

Martin T Vala

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Experimental Study of Luminescence and Excitation Trapping in Vinyl Polymers, Paracyclophanes, and Related Compounds. <i>Journal of Chemical Physics</i> , 1965, 43, 886-897.	1.2	219
2	Electronic and vibrational spectra of matrix isolated anthracene radical cations: Experimental and theoretical aspects. <i>Journal of Chemical Physics</i> , 1993, 98, 4494-4511.	1.2	144
3	Infrared frequencies and intensities for astrophysically important polycyclic aromatic hydrocarbon cations. <i>Astrophysical Journal</i> , 1993, 414, 646.	1.6	144
4	Photodissociation of Gas-Phase Polycyclic Aromatic Hydrocarbon Cations. <i>Journal of Physical Chemistry A</i> , 1998, 102, 3498-3504.	1.1	123
5	Electronic and Vibrational Spectra Of Matrix-Isolated Pyrene Radical Cations: Theoretical and Experimental Aspects. <i>The Journal of Physical Chemistry</i> , 1994, 98, 9187-9196.	2.9	121
6	Laboratory evidence for ionized polycyclic aromatic hydrocarbons in the interstellar medium. <i>Nature</i> , 1993, 363, 699-701.	13.7	118
7	Vibrational and electronic spectra of matrix-isolated pentacene cations and anions. <i>Chemical Physics Letters</i> , 1995, 232, 221-228.	1.2	96
8	Time-Dependent Density Functional Study of the Electronic Excited States of Polycyclic Aromatic Hydrocarbon Radical Ions. <i>Journal of Physical Chemistry A</i> , 2003, 107, 4940-4951.	1.1	96
9	Infrared spectrum of matrix-isolated naphthalene radical cation. <i>The Journal of Physical Chemistry</i> , 1992, 96, 7876-7881.	2.9	91
10	C5 molecule: Structure and infrared frequencies. <i>Journal of Chemical Physics</i> , 1989, 90, 595-596.	1.2	73
11	Vibrational Spectroscopy of Small Matrix-Isolated Linear Carbon Cluster Anions. <i>Journal of Physical Chemistry A</i> , 1997, 101, 1841-1847.	1.1	71
12	Visible and infrared spectra of matrix-isolated perylene cations. <i>Chemical Physics Letters</i> , 1993, 205, 434-439.	1.2	59
13	Infrared spectroscopy of matrix-isolated carbon clusters, with emphasis on C8 and C9. <i>Chemical Physics</i> , 1996, 211, 359-366.	0.9	54
14	Glycine and Its Hydrated Complexes: A Matrix Isolation Infrared Study. <i>Journal of Physical Chemistry A</i> , 2010, 114, 5919-5927.	1.1	54
15	Correlation of infrared and UV-visible bands of matrix-isolated carbon clusters. <i>The Journal of Physical Chemistry</i> , 1991, 95, 2792-2798.	2.9	53
16	Solvent Effects and a Test of the Theory of Hypochromism. <i>Journal of Chemical Physics</i> , 1963, 39, 2348-2353.	1.2	48
17	Vibrational and electronic spectra of matrix-isolated tetracene cations. <i>Chemical Physics Letters</i> , 1995, 245, 539-548.	1.2	48
18	Tetrahedral transition-metal complex spectra. <i>Molecular Physics</i> , 1972, 23, 217-234.	0.8	47

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19	Photon-induced Complete Dehydrogenation of Putative Interstellar Polycyclic Aromatic Hydrocarbon Cations: Coronene and Naphtho[2,3-[CLC]a[/CLC]]pyrene. <i>Astrophysical Journal</i> , 1997, 488, L39-L41.	1.6	47
20	Infrared Spectroscopy of Gas-Phase Complexes of Fe+ and Polycyclic Aromatic Hydrocarbon Molecules. <i>Astrophysical Journal</i> , 2006, 646, 666-680.	1.6	44
21	Vibrational and Electronic Spectroscopy of Acenaphthylene and Its Cation. <i>Journal of Physical Chemistry A</i> , 2003, 107, 782-793.	1.1	43
22	What Teaching Teaches: Mentoring and the Performance Gains of Mentors. <i>Journal of Chemical Education</i> , 2009, 86, 630.	1.1	42
