Waals complexes. Journal of Chemical Physics, 1981, 75, 2489-2512.	1.2	191
2	Cooling of large and heavy molecules in seeded supersonic beams. Chemical Physics, 1980, 51, 31-42.	0.9	146
3	A direct sample introduction device for mass spectrometry studies and gas chromatography mass spectrometry analyses. European Journal of Mass Spectrometry, 1997, 3, 105.	0.7	128
4	Gas chromatographyâ€mass spectrometry with supersonic molecular beams. Journal of Mass Spectrometry, 2008, 43, 141-163.	0.7	125
5	Optical selection studies of electronic relaxation from the S1 state of jetâ€cooled anthracene derivatives. Journal of Chemical Physics, 1988, 88, 3092-3110.	1.2	119
6	Identification and confirmation of chemical residues in food by chromatography-mass spectrometry and other techniques. TrAC - Trends in Analytical Chemistry, 2008, 27, 1070-1090.	5.8	116
7	Energetics and intramolecular dynamics of the isolated ultracold tetracene molecule in its first excited singlet state. Journal of Chemical Physics, 1981, 75, 3770-3793.	1.2	108
8	Pulsed-flame photometer: a novel gas chromatography detector. Analytical Chemistry, 1993, 65, 539-555.	3.2	108
9	Pulsed Flame Photometer Detector for Gas Chromatography. Analytical Chemistry, 1995, 67, 3305-3318.	3.2	103
10	Isotope separation in supersonic molecular beams using rf spectroscopy. Journal of Applied Physics, 1980, 51, 1-6.	1.1	100
11	Extending the range of compounds amenable for gas chromatographyâ€“mass spectrometric analysis. Journal of Chromatography A, 2003, 991, 217-240.	1.8	91
12	Pesticide Analysis with the Pulsed-Flame Photometer Detector and a Direct Sample Introduction Device. Analytical Chemistry, 1997, 69, 1426-1435.	3.2	89
13	Aerodynamical acceleration and rotational-vibrational temperatures in seeded supersonic molecular beams. Chemical Physics, 1983, 82, 269-283.	0.9	82
14	Molecular ionization and dissociative ionization at hyperthermal surface scattering. The Journal of Physical Chemistry, 1989, 93, 5549-5562.	2.9	77
15	Electron impact and hyperthermal surface ionization mass spectrometry in supersonic molecular beams. Organic Mass Spectrometry, 1991, 26, 1-17.	1.3	71
16	Excitedâ€state dynamics of the isolated ultracold ovalene molecule. Journal of Chemical Physics, 1981, 74, 3745-3756.	1.2	68
17	Fast, very fast, and ultra-fast gas chromatography-mass spectrometry of thermally labile steroids, carbamates, and drugs in supersonic molecular beams. Journal of the American Society for Mass Spectrometry, 1996, 7, 737-752.	1.2	63
18	Rotational and vibrational state dependence on intramolecular coupling and dynamics in theS1state of pyrazine. Journal of Chemical Physics, 1986, 84, 1500-1507.	1.2	62

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19	Fast, high-sensitivity, multipesticide analysis of complex mixtures with supersonic gas chromatographyâ€“mass spectrometry. Journal of Chromatography A, 2002, 974, 185-212.	1.8	62
20	Supersonic gas chromatography/mass spectrometry. Rapid Communications in Mass Spectrometry, 2001, 15, 811-820.	0.7	60
21	Sensitivity and noise in GCâ€“MS: Achieving low limits of detection for difficult analytes. International Journal of Mass Spectrometry, 2007, 260, 31-48.	0.7	59
22	Electron impact mass spectrometry of alkanes in supersonic molecular beams. Journal of the American Society for Mass Spectrometry, 1995, 6, 120-131.	1.2	58
23	A new type of GCâ€“MS with advanced capabilities. International Journal of Mass Spectrometry, 2006, 251, 47-58.	0.7	57
24	Fast, high temperature and thermolabile GCâ€”MS in supersonic molecular beams. International Journal of Mass Spectrometry and Ion Processes, 1994, 133, 187-210.	1.9	54
25	SnifProbe: new method and device for vapor and gas sampling. Journal of Chromatography A, 2000, 903, 155-172.	1.8	54
26	Isotope abundance analysis methods and software for improved sample identification with supersonic gas chromatography/mass spectrometry. Rapid Communications in Mass Spectrometry, 2006, 20, 2579-2588.	0.7	52
27	Pulsed flow modulation comprehensive two-dimensional gas chromatography. Journal of Chromatography A, 2008, 1186, 189-195.	1.8	51
