

Hiromichi Hoshina

List of Publications by Year in descending order

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61
papers

1,571
citations

279487

23
h-index

315357

38
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all docs

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docs citations

62
times ranked

1203
citing authors

#	ARTICLE	IF	CITATIONS
1	High resolution infrared absorption spectra of methane molecules isolated in solid parahydrogen matrices. <i>Journal of Chemical Physics</i> , 1999, 111, 4191-4198.	1.2	101
2	Polarization and temperature dependent spectra of poly(3-hydroxyalkanoate)s measured at terahertz frequencies. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 9173.	1.3	97
3	Noninvasive Mail Inspection System with Terahertz Radiation. <i>Applied Spectroscopy</i> , 2009, 63, 81-86.	1.2	95
4	Terahertz pulsed imaging of frozen biological tissues. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	78
5	Chemical reactions in quantum crystals. <i>International Reviews in Physical Chemistry</i> , 2005, 24, 533-552.	0.9	73
6	Higher order conformation of poly(3-hydroxyalkanoates) studied by terahertz time-domain spectroscopy. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	70
7	High-resolution spectroscopy and the analysis of ro-vibrational transitions of molecules in solid parahydrogen. <i>Vibrational Spectroscopy</i> , 2004, 34, 95-108.	1.2	67
8	Quantum Mechanical Interpretation of Intermolecular Vibrational Modes of Crystalline Poly-(<i>l</i> -3-Hydroxybutyrate Observed in Low-Frequency Raman and Terahertz Spectra. <i>Journal of Physical Chemistry B</i> , 2013, 117, 2180-2187.	1.2	58
9	Terahertz Spectroscopy in Polymer Research: Assignment of Intermolecular Vibrational Modes and Structural Characterization of Poly(3-Hydroxybutyrate). <i>IEEE Transactions on Terahertz Science and Technology</i> , 2013, 3, 248-258.	2.0	55
10	Actin polymerization is activated by terahertz irradiation. <i>Scientific Reports</i> , 2018, 8, 9990.	1.6	50
11	Polymer Morphological Change Induced by Terahertz Irradiation. <i>Scientific Reports</i> , 2016, 6, 27180.	1.6	44
12	Three different kinds of weak C-H \cdots O=C inter- and intramolecular interactions in poly(μ -caprolactone) studied by using terahertz spectroscopy, infrared spectroscopy and quantum chemical calculations. <i>Polymer</i> , 2018, 137, 245-254.	1.8	44
13	Precise measurement of pressure broadening parameters for water vapor with a terahertz time-domain spectrometer. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 2303-2314.	1.1	43
14	Propagation of THz irradiation energy through aqueous layers: Demolition of actin filaments in living cells. <i>Scientific Reports</i> , 2020, 10, 9008.	1.6	42
15	Isothermal crystallization of poly(3-hydroxybutyrate) studied by terahertz two-dimensional correlation spectroscopy. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	38
16	Tunneling chemical reactions in solid parahydrogen: A case of CD ₃ +H ₂ \rightarrow CD ₃ H+H at 5 K. <i>Journal of Chemical Physics</i> , 1998, 108, 7334-7338.	1.2	36
17	Low-Frequency Vibrational Modes of Poly(glycolic acid) and Thermal Expansion of Crystal Lattice Assigned On the Basis of DFT-Spectral Simulation Aided with a Fragment Method. <i>Journal of Physical Chemistry B</i> , 2017, 121, 1128-1138.	1.2	33
18	High-resolution laser spectroscopy of methane clusters trapped in solid parahydrogen. <i>Journal of Chemical Physics</i> , 1997, 107, 7717-7720.	1.2	29

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19	Infrared spectroscopic study of rovibrational states of perdeuterated methane (CD ₄) trapped in parahydrogen crystal. <i>Journal of Chemical Physics</i> , 1999, 110, 5728-5733.	1.2	29
20	Pressure broadening coefficients of the water vapor lines at 556.936 and 752.033GHz. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 144-150.	1.1	29
21	Brill transition of nylon-6 characterized by low-frequency vibration through terahertz absorption spectroscopy. <i>Chemical Physics Letters</i> , 2013, 575, 36-39.	1.2	28
22	Tunneling chemical reactions in solid parahydrogen: Direct measurement of the rate constants of R+H ₂ →RH+H (R=CD ₃ ,CD ₂ H,CDH ₂ ,CH ₃) at 5 K. <i>Journal of Chemical Physics</i> , 2004, 120, 3706-3715.	1.2	24
23	Satellite Band in the Rovibrational Spectrum of CO ₂ in Helium Droplets. <i>Physical Review Letters</i> , 2005, 94, 195301.	2.9	23
24	Low-Frequency Vibrational Modes of Nylon 6 Studied by Using Infrared and Raman Spectroscopies and Density Functional Theory Calculations. <i>Journal of Physical Chemistry B</i> , 2019, 123, 5368-5376.	1.2	23
25	Plane photoacoustic wave generation in liquid water using irradiation of terahertz pulses. <i>Scientific Reports</i> , 2020, 10, 18537.	1.6	23
26	Low-frequency vibrations of polyamide-6 as a function of temperature and thermal history investigated by terahertz absorption spectroscopy. <i>European Polymer Journal</i> , 2015, 67, 284-291.	2.6	19
27	Search for CCH ⁻ , NCO ⁻ , and NCS ⁻ Negative Ions in Molecular Clouds. <i>Publication of the Astronomical Society of Japan</i> , 2005, 57, 325-334.	1.0	18
28	Intermolecular interactions of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) (P(HB-co-HV)) with PHB-type crystal structure and PHV-type crystal structure studied by low-frequency Raman and terahertz spectroscopy. <i>Polymer</i> , 2018, 135, 331-337.	1.8	18
29	Isothermal crystallization of poly(glycolic acid) studied by terahertz and infrared spectroscopy and SAXS/WAXD simultaneous measurements. <i>Polymer Journal</i> , 2019, 51, 237-245.	1.3	18
30	Differences in Intermolecular Interactions and Flexibility between Poly(ethylene terephthalate) and Poly(butylene terephthalate) Studied by Far-Infrared/Terahertz and Low-Frequency Raman Spectroscopy. <i>Macromolecules</i> , 2021, 54, 1052-1062.	2.2	18
31	Terahertz Imaging of the Distribution of Crystallinity and Crystalline Orientation in a Poly(ϵ -caprolactone) Film. <i>Applied Spectroscopy</i> , 2017, 71, 1537-1542.	1.2	17
32	Infrared Spectra in the 3 $\frac{1}{4}$ μ m Region of Ethane and Ethane Clusters in Helium Droplets. <i>Journal of Physical Chemistry A</i> , 2013, 117, 13648-13653.	1.1	16
33	Infrared Spectroscopy and Structure of (NO) _n Clusters. <i>Journal of Physical Chemistry A</i> , 2016, 120, 527-534.	1.1	16
34	UV and IR absorption spectra of C ₃ embedded in solid para-hydrogen. <i>Chemical Physics</i> , 2004, 300, 69-77.	0.9	15
35	Separation of overlapping vibrational peaks in terahertz spectra using two-dimensional correlation spectroscopy. <i>Journal of Molecular Structure</i> , 2014, 1069, 152-156.	1.8	15
36	Terahertz Spectroscopy for Characterization of Hydrogen Bonding and Cross-linked Structure Dynamics in Polyurethane. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2020, 41, 265-275.	1.2	15

