Yizhak Marcus

List of Publications by Year
in descending order

148 papers	12,658 citations	81900 39 h-index	24982 109 g-index
162 all docs	162 docs citations	162 times ranked	11633 citing authors

#	Article	IF	Citations
1	Thermodynamics of solvation of ions. Part 5.â€"Gibbs free energy of hydration at 298.15 K. Journal of the Chemical Society, Faraday Transactions, 1991, 87, 2995-2999.	1.7	1,703
2	Effect of Ions on the Structure of Water: Structure Making and Breaking. Chemical Reviews, 2009, 109, 1346-1370.	47.7	1,460
3	Ionic radii in aqueous solutions. Chemical Reviews, 1988, 88, 1475-1498.	47.7	1,380
4	Ion Pairing. Chemical Reviews, 2006, 106, 4585-4621.	47.7	921
5	A simple empirical model describing the thermodynamics of hydration of ions of widely varying charges, sizes, and shapes. Biophysical Chemistry, 1994, 51, 111-127.	2.8	712
6	Viscosity B-Coefficients of Ions in Solution. Chemical Reviews, 1995, 95, 2695-2724.	47.7	623
7	Linear solvation energy relationship. 46. An improved equation for correlation and prediction of octanol/water partition coefficients of organic nonelectrolytes (including strong hydrogen bond) Tj ETQq1 1 0.784314 rgBT /Overlock	3.14	1
8	Gibbs Energies of Transfer of Cations from Water to Mixed Aqueous Organic Solvents. Chemical Reviews, 2000, 100, 819-852.	47.7	311
9	Polarity, hydrogen bonding, and structure of mixtures of water and cyanomethane. The Journal of Physical Chemistry, 1991, 95, 400-406.	2.9	250
10	Standard Partial Molar Volumes of Electrolytes and Ions in Nonaqueous Solvents. Chemical Reviews, 2004, 104, 3405-3452.	47.7	232
11	On the preferential solvation of drugs and PAHs in binary solvent mixtures. Journal of Molecular Liquids, 2008, 140, 61-67.	4.9	232
12	The thermodynamics of solvation of ions. Part 2.â€"The enthalpy of hydration at 298.15 K. Journal of the Chemical Society Faraday Transactions I, 1987, 83, 339.	1.0	217
13	The use of chemical probes for the characterization of solvent mixtures. Part 2. Aqueous mixtures. Journal of the Chemical Society Perkin Transactions II, 1994, , 1751.	0.9	145
14	Thermodynamics of solvation of ions. Part 6.â€"The standard partial molar volumes of aqueous ions at 298.15 K. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 713-718.	1.7	144
15	Enthalpies and Entropies of Transfer of Electrolytes and Ions from Water to Mixed Aqueous Organic Solvents. Chemical Reviews, 2002, 102, 2773-2836.	47.7	138
16	Gibbs Energies of Transfer of Anions from Water to Mixed Aqueous Organic Solvents. Chemical Reviews, 2007, 107, 3880-3897.	47.7	120
17	Preferential Solvation in Mixed Solvents X. Completely Miscible Aqueous Co-Solvent Binary Mixtures at 298.15 K. Monatshefte FÃ¼r Chemie, 2001, 132, 1387-1411.	1.8	118
18	Electrostriction in Electrolyte Solutions. Chemical Reviews, 2011, 111, 2761-2783.	47.7	113