28	Electron impact mass spectrometry in supersonic molecular beams. International Journal of Mass Spectrometry and Ion Processes, 1990, 97, 107-113.	1.9	49
29	Improved electron ionization ion source for the detection of supersonic molecular beams. Review of Scientific Instruments, 2002, 73, 2872-2876.	0.6	49
30	Spectroscopic manifestation of intramolecular relaxation of azulene in supersonic jets. Journal of Chemical Physics, 1984, 81, 4200-4205.	1.2	48
31	Simultaneous pulsed flame photometric and mass spectrometric detection for enhanced pesticide analysis capabilities. Journal of Chromatography A, 1998, 814, 133-150.	1.8	47
32	Dissociation and ionization in hyperthermal 1-iodopropane-diamond scattering. Surface Science, 1988, 193, 132-152.	0.8	46
33	Pulsed flow modulation two-dimensional comprehensive gas chromatographyâ€“tandem mass spectrometry with supersonic molecular beams. Journal of Chromatography A, 2008, 1210, 108-114.	1.8	44
34	Hyperthermal surface ionization: a novel ion source with analytical applications. International Journal of Mass Spectrometry and Ion Processes, 1990, 96, 139-167.	1.9	40
35	Excited state energetics of aniline-rare-gas van der Waals complexes. Molecular Physics, 1983, 49, 899-912.	0.8	38
36	LCâ€“MS with electron ionization of cold molecules in supersonic molecular beams. International Journal of Mass Spectrometry, 2005, 244, 15-28.	0.7	37

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37	Fast analysis of drugs in a single hair. Journal of the American Society for Mass Spectrometry, 1998, 9, 1311-1320.	1.2	36
38	Cluster chemical ionization for improved confidence level in sample identification by gas chromatography/mass spectrometry. Rapid Communications in Mass Spectrometry, 2003, 17, 1326-1338.	0.7	36
39	Hydrocarbons and fuels analyses with the supersonic gas chromatography mass spectrometryâ€"The novel concept of isomer abundance analysis. Journal of Chromatography A, 2008, 1195, 127-135.	1.8	33
40	Electron ionization LCâ€MS with supersonic molecular beamsâ€"the new concept, benefits and applications. Journal of Mass Spectrometry, 2015, 50, 1252-1263.	0.7	33
41	Collision induced dissociation of molecular iodine on sapphire. Journal of Chemical Physics, 1983, 79, 4648-4650.	1.2	32
42	Kinetic energy induced surface dissociative ionization. Journal of Chemical Physics, 1987, 86, 4708-4709.	1.2	32
43	Fast GC-PFPD system for field analysis of chemical warfare agents. Field Analytical Chemistry and Technology, 2000, 4, 170-194.	0.9	31
44	Ceramic nozzle for molecular acceleration and its temperature measurement. Review of Scientific Instruments, 1987, 58, 1724-1726.	0.6	30
45	Megabore versus microbore as the optimal column for fast gas chromatography/mass spectrometry. European Journal of Mass Spectrometry, 1998, 4, 7.	0.7	30
46	Electron impact mass spectrometry of cholesterol in supersonic molecular beams. The Journal of Physical Chemistry, 1990, 94, 5200-5202.	2.9	28
47	High-efficiency surface-induced dissociation on a rhenium oxide surface. Journal of the American Society for Mass Spectrometry, 1993, 4, 869-873.	1.2	28
48	Liquid chromatography mass spectrometry with supersonic molecular beams. Journal of the American Society for Mass Spectrometry, 2000, 11, 587-591.	1.2	28
49	Cluster chemical ionization and deuterium exchange mass spectrometry in supersonic molecular Beams. Journal of the American Society for Mass Spectrometry, 1996, 7, 550-558.	1.2	27
50	Flow modulation comprehensive two-dimensional gas chromatographyâ€"mass spectrometry with a supersonic molecular beam. Journal of Chromatography A, 2006, 1129, 95-104.	1.8	26
51	Hyperthermal Surface Ionization. Israel Journal of Chemistry, 1989, 29, 443-449.	1.0	23
52	How enhanced molecular ions in Cold EI improve compound identification by the NIST library. Rapid Communications in Mass Spectrometry, 2015, 29, 2287-2292.	0.7	23
53	Comparison of electrospray LCâ€"MS, LCâ€"MS with Cold EI and GCâ€"MS with Cold EI for sample identification. International Journal of Mass Spectrometry, 2017, 422, 119-125.	0.7	22
54	The effect of small cluster environment on molecular oscillator strengths and spectra. Journal of Chemical Physics, 1988, 88, 3516-3523.	1.2	21