23	Vibrational and Electronic Spectroscopy of the Fluorene Cation. <i>Journal of Physical Chemistry A</i> , 2002, 106, 63-73.	1.1	41
24	Ground-state exchange energy of the Mn ₂ antiferromagnetic molecule. <i>Chemical Physics Letters</i> , 1982, 92, 313-316.	1.2	40
25	Magnetic circular dichroism studies of matrix-isolated atoms: Excited state spin-orbit coupling constant reduction of copper in the noble gases. <i>Journal of Chemical Physics</i> , 1984, 80, 2401-2406.	1.2	39
26	The external heavy atom effect: Theory of spin-orbit coupling of alkali and noble metals in rare gas matrices. <i>Journal of Chemical Physics</i> , 1989, 90, 5612-5621.	1.2	35
27	The $\hat{1}/21 + \hat{1}/23$ combination mode of C ₃ in Ar and Kr matrices: Evidence for a bent structure. <i>Journal of Chemical Physics</i> , 1993, 99, 7371-7375.	1.2	33
28	H ₂ ⁺ Ejection from Polycyclic Aromatic Hydrocarbons: Infrared Multiphoton Dissociation Study of Protonated 1,2-Dihydronaphthalene. <i>Journal of the American Chemical Society</i> , 2009, 131, 5784-5791.	6.6	33
29	On the Electronic States of Crystalline Naphthalene. <i>Journal of Chemical Physics</i> , 1965, 42, 2948-2959.	1.2	31
30	Infrared Absorption Spectroscopy of Small Carbon-Sulfur Clusters Isolated in Solid Ar. <i>Journal of Physical Chemistry A</i> , 1999, 103, 2975-2981.	1.1	30
31	Photodissociation of the Fluorene Cation: A Fourier Transform Ion Cyclotron Resonance Mass Spectrometric Study. <i>Journal of Physical Chemistry A</i> , 2001, 105, 6024-6029.	1.1	28
32	Atom-matrix interactions: An MCD study of copper atoms in argon. <i>Journal of Chemical Physics</i> , 1983, 78, 2231-2239.	1.2	27
33	Spectroscopy and Photochemistry of the C ₃ .H ₂ O Complex in Argon Matrixes. <i>The Journal of Physical Chemistry</i> , 1995, 99, 8002-8012.	2.9	27
34	LUMINESCENCE STUDIES OF QUINIZARIN AND DAUNORUBICIN. <i>Photochemistry and Photobiology</i> , 1981, 33, 673-682.	1.3	26
35	Complexes of Linear Carbon Clusters with Water. <i>Journal of Physical Chemistry A</i> , 2000, 104, 3584-3592.	1.1	25
36	Anab Initio Study of the C ₃ H ₂ O Potential Surface: A Mechanism for Propynal Formation and Destruction. <i>The Journal of Physical Chemistry</i> , 1996, 100, 16109-16115.	2.9	24

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37	H ₂ EJECTION FROM POLYCYCLIC AROMATIC HYDROCARBONS: INFRARED MULTIPHOTON DISSOCIATION STUDY OF PROTONATED ACENAPHTHENE AND 9,10-DIHYDROPHENANTHRENE. <i>Astrophysical Journal</i> , 2011, 727, 12.	1.6	24
38	Time-resolved opto-acoustic spectroscopy. <i>Chemical Physics</i> , 1978, 33, 93-105.	0.9	23
39	Electronic absorption and resonance Raman spectra of large linear carbon clusters isolated in solid argon. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2001, 57, 775-786.	2.0	23
40	Magnetic circular and linear dichroism in cubic high spin d5 complex. <i>Molecular Physics</i> , 1975, 30, 1325-1344.	0.8	22
41	C ₆ -Carbon Cluster Anion: An Infrared Absorption and Resonance Raman Isotopic Study. <i>Journal of Physical Chemistry A</i> , 1997, 101, 9296-9301.	1.1	22
42	C ₃ - Carbon Cluster Anion: Structure and Asymmetric Stretching Mode Frequency. <i>Journal of Physical Chemistry A</i> , 1997, 101, 7039-7042.	1.1	22
43	Solid state study of the copper(ii) complex of 2-hydroxyiminopropanoic acid. <i>New Journal of Chemistry</i> , 2004, 28, 477-483.	1.4	22
