Mitsuo Tasumi

List of Publications by Citations

56 papers	2,772 citations	26 h-index	52 g-index
56 ext. papers	2,903 ext. citations	2.9 avg, IF	4.61 L-index

#	Paper	IF	Citations
56	Model calculations on the amide-I infrared bands of globular proteins. *Journal of Chemical Physics*, **1992**, 96, 3379-3387	3.9	407
55	Correlation between the Vibrational Frequencies of the Carboxylate Group and the Types of Its Coordination to a Metal Ion:Anab InitioMolecular Orbital Study. *The Journal of Physical Chemistry*, **1996**, 100, 19812-19817		365
54	Ab initio molecular orbital study of the amide I vibrational interactions between the peptide groups in di- and tripeptides and considerations on the conformation of the extended helix. *Journal of Raman Spectroscopy*, **1998**, 29, 81-86	2.3	246
53	Normal-coordinate analysis of carotene isomers and assignments of the Raman and infrared bands. *Journal of Raman Spectroscopy*, **1983**, 14, 310-321	2.3	148
52	Effects of Intermolecular Hydrogen-Bonding Interactions on the Amide I Mode of N-Methylacetamide: Matrix-Isolation Infrared Studies and ab Initio Molecular Orbital Calculations. *Journal of Physical Chemistry B*, **1998**, 102, 309-314	3.4	141
51	Effects of hydration on the structure, vibrational wavenumbers, vibrational force field and resonance raman intensities of N-methylacetamide. *Journal of Raman Spectroscopy*, **1998**, 29, 537-546	2.3	127
50	Raman and infrared spectra of the all-trans, 7-cis, 9-cis, 13-cis and 15-cis isomers of carotene: Key bands distinguishing stretched or terminal-bent configurations form central-bent configurations. *Journal of Raman Spectroscopy*, **1988**, 19, 37-49	2.3	123
49	Local order and transition dipole coupling in liquid methanol and acetone as the origin of the Raman noncoincidence effect. *Journal of Chemical Physics*, **1993**, 99, 8459-8465	3.9	96
48	Resonance Raman spectra (5800 40 cm 1) of All-trans and 15-cis isomers of carotene in the solid state and in solution. Measurements with various laser lines from ultraviolet to red. *Journal of Raman Spectroscopy*, **1983**, 14, 299-309	2.3	85
47	Infrared studies of interaction between metal ions and Ca(2+)-binding proteins. Marker bands for identifying the types of coordination of the side-chain COO- groups to metal ions in pike parvalbumin (pI = 4.10). *FEBS Letters*, **1994**, 349, 84-8	3.8	81
46	Vibrational analyses of trans-polyacetylene based on ab initio second-order Mo/ller Plesset perturbation calculations of trans-oligoenes. *Journal of Chemical Physics*, **1995**, 103, 8964-8979	3.9	58
45	Application of the three-dimensional doorway-state theory to analyses of the amide-I infrared bands of globular proteins. *Journal of Chemical Physics*, **1992**, 97, 92-98	3.9	58
44	Liquid Structure, Infrared and Isotropic/Anisotropic Raman Noncoincidence of the Amide I Band, and Low-Wavenumber Vibrational Spectra of Liquid Formamide:Molecular Dynamics and ab Initio Molecular Orbital Studies. *Journal of Physical Chemistry B*, **1998**, 102, 315-321	3.4	52
43	Some thoughts on the vibrational modes of toluene as a typical monosubstituted benzene. *Journal of Molecular Structure*, **1986**, 146, 383-396	3.4	52
42	Normal-coordinate analysis of retinal isomers and assignments of Raman and infrared bands. *Journal of Raman Spectroscopy*, **1983**, 14, 236-245	2.3	52
41	Bacteriochlorophyll-protein complexes of aerobic bacteria, Erythrobacter longus and Erythrobacter species OCh 114. *Archives of Microbiology*, **1985**, 143, 244-247	3	48
40	Three-dimensional doorway-state theory for analyses of absorption bands of many-oscillator systems. *Journal of Chemical Physics*, **1992**, 97, 86-91	3.9	43