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55	Soft Cold EI â€“ approaching molecular ion only with electron ionization. Rapid Communications in Mass Spectrometry, 2015, 29, 1954-1960.	0.7	20
56	A comparison of electron ionization mass spectra obtained at 70 eV, low electron energies, and with cold EI and their NIST library identification probabilities. Journal of Mass Spectrometry, 2020, 55, e4646.	0.7	20
57	Twoâ€photon spectroscopy of ultracold large molecules in planar supersonic expansions. Journal of Chemical Physics, 1981, 75, 3151-3152.	1.2	19
58	Laser desorption fast gas chromatographyâ€“Mass spectrometry in supersonic molecular beams. Journal of the American Society for Mass Spectrometry, 1998, 9, 628-637.	1.2	19
59	Measurement and optimization of organic chemical reaction yields by GCâ€“MS with supersonic molecular beams. Tetrahedron, 2012, 68, 5793-5799.	1.0	19
60	Collisionally-activated dissociation in hyperthermal surface ionization of cholesterol. International Journal of Mass Spectrometry and Ion Processes, 1992, 113, 157-165.	1.9	18
61	Electrolyzer-Powered Flame Ionization Detector. Analytical Chemistry, 1997, 69, 1248-1255.	3.2	18
62	Classical electron ionization mass spectra in gas chromatography/mass spectrometry with supersonic molecular beams. Rapid Communications in Mass Spectrometry, 2008, 22, 2660-2666.	0.7	18
63	A low thermal mass fast gas chromatograph and its implementation in fast gas chromatography mass spectrometry with supersonic molecular beams. Journal of Chromatography A, 2011, 1218, 9375-9383.	1.8	18
64	Analysis of quinocide in unprocessed primaquine diphosphate and primaquine diphosphate tablets using gas chromatographyâ€“mass spectrometry with supersonic molecular beams. Journal of Chromatography A, 2009, 1216, 824-829.	1.8	17
65	Isotope, molecular and surface effects on hyperthermal surface induced dissociated ionization. International Journal of Mass Spectrometry and Ion Processes, 1993, 125, 63-74.	1.9	16
66	Cannabis and its cannabinoids analysis by gas chromatographyâ€“mass spectrometry with Cold EI. Journal of Mass Spectrometry, 2021, 56, e4726.	0.7	16
67	Vacuum ultraviolet absorption spectroscopy in supersonic expansions. Journal of Chemical Physics, 1985, 82, 4378-4379.	1.2	15
68	Less than one minute low-pressure gas chromatography - mass spectrometry. Journal of Chromatography A, 2020, 1612, 460691.	1.8	15
69	Fast Heroin and Cocaine Analysis by GCâ€“MS with Cold EI: The Important Role of Flow Programming. Chromatographia, 2017, 80, 295-300.	0.7	14
70	Identification of novel synthetic organic compounds with supersonic gas chromatographyâ€“mass spectrometry. Journal of Chromatography A, 2004, 1058, 233-242.	1.8	14
71	Rotational effects on energy resolved emission of anthracene. Journal of Chemical Physics, 1987, 86, 4706-4707.	1.2	13
72	Identification of novel synthetic organic compounds with supersonic gas chromatographyâ€“mass spectrometry. Journal of Chromatography A, 2004, 1058, 233-242.	1.8	13

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73	Open Probe fast GCâ€“MS â€” combining ambient sampling ultraâ€fast separation and inâ€vacuum ionization for realâ€time analysis. Journal of Mass Spectrometry, 2017, 52, 417-426.	0.7	13
74	Pesticide analysis by pulsed flow modulation GCxGC-MS with Cold Elâ€”an alternative to GC-MS-MS. Analytical and Bioanalytical Chemistry, 2018, 410, 5507-5519.	1.9	13
75	Chemically induced hyperthermal surface ionization. Journal of Chemical Physics, 1990, 92, 6968-6970.	1.2	12
76	Surface ionization mass spectrometry of drugs in the thermal and hyperthermal energy range â€” a comparative study. International Journal of Mass Spectrometry and Ion Processes, 1995, 151, 159-165.	1.9	12
77	Open Probe: A Device for Ultra Fast Electron Ionization Mass Spectrometry Analysis. Analytical Chemistry, 2010, 82, 5777-5782.	3.2	12
78	Open Probe fast GCâ€“MSâ€”Real time analysis with separation. International Journal of Mass Spectrometry, 2014, 371, 47-53.	0.7	11
79	A New Pulsed Flow Modulation GCÂÃ—ÂGCâ€“MS with Cold EI System and Its Application for Jet Fuel Analysis. Chromatographia, 2016, 79, 741-754.	0.7	11