44	Copper-Carbon Cluster CuC ₃ : Structure, Infrared Frequencies, and Isotopic Scrambling. <i>Journal of Physical Chemistry A</i> , 2008, 112, 4778-4785.	1.1	22
45	Vibrational and electronic spectra of matrix-isolated para-dichlorobenzene radical cations. <i>Journal of Chemical Physics</i> , 1992, 96, 35-43.	1.2	21
46	Hydrogen Bonding in Human Manganese Superoxide Dismutase Containing 3-Fluorotyrosine. <i>Biophysical Journal</i> , 2005, 89, 4171-4179.	0.2	21
47	BREAKDOWN PRODUCTS OF GASEOUS POLYCYCLIC AROMATIC HYDROCARBONS INVESTIGATED WITH INFRARED ION SPECTROSCOPY. <i>Astrophysical Journal</i> , 2016, 826, 33.	1.6	21
48	Theoretical Study of the Photodissociation and Hydrogenation of the Fluorene Cation. <i>Journal of Physical Chemistry A</i> , 2001, 105, 9388-9395.	1.1	20
49	Vibrational and Electronic Absorption Spectroscopy of 2,3-Benzofluorene and Its Cation. <i>Journal of Physical Chemistry A</i> , 2004, 108, 3713-3722.	1.1	20
50	Vibrational absorption spectra of C _n S (n = 2, 6) and C _n S ₂ (n = 7, 9, 11, 13, 15) linear carbon-sulfur clusters. <i>International Journal of Quantum Chemistry</i> , 2005, 102, 806-819.	1.0	20
51	Vibrational spectroscopy of neutral complexes of Fe and polycyclic aromatic hydrocarbons. <i>Chemical Physics</i> , 2007, 342, 107-118.	0.9	20
52	Aromatic Carbonyl Spectra. I. The Polarized Absorption Spectrum of Single-Crystal 4,4'-Dichlorobenzophenone. <i>Journal of Chemical Physics</i> , 1968, 49, 5222-5234.	1.2	19
53	Polarized crystal spectra of tris(ethylenediamine) chromium(III) ion. <i>Molecular Physics</i> , 1973, 25, 17-34.	0.8	19
54	Isotopic Infrared Absorption Study of C ₅ -, C ₇ -, and C ₉ - Carbon Cluster Anions in Ar Matrices. <i>Journal of Physical Chemistry A</i> , 1998, 102, 8300-8304.	1.1	19

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55	Temperature dependence of the dual phosphorescence from xanthone in n-hexane matrices. <i>Molecular Physics</i> , 1981, 43, 1219-1234.	0.8	18
56	Infrared matrix isolation study of ammonia complexes with the neutral transition metals Cu and Fe. <i>Chemical Physics Letters</i> , 1989, 162, 123-126.	1.2	18
57	Preresonance Raman Spectrum of the C ₁₃ H ₉ Fluorene-like Radical. <i>Journal of Physical Chemistry A</i> , 2002, 106, 6935-6940.	1.1	18
58	Infrared spectra and dissociation pathways of the linear carbon-sulfur clusters C _n S and SC _n S (n ≥ 29): Theoretical calculations. <i>International Journal of Quantum Chemistry</i> , 2005, 102, 795-805.	1.0	18
59	Experimental and theoretical NMR study of selected oxocarboxylic acid oximes. <i>Magnetic Resonance in Chemistry</i> , 2004, 42, 23-29.	1.1	17
60	Measurement of magnetic circular dichroism of matrix-isolated high temperature molecules. <i>Review of Scientific Instruments</i> , 1980, 51, 905-910.	0.6	16
61	Silver ⁺ Carbon Cluster AgC ₃ : Structure and Infrared Frequencies. <i>Journal of Physical Chemistry A</i> , 2008, 112, 11088-11092.	1.1	16
62	Moment directions of the electronic transitions of para-dimethoxybenzene. <i>Chemical Physics Letters</i> , 1970, 7, 31-36.	1.2	15
63	The magnetic circular dichroism spectrum of matrix-isolated TaO. <i>Chemical Physics</i> , 1980, 54, 71-78.	0.9	15
64	Theory of magnetic linear dichroism. Application to matrix-isolated atomic transitions. <i>Journal of Chemical Physics</i> , 1981, 74, 5411-5419.	1.2	15