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19	Volumes of aqueous hydrogen and hydroxide ions at 0 to 200 Â°C. Journal of Chemical Physics, 2012, 137, 154501.	3.0	111
20	Solution Thermodynamics and Preferential Solvation of Meloxicam in Propylene Glycol + Water Mixtures. Journal of Solution Chemistry, 2011, 40, 1987-1999.	1.2	110
21	Tetraalkylammonium Ions in Aqueous and Non-aqueous Solutions. Journal of Solution Chemistry, 2008, 37, 1071-1098.	1.2	108
22	Effect of ions on the structure of water. Pure and Applied Chemistry, 2010, 82, 1889-1899.	1.9	96
23	Electrostriction, Ion Solvation, and Solvent Release on Ion Pairing. Journal of Physical Chemistry B, 2005, 109, 18541-18549.	2.6	90
24	Ion volumes: a comparison. Dalton Transactions RSC, 2002, , 3795-3798.	2.3	86
25	Preferential solvation in mixed solvents. Part 5.â€”Binary mixtures of water and organic solvents. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 2215-2224.	1.7	84
26	Internal Pressure of Liquids and Solutions. Chemical Reviews, 2013, 113, 6536-6551.	47.7	83
27	The Standard Partial Molar Volumes of Ions in Solution. Part 4. Ionic Volumes in Water at 0â˜100 Â°C. Journal of Physical Chemistry B, 2009, 113, 10285-10291.	2.6	79
28	Preferential solvation. Part 3.â€”Binary solvent mixtures. Journal of the Chemical Society Faraday Transactions I, 1989, 85, 381.	1.0	76
29	The thermodynamics of solvation of ions. Part 1.â€”The heat capacity of hydration at 298.15 K. Journal of the Chemical Society Faraday Transactions I, 1986, 82, 3255.	1.0	72
30	Deep Eutectic Solvents. , 2019, , .		70
31	The structuredness of solvents. Journal of Solution Chemistry, 1992, 21, 1217-1230.	1.2	69
32	On the Pressure and Electric Field Dependencies of the Relative Permittivity of Liquids. Journal of Solution Chemistry, 1999, 28, 575-592.	1.2	67
33	The structure of and interactions in binary acetonitrile + water mixtures. Journal of Physical Organic Chemistry, 2012, 25, 1072-1085.	1.9	62
34	Ionic partial molar volumes in non-aqueous solvents. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 1899.	1.7	58
35	A critical review of methods for obtaining ionic volumes in solution. Journal of Solution Chemistry, 1997, 26, 249-266.	1.2	58
36	Surface Tension of Aqueous Electrolytes and Ions. Journal of Chemical & Engineering Data, 2010, 55, 3641-3644.	1.9	55

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37	Are solubility parameters relevant to supercritical fluids?. Journal of Supercritical Fluids, 2006, 38, 7-12.	3.2	53
38	Concentration Dependence of Ionic Hydration Numbers. Journal of Physical Chemistry B, 2014, 118, 10471-10476.	2.6	51
39	Ionic Liquid Properties. , 2016, , .		51
40	Unconventional Deep Eutectic Solvents: Aqueous Salt Hydrates. ACS Sustainable Chemistry and Engineering, 2017, 5, 11780-11787.	6.7	45
41	Water structure enhancement in water-rich binary solvent mixtures. Part II. The excess partial molar heat capacity of the water. Journal of Molecular Liquids, 2012, 166, 62-66.	4.9	41
42	Ionic and molar volumes of room temperature ionic liquids. Journal of Molecular Liquids, 2015, 209, 289-293.	4.9	41
43	Ions in Water and Biophysical Implications. , 2012, , .		40
44	Effects of Solvent Properties on the Anion Binding of Neutral Water-Soluble Bis(cyclopeptides) in Water and Aqueous Solvent Mixtures. ACS Omega, 2017, 2, 3669-3680.	3.5	40
45	Hansen solubility parameters for supercritical water. Journal of Supercritical Fluids, 2012, 62, 60-64.	3.2	39
46	Extraction by Subcritical and Supercritical Water, Methanol, Ethanol and Their Mixtures. Separations, 2018, 5, 4.	2.4	39
47	Individual Ionic Surface Tension Increments in Aqueous Solutions. Langmuir, 2013, 29, 2881-2888.	3.5	38
48	Solvatochromic probes in supercritical fluids. Journal of Physical Organic Chemistry, 2005, 18, 373-384.	1.9	37
49	The sizes of molecules-revisited. Journal of Physical Organic Chemistry, 2003, 16, 398-408.	1.9	35
50	On Water Structure in Concentrated Salt Solutions. Journal of Solution Chemistry, 2009, 38, 513-516.	1.2	35
51	The guanidinium ion. Journal of Chemical Thermodynamics, 2012, 48, 70-74.	2.0	35
52	Preferential solvation in mixed solvents.. Physical Chemistry Chemical Physics, 2002, 4, 4462-4471.	2.8	34
53	Gas solubilities in deep eutectic solvents. Monatshefte FÃ¼r Chemie, 2018, 149, 211-217.	1.8	33
54	Water structure enhancement in water-rich binary solvent mixtures. Journal of Molecular Liquids, 2011, 158, 23-26.	4.9	32