80	Fast gas chromatography/mass spectrometry analysis of drugs in urine with hyperthermal surface ionization in supersonic molecular beams. European Journal of Mass Spectrometry, 1998, 4, 15.	0.7	10
81	Electron Ionization Mass Spectrometry for Both Liquid and Gas Chromatography in One System without the Need for Hardware Adjustments. Journal of the American Society for Mass Spectrometry, 2020, 31, 1713-1721.	1.2	10
82	Rotational effects on pyrazine S1(1B3u) dynamics and the problem of the missing states. Journal of Chemical Physics, 1988, 88, 2840-2841.	1.2	9
83	Resolving detailed molecular structures in complex organic mixtures and modeling their secondary organic aerosol formation. Atmospheric Environment, 2016, 128, 276-285.	1.9	9
84	Electron Ionization LC-MS. Comprehensive Analytical Chemistry, 2018, 79, 1-28.	0.7	9
85	The branching of nonradiative processes in isoquinoline. Journal of Chemical Physics, 1989, 91, 3532-3538.	1.2	8
86	Cold Electron Ionization (EI) Is Not a Supplementary Ion Source to Standard EI. It is a Highly Superior Replacement Ion Source. Journal of the American Society for Mass Spectrometry, 2021, 32, 2631-2635.	1.2	8
87	Vibrational predissociation of 9,10â€dichloroanthraceneâ€”Mixed and homo rare gas atom clusters. Journal of Chemical Physics, 1993, 99, 9616-9628.	1.2	7
88	Electrolyzer-operated gas-cylinder-free GC-FID. Field Analytical Chemistry and Technology, 2001, 5, 107-115.	0.9	7
89	Rydberg state absorption spectroscopy of Br(CH2)nI (n=1â€“3). Journal of Chemical Physics, 1990, 93, 8576-8579.	1.2	6
90	Covalent functionalization of solid cellulose by divergent synthesis of chemically active dendrons. Journal of Polymer Science Part A, 2018, 56, 2103-2114.	2.5	6

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91	Doubly Charged Molecular Ions in GCâ€“MS with Cold EI. Journal of the American Society for Mass Spectrometry, 2020, 31, 347-354.	1.2	6
92	Nitrogen and hydrogen as carrier and makeâ€up gases for GCâ€MS with <scp>Cold</scp> EI. Journal of Mass Spectrometry, 2022, 57, e4830.	0.7	6
93	Fast GCâ€”MS in Supersonic Molecular Beams. Israel Journal of Chemistry, 1997, 37, 475-482.	1.0	5
94	The preâ€separation of oxygen containing compounds in oxidised heavy paraffinic fractions and their identification by GCâ€MS with supersonic molecular beams.. Journal of Mass Spectrometry, 2019, 54, 328-341.	0.7	5
95	Comparison of Isotope Abundance Analysis and Accurate Mass Analysis in their Ability to Provide Elemental Formula Information. Journal of the American Society for Mass Spectrometry, 2021, 32, 929-935.	1.2	5
96	NaXe and KXe positive ion formation in hyperthermal xenonâ€“Pt(111) surface scattering. Journal of Chemical Physics, 1990, 93, 7506-7507.	1.2	4
97	Isotope abundance analysis for improved sample identification with tandem mass spectrometry. Rapid Communications in Mass Spectrometry, 2009, 23, 3668-3672.	0.7	4
98	Analysis of impurities in pharmaceuticals by LCâ€MS with cold electron ionization. Journal of Mass Spectrometry, 2020, 55, e4587.	0.7	3
99	Whole blood analysis for medical diagnostics by GCâ€MS with Cold EI. Journal of Mass Spectrometry, 2022, 57, .	0.7	3
100	A Comparison of SnifProbe and SPME for Aroma Sampling. Chromatographia, 2006, 64, 487-493.	0.7	2
101	Electrolyzer powered nitrogen phosphorus detector. Field Analytical Chemistry and Technology, 1997, 1, 375-380.	0.9	1
102	Second hydrogen atom abstraction by molecular ions. Journal of Mass Spectrometry, 2017, 52, 638-642.	0.7	1
103	GCâ€“MS with photoionization of cold molecules in supersonic molecular beamsâ€”Approaching the softest ionization method. Journal of Mass Spectrometry, 2020, 55, e4516.	0.7	1
104	Some applications of supersonic expansions to molecular dynamics and photochemistry. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1981, 85, 167-167.	0.9	0
105	The dynamics of equally spaced multilevel model systems. International Journal of Quantum Chemistry, 1991, 39, 387-397.	1.0	0
106	Pressure and gas composition effects on the operation of the pulsed flame photometric detector. Israel Journal of Chemistry, 2001, 41, 91-98.	1.0	0