Jean-FranÃ§ois Gal

List of Publications by Year
in descending order

109	2,961	186265	206112
papers	citations	28 h-index	48 g-index

115	115	115	2553
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Free energies of cation-molecule complex formation and cation-solvent transfers. Pure and Applied Chemistry, 1990, 62, 17-23.	1.9	150
2	Revised and Expanded Scale of Gas-Phase Lithium Cation Basicities. An Experimental and Theoretical Study. Journal of Physical Chemistry A, 2000, 104, 2824-2833.	2.5	131
3	Consequences of proton transfer in guanidine. Journal of Physical Organic Chemistry, 2003, 16, 91-106.	1.9	109
4	Dinuclear Copper Intermediates in Copper(I)â€Catalyzed Azideâ€“Alkyne Cycloaddition Directly Observed by Electrospray Ionization Mass Spectrometry. Angewandte Chemie - International Edition, 2015, 54, 3065-3068.	13.8	98
5	Thermochemical aspects of proton transfer in the gas phase. Journal of Mass Spectrometry, 2001, 36, 699-716.	1.6	94
6	Superbases in the gas phase. Part II. Further extension of the basicity scale using acyclic and cyclic guanidines. Journal of Physical Organic Chemistry, 1994, 7, 725-733.	1.9	89
7	Enhanced Basicity of Pushâ€“Pull Nitrogen Bases in the Gas Phase. Chemical Reviews, 2016, 116, 13454-13511.	47.7	85
8	Lithium-Cation/Ï€ Complexes of Aromatic Systems. The Effect of Increasing the Number of Fused Rings. Journal of the American Chemical Society, 2003, 125, 10394-10401.	13.7	82
9	Site of Protonation of Nicotine and Nornicotine in the Gas Phase: Pyridine or Pyrrolidine Nitrogen?. Journal of the American Chemical Society, 2002, 124, 10552-10562.	13.7	77
10	Characterization of oligomers from methylglyoxal under dark conditions: a pathway to produce secondary organic aerosol through cloud processing during nighttime. Atmospheric Chemistry and Physics, 2010, 10, 3803-3812.	4.9	74
11	Gas-phase structural (internal) effects in strong organic nitrogen bases. Journal of Physical Organic Chemistry, 2001, 14, 25-34.	1.9	72
12	Elemental characterization and source identification of PM2.5 using Positive Matrix Factorization: The Malraux road tunnel, Nice, France. Atmospheric Research, 2009, 94, 320-329.	4.1	71
13	Superbases in the gas phase: Amidine and guanidine derivatives with proton affinities larger than 1000 kj molâ¯1. Rapid Communications in Mass Spectrometry, 1993, 7, 599-602.	1.5	68
14	An Overview of Lewis Basicity and Affinity Scales. Journal of Chemical Education, 2011, 88, 1651-1657.	2.3	67
15	Hydrogen-bonding 8. Possible equivalence of solute and solvent scales of hydrogen-bond basicity of non-associated compounds. Journal of Physical Organic Chemistry, 1989, 2, 540-552.	1.9	59
16	Determination of benzene, toluene, ethylbenzene and xylenes in air by solid phase micro-extraction/gas chromatography/mass spectrometry. Analytical and Bioanalytical Chemistry, 2004, 380, 824-830.	3.7	55
17	Gas-Phase Basicity and Acidity Trends in Î±,Î²-Unsaturated Amines, Phosphines, and Arsines. Journal of the American Chemical Society, 1999, 121, 4653-4663.	13.7	47
18	Gas-phase lithium-cation basicities of some benzene derivatives. International Journal of Mass Spectrometry, 2002, 219, 445-456.	1.5	47