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55	Solubility Parameter of Carbon Dioxideâ€"An Enigma. ACS Omega, 2018, 3, 524-528.	3.5	31
56	Preferential solvation in mixed solvents Part 8. Aqueous methanol from sub-ambient to elevated temperatures. Physical Chemistry Chemical Physics, 1999, 1, 2975-2983.	2.8	30
57	The cohesive energy of molten salts and its density. Journal of Chemical Thermodynamics, 2010, 42, 60-64.	2.0	30
58	Are Ionic Stokes Radii of Any Use?. Journal of Solution Chemistry, 2012, 41, 2082-2090.	1.2	30
59	Preferential solvation of ions in mixed solvents. Part 4.â€"Comparison of the Kirkwoodâ€"Buff and quasi-lattice quasi-chemical approaches. Journal of the Chemical Society Faraday Transactions I, 1989, 85, 3019.	1.0	26
60	The standard partial molar volumes of ions in solution. Journal of Molecular Liquids, 2005, 118, 3-8.	4.9	26
61	Ionic volumes in solution. Biophysical Chemistry, 2006, 124, 200-207.	2.8	25
62	The compressibility of molten salts. Journal of Chemical Thermodynamics, 2013, 61, 7-10.	2.0	25
63	On the compressibility of liquid metals. Journal of Chemical Thermodynamics, 2017, 109, 11-15.	2.0	25
64	Some Advances in Supercritical Fluid Extraction for Fuels, Bio-Materials and Purification. Processes, 2019, 7, 156.	2.8	25
65	Ionic partial molar heat capacities in non-aqueous solvents. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 757.	1.7	24
66	Preferential solvation in mixed solvents. 14. Mixtures of 1,4-dioxane with organic solvents: Kirkwoodâ€"Buff integrals and volume-corrected preferential solvation parameters. Journal of Molecular Liquids, 2006, 128, 115-126.	4.9	24
67	Surface tension and cohesive energy density of molten salts. Thermochimica Acta, 2013, 571, 77-81.	2.7	24
68	Molar refractivities of tetra-n-alkylammonium salts and ions. Journal of Chemical & Engineering Data, 1988, 33, 43-46.	1.9	23
69	The structuredness of solvents. 2. Data for ambient conditions. Journal of Solution Chemistry, 1996, 25, 455-469.	1.2	23
70	The Molar Volumes of Ions in Solution, Part 7. Electrostriction and Hydration Numbers of Aqueous Polyatomic Anions at 25 Â°C. Journal of Physical Chemistry B, 2014, 118, 2172-2175.	2.6	22
71	Preferential solvation of ions in mixed solvents. 6: Univalent anions in aqueous organic solvents according to the inverse Kirkwoodâ€"Buff integral (IKBI) approach. Journal of Chemical Thermodynamics, 2007, 39, 1338-1345.	2.0	20
72	CORRELATION OF THE DISTRIBUTION OF ORGANIC SOLUTES BETWEEN WATER AND â€˜WETâ€™ ORGANIC SOLVENTS WITH THE PROPERTIES OF THE SOLUTES AND THE SOLVENTS. Solvent Extraction and Ion Exchange, 1992, 10, 527-538.	2.0	19