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37	Exploring the Dynamics of Bound Water in Nylon Polymers with Terahertz Spectroscopy. Journal of Physical Chemistry B, 2020, 124, 422-429.	1.2	15
38	Terahertz waves radiated from two noncollinear femtosecond plasma filaments. Applied Physics Letters, 2015, 107, .	1.5	14
39	Structure and dynamics of bound water in poly(ethylene-vinylalcohol) copolymers studied by terahertz spectroscopy. Polymer, 2018, 148, 49-60.	1.8	14
40	Crystallization and crystalline dynamics of poly(3-hydroxybutyrate) / poly(4-vinylphenol) polymer blends studied by low-frequency vibrational spectroscopy. Polymer, 2019, 181, 121790.	1.8	14
41	THz irradiation inhibits cell division by affecting actin dynamics. PLoS ONE, 2021, 16, e0248381.	1.1	13
42	Correlation between Nuclear Spin Ratio of Cyclic C ₃ H ₂ and Chemical Evolution in TMC Cores. Astrophysical Journal, 2006, 642, 954-965.	1.6	12
43	Infrared spectroscopy of rovibrational transitions of methyl radicals (CH ₃ , CD ₃) in solid parahydrogen. Journal of Molecular Spectroscopy, 2011, 268, 164-172.	0.4	12
44	Pressure broadening coefficients of induced by for Venus atmosphere. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 2027-2036.	1.1	11
45	In Situ Photolysis of CD ₃ I in Solid Orthodeuterium. Journal of Physical Chemistry A, 2007, 111, 12629-12634.	1.1	9
46	Kinetics of Polymorphic Transitions of Cyclohexanol Investigated by Terahertz Absorption Spectroscopy. Crystal Growth and Design, 2014, 14, 4087-4093.	1.4	9
47	A Study on Blend Ratio-dependent Far-IR and Low-frequency Raman Spectra and WAXD Patterns of Poly(3-hydroxybutyrate)/ poly(4-vinylphenol) Using Homospectral and Heterospectral Two-dimensional Correlation Spectroscopy. Analytical Sciences, 2020, 36, 731-735.	0.8	9
48	Internal Rotation of Methane Molecules in Large Clusters. Journal of Physical Chemistry Letters, 2016, 7, 47-50.	2.1	6
49	Temperature Dependence of Crystal Structure and THz Absorption Spectra of Organic Nonlinear Optical Stilbazolium Material for High-Output THz-Wave Generation. Journal of Infrared, Millimeter, and Terahertz Waves, 2016, 37, 540-550.	1.2	4
50	Sol-gel transition of organogels observed by terahertz spectroscopy. Chemical Physics Letters, 2014, 608, 173-176.	1.2	3
51	Terahertz irradiation effects on the morphology and dynamics of actin biopolymer. JPhys Photonics, 2021, 3, 034015.	2.2	3
52	Gre factors prevent thermal and mechanical stresses induced by terahertz irradiation during transcription. Genes To Cells, 2021, 26, 56-64.	0.5	2
53	Isothermal crystallization of poly(3-hydroxybutyrate) studied by terahertz time-domain spectroscopy. , 2011, , .		1
54	Terahertz spectroscopy of poly(3-hydroxyalkanoate)s. , 2011, , .		1

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55	Rotational Spectra of (para H_2) N_2 in He Droplets. ChemPhysChem, 2016, 17, 3818-3825.	1.0	1
56	Progress in Terahertz Technology and Non-destructive Testing. Journal of the Institute of Electrical Engineers of Japan, 2018, 138, 610-613.	0.0	1
57	Structure and Dynamics of Bound Water in Polymer Film Studied by THz Spectroscopy. , 2018, , .		0
58	Phase Singularities in Moiré Type Metasurfaces. , 2018, , .		0
59	The Effects of THz Irradiation on Cellular Actin Filament. , 2020, , .		0
60	THz Spectroscopy Reveals the Dynamics of Bound Water in Polymer Films. , 2020, , .		0
61	Plane photoacoustic wave generation in liquid water by THz-FEL. , 2020, , .		0