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19	Linear solvation energy relationships. Part 32. A co-ordinate covalency parameter, Î¾, which, in combination with the hydrogen bond acceptor basicity parameter, Î², permits correlation of many properties of neutral oxygen and nitrogen bases (including aqueous pKa). Journal of the Chemical Society Perkin Transactions II, 1985, , 1583-1589.	0.9	46
20	Cesium cation affinities and basicities. International Journal of Mass Spectrometry, 2007, 267, 7-23.	1.5	45
21	Acidity Trends in Î±,Î²-Unsaturated Alkanes, Silanes, Germanes, and Stannanes. Journal of the American Chemical Society, 2001, 123, 6353-6359.	13.7	43
22	The P4Â·Â·Â·Li+Ion in the Gas Phase:Â A Planetary System. Journal of the American Chemical Society, 2000, 122, 4451-4454.	13.7	42
23	The Nicotinic Pharmacophore:Â Thermodynamics of the Hydrogen-Bonding Complexation of Nicotine, Nornicotine, and Models. Journal of Organic Chemistry, 2003, 68, 8208-8221.	3.2	42
24	Insight into the Mechanisms of the Multicomponent Ugi and Ugiâ€“Smiles Reactions by ESIâ€MS(/MS). European Journal of Organic Chemistry, 2014, 2014, 7087-7090.	2.4	39
25	Comparison of brÃ¶nsted acidities of neutral NH-acids in gas phase, dimethyl sulfoxide and water. International Journal of Mass Spectrometry and Ion Processes, 1998, 175, 61-69.	1.8	33
26	Thermogravimetric calibration of permeation tubes used for the preparation of gas standards for air pollution analysis. Analyst, The, 2005, 130, 1369.	3.5	33
27	The heats of formation, gas-phase acidities, and related thermochemical properties of the third-row hydrides GeH4, AsH3, SeH2 and HBr from G2 ab initio calculations. International Journal of Mass Spectrometry and Ion Processes, 1997, 167-168, 689-696.	1.8	32
28	Complexes between Lithium Cation and Diphenylalkanes in the Gas Phase: The Pincer Effect. Chemistry - A European Journal, 2006, 12, 7676-7683.	3.3	32
29	Ab initiostudy of tautomerism and of basicity center preference in histamine, from gas phase to solution-comparison with experimental data (gas phase, solution, solid state). Journal of Physical Organic Chemistry, 2003, 16, 783-796.	1.9	30
30	Using Thermogravimetry for Weight Loss Monitoring of Permeation Tubes Used for Generation of Trace Concentration Gas Standards. Analytical Chemistry, 2002, 74, 305-307.	6.5	29
31	The Gas-Phase Acidity of HCP, CH3CP, HCAs, and CH3CAs: An Unexpected Enhanced Acidity of the Methyl Group. Chemistry - A European Journal, 2002, 8, 4919-4924.	3.3	29
32	On the Use of the Kinetic Method for the Determination of Proton Affinities by Fourier-transform Ion Cyclotron Resonance Mass Spectrometry. Rapid Communications in Mass Spectrometry, 1996, 10, 242-245.	1.5	28
33	Gas-Phase Basicities and Acidities of Ethyl-, Vinyl-, and Ethynylarsine. An Experimental and Theoretical Study. Journal of Physical Chemistry A, 1997, 101, 9525-9530.	2.5	28
34	Enhanced Li+ Binding Energies in Alkylbenzene Derivatives: The Scorpion Effect. Chemistry - A European Journal, 2003, 9, 4330-4338.	3.3	28
35	Experimental and Theoretical Evidence of Basic Site Preference in Polyfunctional Superbasic Amidinazine:ÂN1,N1-Dimethyl-N2-Î²-(2-pyridylethyl)formamidine. Journal of Organic Chemistry, 2004, 69, 4023-4030.	3.2	28
36	Acidity Trends in Î±,Î²-Unsaturated Sulfur, Selenium, and Tellurium Derivatives: Comparison with C-, Si-, Ge-, Sn-, N-, P-, As-, and Sb-Containing Analogues. Chemistry - A European Journal, 2005, 11, 2145-2153.	3.3	28