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73	On the activity coefficients of charge-symmetrical ion pairs. Journal of Molecular Liquids, 2006, 123, 8-13.	4.9	19
74	Preferential Solvation in Mixed Solvents. Journal of Solution Chemistry, 2006, 35, 251-277.	1.2	19
75	Specific ion effects on the surface tension and surface potential of aqueous electrolytes. Current Opinion in Colloid and Interface Science, 2016, 23, 94-99.	7.4	19
76	Preferential solvation of silver(I), copper(I) and copper(II) ions in aqueous acetonitrile. Journal of the Chemical Society Dalton Transactions, 1991, , 2265.	1.1	17
77	On the Intrinsic Volumes of Ions in Aqueous Solutions. Journal of Solution Chemistry, 2010, 39, 1031-1038.	1.2	17
78	The Standard Partial Molar Volumes of Ions in Solution. Part 5. Ionic Volumes in Water at 125â€“200 Â°C. Journal of Physical Chemistry B, 2012, 116, 7232-7239.	2.6	17
79	The compressibility and surface tension product of molten salts. Journal of Chemical Physics, 2013, 139, 124509.	3.0	17
80	Estimation of the Critical Temperatures of Some More Deep Eutectic Solvents from Their Surface Tensions. Advances in Materials Science and Engineering, 2018, 2018, 1-3.	1.8	17
81	The Standard Partial Molar Volumes of Ions in Solution. Part 2. The Volumes in Two Binary Solvent Mixtures with No Preferential Solvation. Journal of Solution Chemistry, 2004, 33, 549-559.	1.2	16
82	Heat capacities of molten salts with polyatomic anions. Thermochimica Acta, 2009, 495, 81-84.	2.7	15
83	Relationships Among Solvent Softness Scales. Journal of Solution Chemistry, 2000, 29, 201-216.	1.2	14
84	Preferential Solvation of Ions in Mixed Solvents. 5. The Alkali Metal, Silver, and Thallium(I) Cations in Aqueous Organic Solvents According to the Inverse Kirkwood-Buff Integral (IKBI) Approach. Journal of Solution Chemistry, 2007, 36, 1385-1399.	1.2	14
85	The Viscosity B-Coefficient of the Thiocyanate Anion. Journal of Chemical & Engineering Data, 2012, 57, 617-619.	1.9	14
86	Titration calorimetric determination of the pairwise interaction parameters of glycerol, D-threitol, mannitol, and D-glucitol in dilute aqueous solutions. Journal of Solution Chemistry, 1995, 24, 201-209.	1.2	13
87	Volumetric behavior of molten salts. Thermochimica Acta, 2013, 559, 111-116.	2.7	13
88	Evaluation of the Static Permittivity of Aqueous Electrolytes. Journal of Solution Chemistry, 2013, 42, 2354-2363.	1.2	13
89	Prediction of salting-out and salting-in constants. Journal of Molecular Liquids, 2013, 177, 7-10.	4.9	13
90	Role of hydrophobicity in protein structure is overestimated. International Journal of Peptide and Protein Research, 1989, 34, 405-408.	0.1	12