39	Raman studies of L-histidine and related compounds in aqueous solutions. *Journal of Raman Spectroscopy*, **1982**, 12, 149-151	2.3	43
38	Intermolecular hydrogen bonding and low-wave-number vibrational spectra of formamide, N-methylformamide, and N-methylacetamide in the liquid state. *International Journal of Quantum Chemistry*, **1998**, 70, 241-252	2.1	41
37	Spectroscopic Studies on the Radical-Cation Dimer of a Model Compound of Poly(p-phenylenevinylene). Similarities between the Dimer and the State of Positive Polarons in the Sulfuric-Acid-Treated Polymer. *Journal of Physical Chemistry B*, **1997**, 101, 1726-1732	3.4	39
36	Vibrational analyses of trans,trans-1,3,5,7-octatetraene and all-trans-1,3,5,7,9-decapentaene based on ab initio molecular orbital calculations and observed infrared and Raman spectra. *Journal of Chemical Physics*, **1995**, 103, 8955-8963	3.9	36
35	STUDIES ON THE INTERRELATIONSHIP AMONG THE INTENSITY OF A RAMAN MARKER BAND OF CAROTENOIDS, POLYENE CHAIN STRUCTURE, AND EFFICIENCY OF THE ENERGY TRANSFER FROM CAROTENOIDS TO BACTERIOCHLOROPHYLL IN PHOTOSYNTHETIC BACTERIA. *Photochemistry and Photobiology*, **1989**, 49, 337-343	3.6	36
34	Resonance Raman spectra and excitation profiles of tetradesmethyl-β-Carotene. *Journal of Raman Spectroscopy*, **1984**, 15, 331-335	2.3	35
33	A comparative study of the binding effects of Mg2+, Ca2+, Sr2+, and Cd2+ on calmodulin by fourier-transform infrared spectroscopy. *Biospectroscopy*, **1995**, 1, 47-54		30
32	Analysis of the absorption spectrum (1 1Bu<-1 1Ag) and resonance Raman excitation profiles of trans-1,3,5-hexatriene based on ab initio molecular orbital calculations. *Journal of Chemical Physics*, **1994**, 101, 4496-4504	3.9	28
31	In vivo states and functions of carotenoids in an aerobic photosynthetic bacterium, Erythrobacter longus. *Photosynthesis Research*, **1992**, 31, 21-30	3.7	27
30	Nuclear-magnetic-resonance study of aggregations and conformations of melanostatin and related peptides. *FEBS Journal*, **1978**, 89, 543-56		26
29	Charge Fluxes and Changes in Electronic Structures as the Origin of Infrared Intensities in the Ground and Excited Electronic States. *Journal of Physical Chemistry B*, **1997**, 101, 466-471	3.4	22
28	Resonance Raman studies on tetradesmethyl-β-carotene aggregates. *Journal of Raman Spectroscopy*, **1989**, 20, 751-756	2.3	22
27	Infrared Intensities of the CC and CN Stretching Modes of Conjugated Schiff Bases. A Study Based onab InitioMolecular Orbital Calculations. *The Journal of Physical Chemistry*, **1996**, 100, 15335-15339		20
26	Raman studies of intact and sodium doped 13C-substituted poly-p-phenylene. *Journal of Raman Spectroscopy*, **1993**, 24, 551-554	2.3	18
25	Raman Studies of Doped Polythiophene and the Radical Cation and Dication of Quinquethiophene. *Molecular Crystals and Liquid Crystals*, **1994**, 256, 113-120		16
24	Infrared studies of octopus rhodopsin. Existence of a long-lived intermediate and the states of the carboxylic group of Asp-81 in rhodopsin and its photoproducts. *FEBS Letters*, **1993**, 317, 223-7	3.8	15
23	NMR spectra of model compounds of poly(vinyl chloride). *Journal of Polymer Science Part A-1, Polymer Chemistry*, **1966**, 4, 1413-1431		14
22	Correlation between redshifts and widths of the 00 band in the absorption spectra (1 1Bu<-1 1Ag) of all-trans-β-carotene in solution. *Journal of Chemical Physics*, **1993**, 98, 3697-3702	3.9	13