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37	Lithium-cation and proton affinities of sulfoxides and sulfones: A fourier transform ion cyclotron resonance study. Journal of the American Society for Mass Spectrometry, 1997, 8, 262-269.	2.8	27
38	Hydrogen-bonding. Part 4. An analysis of solute hydrogen-bond basicity, in terms of complexation constants (logK), using F1 and F2 factors, the principal components of different kinds of basicity. Journal of Physical Organic Chemistry, 1989, 2, 243-254.	1.9	24
39	Gas-Phase Basicity of Polyfunctional Amidinazines:Â Experimental Evidence of Preferred Site(s) of Protonation. Journal of Organic Chemistry, 2000, 65, 4635-4640.	3.2	24
40	Themeta versuspara substituent effect in the gas phase: Separation of inductive and resonance components. Journal of Physical Organic Chemistry, 1994, 7, 615-624.	1.9	23
41	Metal triflates and triflimides as Lewis â€œsuperacidsâ€: preparation, synthetic application and affinity tests by mass spectrometry. Journal of Physical Organic Chemistry, 2013, 26, 87-97.	1.9	23
42	Application of FT-ICR-MS for the study of proton-transfer reactions involving biomolecules. Analytical and Bioanalytical Chemistry, 2007, 389, 1365-1380.	3.7	22
43	Experimental and theoretical study of carbon suboxide C3O2, protonated carbon suboxide C3HO2+ and C3HO2Â· radical in the gas phase. International Journal of Mass Spectrometry and Ion Processes, 1995, 141, 241-255.	1.8	21
44	Fourier transform ion cyclotron resonance determination of lithium cation basicities by the kinetic method: upward extension of the scale to phosphoryl compounds. Journal of Mass Spectrometry, 1998, 33, 757-765.	1.6	21
45	Exceptionally High Proton and Lithium Cation Gas-Phase Basicity of the Anti-Diabetic Drug Metformin. Journal of Physical Chemistry A, 2017, 121, 8706-8718.	2.5	21
46	The gas-phase acidity and bond dissociation energies of hydrogen telluride. International Journal of Mass Spectrometry and Ion Processes, 1989, 93, 87-94.	1.8	20
47	Sterically Hindered Resonance in Methyl-Substituted Anilines in the Gas Phase. Journal of Organic Chemistry, 1994, 59, 8127-8131.	3.2	20
48	Gas-phase basicity of simple amides toward proton and lithium cation: an experimental and theoretical study. European Journal of Mass Spectrometry, 1999, 5, 259.	0.7	20
49	Computational Study of Cesium Cation Interactions with Neutral and Anionic Compounds Related to Soil Organic Matter. Journal of Physical Chemistry A, 2009, 113, 10734-10744.	2.5	19
50	Cyano substituent effects on enol and enethiol acidity and basicity: The protonation and deprotonation of 3-hydroxy-2-propenenitrile and its thio analogue. International Journal of Mass Spectrometry, 2007, 267, 125-133.	1.5	18
51	Gas-Phase Lithium Cation Basicity: Revisiting the High Basicity Range by Experiment and Theory. Journal of the American Society for Mass Spectrometry, 2014, 25, 1962-1973.	2.8	18
52	Gas-Phase Cation Basicities for Sulfuryl Species from Calculation and Experiment. Journal of Organic Chemistry, 1997, 62, 9203-9209.	3.2	17
53	Gas-Phase Basicities of Acid Anhydrides. Journal of Physical Chemistry A, 1998, 102, 9183-9192.	2.5	17
54	Are nicotinoids protonated on the pyridine or the amino nitrogen in the gas phase?. Journal of Physical Organic Chemistry, 2006, 19, 104-114.	1.9	17

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55	Gas-Phase Protonation and Deprotonation of Acrylonitrile Derivatives Nï£½Cï£¿CHï£¾CHï£¿X (X=CH3, NH2,) Tj ETQq1 1 0.784314 rgB	3.3	17
56	Mass spectrometric characterization of metal triflates and triflimides (Lewis superacid catalysts) by electrospray ionization and tandem mass spectrometry. Rapid Communications in Mass Spectrometry, 2010, 24, 2611-2619.	1.5	17
57	Glossary of terms used in physical organic chemistry (IUPAC Recommendations 2021). Pure and Applied Chemistry, 2022, 94, 353-534.	1.9	17
58	Investigations of cluster ions formed between cesium cations and benzoic, salicylic and phthalic acids by electrospray mass spectrometry and density-functional theory calculations. Toward a modeling of the interaction of Cs+ with humic substances. Rapid Communications in Mass Spectrometry, 2005, 19, 568-573.	1.5	16
59	Acidity and basicity of thiocarboxamides in the gas phase. Journal of Physical Organic Chemistry, 1994, 7, 511-517.	1.9	15
60	Interaction of the cesium cation with mono-, di-, and tricarboxylic acids in the gas phase. A Cs+ affinity scale for cesium carboxylates ion pairs. Journal of the American Society for Mass Spectrometry, 2009, 20, 1912-1924.	2.8	15
61	Can Nitriles Be Stronger Bases Than Proton Sponges in the Gas Phase? A Computational Analysis. Journal of Physical Chemistry A, 2015, 119, 8225-8236.	2.5	15
62	A microcalorimetric method for the measurement of enthalpies of solution of gases in liquids. Thermochimica Acta, 1987, 115, 67-81.	2.7	14
63	Adduct formation between phthalate esters and Li+ in the gas phase: a thermochemical study by FT-ICR mass spectrometry. International Journal of Mass Spectrometry, 2002, 217, 75-79.	1.5	14
64	SPME Sampling of BTEX before GC/MS Analysis: Examples of outdoor and indoor Air Quality Measurements in Public and Private Sites. Annali Di Chimica, 2005, 95, 757-766.	0.6	14
65	Exceptional proton affinities of pushâ€“pull nitriles substituted by the guanidino and phosphazeno groups. RSC Advances, 2015, 5, 25513-25517.	3.6	14
66	The guanylated bioamine agmatine â€“ A theoretical investigation of its structure and exceptional high basicity in the gas phase. Computational and Theoretical Chemistry, 2017, 1109, 10-18.	2.5	14
67	Gas-phase basicity of aromatic azines: A short review on structural effects. International Journal of Mass Spectrometry, 2017, 418, 130-139.	1.5	14
68	Catalytic intramolecular carbonylâ€“ene reaction with ketones: evidence for a retroâ€“ene process. New Journal of Chemistry, 2015, 39, 7453-7458.	2.8	13
69	Biguanide Antidiabetic Drugs: Imeglimin Exhibits Higher Proton Basicity but Smaller Lithium-Cation Basicity than Metformin in Vacuo. ACS Omega, 2018, 3, 17842-17852.	3.5	13
70	Gas-phase ion-molecule reactions in organophosphorus esters. , 1999, 34, 1296-1302.		12
71	Vinyl- and ethynylsilanes, -germanes and -stannanes. A new case of dissociative proton attachment. Journal of Physical Organic Chemistry, 2002, 15, 509-513.	1.9	12
72	Steric Effects in Isolated Molecules: Gas-Phase Basicity of Methyl-Substituted Acetophenones. European Journal of Organic Chemistry, 2005, 2005, 2580-2588.	2.4	12