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91	Room Temperature Ionic Liquids. , 2016, , 123-220.		12
92	Total and partial solubility parameters of supercritical methanol. Journal of Supercritical Fluids, 2016, 111, 43-46.	3.2	12
93	Activity Coefficients of Sodium Bromide at High Concentrations.. Journal of Chemical & Engineering Data, 1965, 10, 105-106.	1.9	11
94	Entropies of tetrahedral Mâ€"phenyl species. Journal of the Chemical Society Faraday Transactions I, 1986, 82, 993.	1.0	11
95	Water binding by organic molecules. Cell Biochemistry and Function, 1995, 13, 157-163.	2.9	11
96	Preferential solvation in mixed solvents. 12. Aqueous glycols. Journal of Molecular Liquids, 2003, 107, 109-126.	4.9	11
97	Solubility Parameters of Permanent Gases. Journal of Chemistry, 2016, 2016, 1-18.	1.9	11
98	Room Temperature Ionic Liquids: Their Cohesive Energies, Solubility Parameters and Solubilities in Them. Journal of Solution Chemistry, 2017, 46, 1778-1791.	1.2	11
99	Thermodynamic properties of tetrabutylammonium iodide and tetrabutylammonium tetraphenylborate. Thermochimica Acta, 2009, 483, 15-20.	2.7	10
100	Relationships between the internal pressure, the cohesive energy, and the surface tension of liquids. Physics and Chemistry of Liquids, 2017, 55, 522-531.	1.2	10
101	The Entropy of Deep Eutectic Solvent Formation. Entropy, 2018, 20, 524.	2.2	10
102	Are solubility parameters relevant for the solubility of liquid organic solutes in room temperature ionic liquids?. Journal of Molecular Liquids, 2016, 214, 32-36.	4.9	9
103	Properties of Deep Eutectic Solvents. , 2019, , 45-110.		9
104	On the Molar Volumes and Viscosities of Electrolytes. Journal of Solution Chemistry, 2006, 35, 1271-1286.	1.2	8
105	Total and partial solubility parameters of sub- and supercritical ethanol. Journal of Chemical Thermodynamics, 2018, 126, 187-189.	2.0	8
106	The Variety of Deep Eutectic Solvents. , 2019, , 13-44.		8
107	Some thermophysical properties of methanol and aqueous methanol mixtures at sub- and supercritical conditions. Journal of Molecular Liquids, 2017, 239, 10-13.	4.9	7
108	The solubility and solvation of salts in mixed nonaqueous solvents. 2. Potassium halides in mixed protic solvents. Journal of Solution Chemistry, 1997, 26, 1-12.	1.2	6

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109	A new double salt: triacetatohexaaquodimagnesium nitrate. Journal of Crystal Growth, 2003, 254, 151-155.	1.5	6
110	Densities and Excess and Partial Molar Volumes of Aqueous Pyrrolidine at 25 and 50 Â°C and Aqueous Morpholine at 25 and 60 Â°C. Journal of Chemical & Engineering Data, 2003, 48, 208-210.	1.9	6
111	Volumetric Properties of Molten Salt Hydrates. Journal of Chemical & Engineering Data, 2013, 58, 488-491.	1.9	6
112	On the surface tension of room temperature ionic liquids. Fluid Phase Equilibria, 2017, 444, 56-60.	2.5	6
113	Preferential solvation in mixed solvents. 15. Mixtures of acetonitrile with organic solvents. Journal of Chemical Thermodynamics, 2019, 135, 55-59.	2.0	6
114	A random contact point model for second virial coefficients in dilute solutions. AICHE Journal, 1987, 33, 1800-1807.	3.6	5
115	Hydrogen Bonding in Supercritical Water. Biofuels and Biorefineries, 2014, , 3-39.	0.5	5
116	The Effect of Complex Anions on the Structure of Water. Journal of Solution Chemistry, 2015, 44, 2258-2265.	1.2	5
117	Structure of Mixtures of Water and Methanol Derived from Their Cohesive Energy Densities and Internal Pressures from Subambient Temperatures to 473 K. Journal of Physical Chemistry B, 2017, 121, 863-866.	2.6	5
118	The Solubility Parameter of Carbon Dioxide and Its Solubility in Ionic Liquids. Journal of Solution Chemistry, 2019, 48, 1025-1034.	1.2	5
119	The structure of mixtures of water and acetone derived from their cohesive energy densities and internal pressures. Journal of Molecular Liquids, 2020, 320, 112801.	4.9	5
120	The fluidity of room temperature ionic liquids. Fluid Phase Equilibria, 2014, 363, 66-69.	2.5	4
121	Electrostriction of Several Nonaqueous Solvents under Ambient Conditions and Solvation Numbers of Ions in Them. Journal of Physical Chemistry B, 2016, 120, 9755-9758.	2.6	4
122	The Internal Pressure and Cohesive Energy Density of Liquid Metallic Elements. International Journal of Thermophysics, 2017, 38, 1.	2.1	4
123	A relationship between the effect of uni-univalent electrolytes on the structure of water and on its volatility. Journal of Chemical Physics, 2018, 148, 222807.	3.0	4
124	Standard absolute entropy, S298o, of salt hydrates from volumes and hydrate numbers and the thermodynamic difference rule. Chemical Physics Letters, 2018, 708, 106-108.	2.6	4
125	Substituted Anilines as Solvatochromic Probes. , 0, , 373-406.		3
126	The enthalpy of formation of gaseous tetra-n-propylammonium cations. Journal of Chemical Thermodynamics, 2014, 71, 196-199.	2.0	3