65	Electronic states of matrix-isolated Ni atoms: A magnetic circular and linear dichroism study. <i>Journal of Chemical Physics</i> , 1985, 83, 969-974.	1.2	15
66	The Kinetics and Formation of Small Carbon Clusters in an Argon Matrix. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1992, 47, 595-604.	0.7	15
67	Spin-orbit splitting and Jahn-Teller effect in rare gas matrix-isolated Ag and Au atoms: a magnetic circular dichroism study. <i>Chemical Physics</i> , 1992, 166, 393-409.	0.9	15
68	Infrared spectrum of the ionic cyclic C ₅ ⁺ cluster in an argon matrix. <i>Journal of Molecular Structure</i> , 1990, 222, 209-218.	1.8	13
69	Vibrational and Electronic Absorption Spectroscopy of Dibenzo[b,def]chrysene and Its Ions. <i>Journal of Physical Chemistry A</i> , 2005, 109, 9737-9746.	1.1	13
70	Excited triplet state spectroscopy in the infrared. <i>Journal of Molecular Structure</i> , 1982, 80, 109-112.	1.8	12
71	Matrix-isolated NbO: A magnetic circular dichroism investigation. <i>Chemical Physics</i> , 1985, 93, 147-155.	0.9	12
72	Magnetic linear dichroism of matrix-isolated iron atoms. <i>Journal of Chemical Physics</i> , 1985, 82, 4376-4377.	1.2	12

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73	Lanthanide chirality as a tool for assignment of transitions: Tm ³⁺ and Tb ³⁺ pyrogermanates. <i>Spectrochimica Acta Part A: Molecular Spectroscopy</i> , 1986, 42, 1193-1195.	0.1	12

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91	Magnetic circular and linear dichroism of cubic or tetragonally distorted high spin d5 systems. <i>Molecular Physics</i> , 1979, 38, 1829-1854.	0.8	7
92	The lowest triplet state of tetramethyl-1,3-cyclobutanedithione. III. Single-crystal Zeeman spectroscopy. <i>Chemical Physics</i> , 1983, 80, 305-315.	0.9	7
93	Laboratory Infrared Observation of Linear C7S Carbon Sulfur Cluster in Solid Argon. <i>Journal of Physical Chemistry A</i> , 2003, 107, 10919-10925.	1.1	7
94	Photodissociation Pathways of the 2,3-Benzofluorene Cation. <i>Journal of Physical Chemistry A</i> , 2004, 108, 3723-3726.	1.1	7
95	Formation of molecular hydrogen from protonated 9,10-dihydroanthracene: Is the ejected H2 rotationally and vibrationally excited?. <i>International Journal of Mass Spectrometry</i> , 2011, 308, 181-190.	0.7	7
96	The Electronic Structure of Saturated Cyclic Ketones. <i>Acta Chemica Scandinavica</i> , 1972, 26, 3475-3482.	0.7	7
97	The triplet spectrum of tetramethyl-1,3-cyclobutanedione. <i>Molecular Physics</i> , 1974, 27, 1241-1248.	0.8	6
98	The lowest triplet state of tetramethyl-1,3-cyclobutanedithione. I. Single-crystal polarized absorption spectrum. <i>Chemical Physics</i> , 1983, 79, 391-402.	0.9	6
99	Magnetic circular dichroism of atomic rhenium in a krypton matrix: Large ground state crystal field splitting. <i>Journal of Chemical Physics</i> , 1989, 90, 1440-1447.	1.2	6
100	The Vacuum Ultraviolet Spectrum of Tetramethyl-1,3-cyclobutanedione. <i>Acta Chemica Scandinavica</i> , 1974, 28a, 37-44.	0.7	6
101	Spectra of tetrahedral complexes of transition metals. Jahn-Teller effect in the tetrabromoferrate(III) ion. <i>Journal of the Chemical Society Dalton Transactions</i> , 1972, , 1870-1875.	1.1	5
102	Temperature dependence of the phosphorescence lifetimes of benzene-chloroform complexes. <i>The Journal of Physical Chemistry</i> , 1977, 81, 1082-1089.	2.9	5
103	Moment analysis of matrix-enhanced forbidden transitions: Application to Cr atoms isolated in Kr and Xe matrices. <i>Journal of Chemical Physics</i> , 1987, 86, 5958-5962.	1.2	5