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73	Experimental (FT-ICR) and theoretical (DFT) estimation of the basic site preference for the bidentate molecule 2-(Î²-aminoethyl)-pyridine: similarity with histamine. Journal of Physical Organic Chemistry, 2005, 18, 856-863.	1.9	12
74	A study of the cesium cation bonding to carboxylate anions by the kinetic method and quantum chemical calculations. Journal of Mass Spectrometry, 2010, 45, 520-527.	1.6	12
75	Bond Strength and Reactivity Scales for Lewis Superacid Adducts: A Comparative Study with In(OTf)₃ and Al(OTf)₃. ChemPhysChem, 2017, 18, 683-691.	2.1	12
76	Bonding energetics in clusters formed by cesium salts: a study by collision-induced dissociation and density functional theory. Rapid Communications in Mass Spectrometry, 2006, 20, 2057-2062.	1.5	11
77	Theoretical modeling of sensitivity factors of Bayard-Alpert ionization gauges. International Journal of Mass Spectrometry, 2013, 341-342, 52-58.	1.5	11
78	Ab Initio and Experimental Thermodynamic and Kinetic Study of Proton-Assisted Bond Activation in Gaseous Hydrocarbons: Deconvolution of Reaction Efficiencies in the Case of Adamantane. Chemistry - A European Journal, 2006, 12, 5505-5513.	3.3	10
79	Effect of the Number of Methyl Groups on the Cation Affinity of Oxygen, Nitrogen, and Phosphorus Sites of Lewis Bases. Journal of Physical Chemistry A, 2016, 120, 9109-9116.	2.5	10
80	Pushâ€“Pull Effect on the Gas-Phase Basicity of Nitriles: Transmission of the Resonance Effects by Methylenecyclopropene and Cyclopropenimine Ï€-Systems Substituted by Two Identical Strong Electron Donors. Symmetry, 2021, 13, 1554.	2.2	10
81	Relative basicities toward metal triflates Lewis acids by electrospray mass spectrometry. Chemical Communications, 2010, 46, 8472.	4.1	9
82	A Quantitative Approach of the Interaction between Metal Triflates and Organic Ligands Using Electrospray Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2012, 23, 2059-2062.	2.8	9
83	On the Significance of Lone Pair/Lone Pair and Lone Pair/Bond Pair Repulsions in the Cation Affinity and Lewis Acid/Lewis Base Interactions. ACS Omega, 2018, 3, 11331-11339.	3.5	9
84	Gas-phase lithium cation basicity of histamine and its agonist 2-(Î²-aminoethyl)-pyridine. International Journal of Mass Spectrometry, 2007, 267, 315-323.	1.5	8
85	Bonding between the cesium cation and substituted benzoic acids or benzoate anions in the gas phase: A density functional theory and mass spectrometric study. Collection of Czechoslovak Chemical Communications, 2009, 74, 167-188.	1.0	8
86	Measuring Gas-Phase Basicities Relative to the Lithium Cation by Mass Spectrometry: A Physical Chemistry Experiment. Journal of Chemical Education, 2012, 89, 1476-1478.	2.3	8
87	Aluminum Monocation Basicity and Affinity Scales. European Journal of Mass Spectrometry, 2015, 21, 517-532.	1.0	8
88	Directionality of Cation/Molecule Bonding in Lewis Bases Containing the Carbonyl Group. Journal of Physical Chemistry A, 2017, 121, 6810-6822.	2.5	8
89	The gas-phase basicity of ethyl-, ethenyl- and ethynylphosphines and arsines. International Journal of Mass Spectrometry and Ion Processes, 1998, 175, 27-33.	1.8	7
90	Interaction between the Cesium Cation and Cesium Carboxylates: An Extended Cs⁺ Basicity Scale. ChemPlusChem, 2013, 78, 1195-1204.	2.8	7