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127	The fluidity of molten salts re-examined. Fluid Phase Equilibria, 2014, 366, 57-60.	2.5	3
128	Solvation Numbers of Divalent Metal Salts and Ions in Some Non-aqueous Solvents. Journal of Solution Chemistry, 2017, 46, 225-233.	1.2	3
129	Salts Forming Low-Melting Eutectics with Water: BET Parameters. Journal of Solution Chemistry, 2017, 46, 1451-1455.	1.2	3
130	The isothermal compressibility and surface tension product of room temperature ionic liquids. Journal of Chemical Thermodynamics, 2018, 124, 149-152.	2.0	3
131	The Octahedral-Square-Planar Transition of Nickel Chelates. Journal of Chemical Education, 1998, 75, 1458.	2.3	2
132	Mixed magnesium and nickel nitrate hexahydrates: an unexpected restructuring. Journal of Crystal Growth, 2004, 270, 589-592.	1.5	2
133	The standard partial molar entropy of the aqueous tetra-n-butylammonium cation. Journal of Chemical Thermodynamics, 2008, 40, 1314-1317.	2.0	2
134	Low-Melting Ionic Salts. , 2016, , 109-122.		2
135	Preferential solvation in mixed solvents. 16. Mixtures of N,N-dimethylformamide or propylene carbonate with organic solvents. Journal of Chemical Thermodynamics, 2020, 140, 105903.	2.0	2
136	Effects of Ions on Water Structure and Vice Versa. , 2012, , 99-139.		2
137	Chapter 18. Internal Pressure of Liquids: A Review. , 2017, , 477-504.		2
138	Chapter 19. Volumetric Behaviour of Room Temperature Ionic Liquids. , 2014, , 512-525.		1
139	Reprint of: The enthalpy of formation of gaseous tetra-n-propylammonium cations. Journal of Chemical Thermodynamics, 2014, 73, 296-299.	2.0	1
140	The internal pressure and cohesive energy density of two inorganic liquids: Bromine and carbon disulfide. Journal of Chemical Thermodynamics, 2016, 98, 317-318.	2.0	1
141	Deep Eutectic Solvents in Extraction and Sorption Technology. , 2019, , 153-183.		1
142	Ions. , 2012, , 49-98.		0
143	Reply to the letter â€œTo curve-fit or not to curve-fit: Comments on â€˜Water structure enhancement in water-rich binary solvent mixtures. Part II. The excess partial molar heat capacity of the water.â€™â€•by Yoshikata Koga. Journal of Molecular Liquids, 2013, 177, 436.	4.9	0
144	On the solubility of non-ionic organic solutes in seawater. Pure and Applied Chemistry, 2015, 87, 503-508.	1.9	0

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145	The Properties of Ions Constituting Ionic Liquids. , 2016, , 7-24.		0
146	High-Melting Salts. , 2016, , 25-98.		0
147	The viscosity and electrical conductivity of single molten salts. Chemical Physics Letters, 2016, 659, 40-42.	2.6	0
148	Water Surfaces. , 2012, , 141-169.		0