104	Polarized absorption spectra of the Nd ³⁺ ion in the optically active Na ₃ Gd(diglycolate) ₃ ·2NaClO ₄ ·6H ₂ O single crystal. <i>Chemical Physics</i> , 1989, 134, 149-161.	0.9	5
105	Magnetic Circular Dichroism and Absorption Spectra of the γ -Band Region of Titanium Monoxide in an Argon Matrix. <i>The Journal of Physical Chemistry</i> , 1994, 98, 3624-3630.	2.9	5
106	Infrared absorption spectroscopy of the C _n Xe (n = 2, 3, 5, 7, 9) species. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 4090.	1.3	5
107	Reactions of neutral interstellar species. <i>Chemical Physics</i> , 2007, 331, 219-231.	0.9	5
108	Structure and Dissociation Pathways of Protonated Tetralin (1,2,3,4-Tetrahydronaphthalene). <i>Journal of Physical Chemistry A</i> , 2017, 121, 4606-4612.	1.1	5

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109	Rydberg transitions in the bichromophoric molecules tetramethyl-1,3-cyclobutanedithione (TM CBDT) and tetramethyl-3-thiocyclobutan-1-one (TMTCB). <i>Molecular Physics</i> , 1983, 50, 193-203.	0.8	4
110	Magneto-optical studies of silver atoms in neon matrices. <i>Chemical Physics</i> , 2005, 312, 89-96.	0.9	4
111	The polarized crystal absorption spectrum of aspirin. <i>Journal of Molecular Spectroscopy</i> , 1969, 32, 169-180.	0.4	3
112	Magnetic circular dichroism of the first spin-forbidden transition in $2[\text{Cr}(\text{en})_3\text{Cl}_3] \cdot \text{KCl} \cdot 6\text{H}_2\text{O}$. <i>Molecular Physics</i> , 1972, 24, 1227-1232.	0.8	3
113	The lowest triplet state of tetramethyl-1,3-cyclobutanedithione. II. Calculation of spin-orbit coupling. <i>Chemical Physics</i> , 1983, 79, 403-412.	0.9	3
114	Trap phosphorescence spectra and lifetimes from crystalline tetramethylcyclobutane-1,3-dithione. <i>Chemical Physics</i> , 1987, 116, 221-230.	0.9	3
115	Raman spectroscopic study of chain complexes of bis(hydrazine) zinc and manganese halides. <i>Journal of Raman Spectroscopy</i> , 1989, 20, 147-153.	1.2	3
116	Primary photophysical and photochemical processes of 2,4,5-trimethylbenzaldehyde in crystalline durene. <i>Molecular Physics</i> , 1977, 33, 1683-1699.	0.8	2
117	Magnetic circular dichroism and magnetic linear dichroism of randomly oriented linear molecules. <i>Molecular Physics</i> , 1989, 68, 893-901.	0.8	2
118	A magnetic circular dichroism study of cobalt atoms in a xenon matrix. <i>Chemical Physics Letters</i> , 1993, 205, 6-12.	1.2	2
119	Nonradiative yields and rate constants from time-resolved opto-acoustic spectroscopy: Theory. <i>Journal of Molecular Structure</i> , 1978, 47, 267-272.	1.8	1
120	Major Source of Intensity in the $\pi^* \rightarrow \pi$ Transition of Aromatic Carbonyls. <i>Bulletin of the Chemical Society of Japan</i> , 1968, 41, 2548-2548.	2.0	0
121	g-factor sum rule. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1989, 22, L135-L137.	0.6	0
122	Magnetic circular dichroism of matrix-isolated Mo atoms: spin-orbit coupling and Jahn-Teller activity. <i>Chemical Physics</i> , 1993, 173, 267-273.	0.9	0
123	Reaction of the $\text{C}_3(\text{X}^1\Sigma_g^+)$ carbon cluster with $\text{H}_2\text{S}(\text{X}^1\text{A}_1)$, hydrogen sulfide: Photon-induced formation of C_3S , tricarbon sulfur. <i>Journal of Chemical Physics</i> , 2014, 141, 204310.	1.2	0
124	Computational Interstellar Chemistry. Thirty Years of Astronomical Discovery With UKIRT, 2010, , 21-30.	0.3	0