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91	Comment on the Article â€œGutmann Donor and Acceptor Numbers for Ionic Liquidsâ€•by M. Schmeisser, P. Illner, R. Puchta, A. Zahl, and R. vanâ€…Eldik (Chem. Eur. J. 2012, 18, 10969â€“10982). Chemistry A European Journal, 2013, 19, 16832-16834.	3.3	7
92	Enthalpies of Adduct Formation between Boron Trifluoride and Selected Organic Bases in Solution: Toward an Accurate Theoretical Entry to Lewis Basicity. Molecules, 2021, 26, 6659.	3.8	7
93	On the Lewis Basicity of Phosphoramides: A Critical Examination of Their Donor Number through Comparison of Enthalpies of Adduct Formation with SbCl 5 and BF 3. ChemPhysChem, 2019, 20, 2566-2576.	2.1	6
94	Quality Control of a Functionalized Polymer Catalyst by Energy Dispersive X-ray Spectrometry (EDX or) Tj ETQq0 0 0 rgBT /Overlock 10 T	6.5	6
95	Is Allylphosphine a Carbon or a Phosphorus Base in the Gas Phase?. European Journal of Mass Spectrometry, 2003, 9, 245-255.	1.0	5
96	Catalytic Effect of Cesium Cation Adduct Formation on the Decarboxylation of Carboxylate Ions in the Gas Phase. Chemistry - A European Journal, 2014, 20, 815-823.	3.3	5
97	Quantitative Ligand Affinity Scales for Metal Triflate Salts: Application to Isomer Differentiation. ChemPlusChem, 2017, 82, 498-506.	2.8	5
98	Assessment of the nature of interactions of cations with cycloheptatriene derivatives using change in the aromaticity: Comparison with electron density and NBO results. Molecular Physics, 2020, 118, e1662507.	1.7	5
99	Purine tautomeric preferences and bond-length alternation in relation with protonation-deprotonation and alkali metal cationization. Journal of Molecular Modeling, 2020, 26, 93.	1.8	5
100	Can the Lewis Basicity of an Isolated Solvent Molecule be Used for Characterizing Solvent Effects?. Current Analytical Chemistry, 2021, 17, 328-338.	1.2	4
101	Nitriles with High Gas-Phase Basicityâ€”Part II Transmission of the Pushâ€“Pull Effect through Methylenecyclopropene and Cyclopropenimine Scaffolds Intercalated between Different Electron Donor(s) and the Cyano N-Protonation Site. Molecules, 2022, 27, 4370.	3.8	4
102	Metal Triflates as Catalysts in Organic Synthesis: Determination of Their Lewis Acidity by Mass Spectrometry. ChemPlusChem, 2022, 87, e202200037.	2.8	3
103	A Short Note on the History of Chromatography at the University of Tartu, Estonia. Chromatographia, 2010, 72, 203-204.	1.3	2
104	An Excursion into the History of Chromatography: Mikhail Tswett, From Asti, Italy, to Tartu, Estonia. Chromatographia, 2019, 82, 519-521.	1.3	2
105	Alkali Metal Cations Bonding to Carboxylate Anions: Studies using Mass Spectrometry and Quantum Chemical Calculations. Journal of Physical Chemistry A, 2020, 124, 4390-4399.	2.5	2
106	Organometallic superacids and hyperacids: Acidity enhancement by internal bonding with a strong electron-pair acceptor group BX2. Chemical Physics Letters, 2021, 763, 138207.	2.6	2
107	Energetics and Structures of Adducts of JohnPhos(Au+), PPh3(Au+), and IPr(Au+) with Organic Substrates: A Mass Spectrometry and DFT Study. Organometallics, 2021, 40, 1642-1653.	2.3	0
108	Evolution of Chemical Research in Nice, CÃ´te dâ€²Azur: From Early Laboratories to the â€˜Institut de Chimie de Niceâ€™. ChemPlusChem, 2022, , e202100532.	2.8	0

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109	Front Cover: Evolution of Chemical Research in Nice, CÃ´te dâ€²Azur: From Early Laboratories to the â€˜Institut de Chimie de Niceâ€™(ChemPlusChem 6/2022). ChemPlusChem, 2022, 87, .	2.8	0