21	Probe-frequency dependence of the resonant inverse Raman band shape. *Journal of Chemical Physics*, **1988**, 89, 3945-3950	3.9	11
20	LIGHT INDUCED FLUORESCENCE SPECTRAL CHANGES IN NATIVE PHYTOCHROME FROM Secale cereale L. AT LIQUID NITROGEN TEMPERATURE. *Photochemistry and Photobiology*, **1985**, 42, 423-427	3.6	11
19	Laser-Raman Scattering by the C34H68 Ring Molecule. *Polymer Journal*, **1971**, 2, 740-746	2.7	11
18	Spectroscopic studies of conducting polymers. *Macromolecular Symposia*, **1996**, 101, 95-102	0.8	9
17	Vibrational Analysis of a Schiff Base Based on ab Initio Molecular Orbital Calculations: Effect of Electron Correlation on the CN Stretching Force Constant and the Origin of the Shift of the CN Stretching Frequency upon Protonation and Hydrogen-Bond Formation. *The Journal of Physical Chemistry*, **1996**, 100, 15328-15334		8
16	Raman and infrared studies on (5-dimethyl-aminopenta-2,4-dienylidene)dimethylammonium perchlorate. *Journal of Raman Spectroscopy*, **1988**, 19, 395-404	2.3	8
15	Ab initio molecular orbital study of the amide I vibrational interactions between the peptide groups in di- and tripeptides and considerations on the conformation of the extended helix **1998**, 29, 81		8
14	Simultaneous observation of the vibrational and electronic-vibrational resonance Raman spectra of the hexachloroiridate(IV) ion at 15 K. *Journal of Chemical Physics*, **1983**, 78, 131-135	3.9	7
13	Analysis of the resonance Raman spectra of 13C-and 2H-substituted carotenoids. *Journal of Raman Spectroscopy*, **1985**, 16, 27-31	2.3	7
12	Raman Spectra of Heavily Sodium-Doped Trans-Polyacetylene and the Radical Anions of Diphenylpolyenes and Dithienylpolyenes. *Molecular Crystals and Liquid Crystals*, **1994**, 256, 721-726		6
11	New feedback mechanism for reducing timing jitter between pulses from two synchronously pumped mode-locked lasers. *Review of Scientific Instruments*, **1995**, 66, 5165-5168	1.7	5
10	Time-resolved pump□probe Raman spectroscopy with temporally incoherent light. *Journal of Raman Spectroscopy*, **1994**, 25, 631-639	2.3	5
9	Effect of correlation between electronic and vibrational dephasing processes on Raman band shapes. *Journal of Raman Spectroscopy*, **1991**, 22, 601-605	2.3	3
8	Picosecond Transient Infrared Spectroscopy of 4-Dimethylamino- 4?-Nitrostilbene in the Fingerprint Region. *Laser Chemistry*, **1999**, 19, 363-366		2
7	Stereoregulated polydideuteroethylene. II. Infrared spectra and normal vibration analysis. *Journal of Polymer Science: Part A, General Papers*, **1964**, 2, 1607-1631		2
6	Ab initio molecular orbital study of the amide I vibrational interactions between the peptide groups in di- and tripeptides and considerations on the conformation of the extended helix **1998**, 29, 81		2
5	Formulation of Raman scattering revisited. *Journal of Raman Spectroscopy*, **2019**, 50, 1245-1249	2.3	1
4	Symmetry of the benzene ring and its normal vibrations: The □breathing□mode is not always a normal vibration of a benzene ring. *Journal of Raman Spectroscopy*, **2021**, 52, 2282	2.3	1

3	Ab initio molecular orbital study of the amide I vibrational interactions between the peptide groups in di- and tripeptides and considerations on the conformation of the extended helix **1998**, 29, 81		1
2	Effects of hydration on the structure, vibrational wavenumbers, vibrational force field and resonance raman intensities of N-methylacetamide **1998**, 29, 537		1
1	Effects of collision-induced perturbation of atomic motions on the vibrational relaxation of polyatomic molecules. *Journal of Chemical Physics*, **1990**, 93, 1054-1060	3.9	0