

Igor V Rubtsov

List of Publications by Year in descending order

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66
papers

2,223
citations

201674

27
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223800

46
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67
all docs

67
docs citations

67
times ranked

1521
citing authors

#	ARTICLE	IF	CITATIONS
1	Dual-frequency 2D-IR spectroscopy heterodyned photon echo of the peptide bond. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 5601-5606.	7.1	146
2	A relaxation-assisted 2D IR spectroscopy method. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14209-14214.	7.1	142
3	Ultrafast Singlet Excited-State Polarization in Electronically Asymmetric Ethyne-Bridged Bis[(porphinato)zinc(II)] Complexes. Journal of the American Chemical Society, 2003, 125, 2687-2696.	13.7	124
4	Relaxation-Assisted Two-Dimensional Infrared (RA 2DIR) Method: Accessing Distances over 10 Å... and Measuring Bond Connectivity Patterns. Accounts of Chemical Research, 2009, 42, 1385-1394.	15.6	106
5	Modulating Unimolecular Charge Transfer by Exciting Bridge Vibrations. Journal of the American Chemical Society, 2009, 131, 18060-18062.	13.7	97
6	Vibrational Dynamics, Mode Coupling, and Structural Constraints for Acetylproline-NH ₂ . Journal of Physical Chemistry B, 2002, 106, 9165-9171.	2.6	93
7	Vibrational Coupling between Amide-I and Amide-A Modes Revealed by Femtosecond Two Color Infrared Spectroscopy. Journal of Physical Chemistry A, 2003, 107, 3384-3396.	2.5	92
8	Dual-frequency 2D IR photon echo of a hydrogen bond. Chemical Physics Letters, 2005, 402, 439-443.	2.6	70
9	Vibrational Energy Transport in Molecules Studied by Relaxation-Assisted Two-Dimensional Infrared Spectroscopy. Annual Review of Physical Chemistry, 2015, 66, 717-738.	10.8	69
10	Bond connectivity measured via relaxation-assisted two-dimensional infrared spectroscopy. Journal of Chemical Physics, 2008, 128, 104502.	3.0	67
11	Distance Dependence of Electron Transfer in Rigid, Cofacially Compressed, π -Stacked Porphyrin-Bridge-Quinone Systems. Journal of the American Chemical Society, 2002, 124, 8275-8279.	13.7	66
12	Turning Charge Transfer On and Off in a Molecular Interferometer with Vibronic Pathways. Nano Letters, 2009, 9, 1818-1823.	9.1	54
13	Constant-speed vibrational signaling along polyethyleneglycol chain up to 60-Å distance. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1413-1418.	7.1	53
14	$C\alpha^2D$ Modes of Deuterated Side Chain of Leucine as Structural Reporters via Dual-frequency Two-dimensional Infrared Spectroscopy. Journal of Physical Chemistry B, 2009, 113, 4940-4946.	2.6	50
15	Ultrafast Excited-State Dynamics of Nanoscale Near-Infrared Emissive Polymersomes. Journal of the American Chemical Society, 2008, 130, 9773-9784.	13.7	45
16	Ballistic Energy Transport in Oligomers. Accounts of Chemical Research, 2015, 48, 2547-2555.	15.6	45
17	Interrogating Conformationally Dependent Electron-Transfer Dynamics via Ultrafast Visible Pump/IR Probe Spectroscopy. Journal of the American Chemical Society, 2004, 126, 2684-2685.	13.7	42
18	Ballistic and diffusive vibrational energy transport in molecules. Journal of Chemical Physics, 2019, 150, 020901.	3.0	42

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19	Energy transport via coordination bonds. <i>Journal of Chemical Physics</i> , 2009, 131, 154508.	3.0	41
20	Structure Dependent Energy Transport: Relaxation-Assisted 2DIR Measurements and Theoretical Studies. <i>Journal of Physical Chemistry B</i> , 2011, 115, 11063-11073.	2.6	40
21	Câ€D Modes as structural reporters via dual-frequency 2DIR spectroscopy. <i>Chemical Physics Letters</i> , 2007, 437, 262-266.	2.6	38
22	Fully automated dual-frequency three-pulse-echo 2DIR spectrometer accessing spectral range from 800 to 4000 wavenumbers. <i>Review of Scientific Instruments</i> , 2014, 85, 083109.	1.3	37
23	The Degree of Charge Transfer in Ground and Charge-Separated States Revealed by Ultrafast Visible Pump/Mid-IR Probe Spectroscopy. <i>Journal of the American Chemical Society</i> , 2004, 126, 5022-5023.	13.7	36
24	Band-Selective Ballistic Energy Transport in Alkane Oligomers: Toward Controlling the Transport Speed. <i>Journal of Physical Chemistry B</i> , 2015, 119, 6448-6456.	2.6	34
25	A Method for Determining Small Anharmonicity Values from 2DIR Spectra Using Thermally Induced Shifts of Frequencies of High-Frequency Modes. <i>Journal of Physical Chemistry B</i> , 2011, 115, 5347-5353.	2.6	31
26	Two-Dimensional Fano Lineshapes in Ultrafast Vibrational Spectroscopy of Thin Molecular Layers on Plasmonic Arrays. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3341-3346.	4.6	31
27	Theoretical Study of Internal Vibrational Relaxation and Energy Transport in Polyatomic Molecules. <i>Journal of Physical Chemistry A</i> , 2013, 117, 315-323.	2.5	28
28	Semiclassical Model for Vibrational Dynamics in Polyatomic Molecules: Investigation of Internal Vibrational Relaxation. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20510-20517.	3.1	26
29	Ballistic energy transport along PEG chains: distance dependence of the transport efficiency. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 10445.	2.8	26
30	Ballistic energy transport via perfluoroalkane linkers. <i>Chemical Physics</i> , 2013, 422, 16-21.	1.9	25
31	Electron transfer rate modulation in a compact Re(<i>sc</i>) donorâ€acceptor complex. <i>Dalton Transactions</i> , 2015, 44, 8609-8616.	3.3	25
32	Room-temperature ballistic energy transport in molecules with repeating units. <i>Journal of Chemical Physics</i> , 2015, 142, 212412.	3.0	25
33	Mid-IR beam direction stabilization scheme for vibrational spectroscopy, including dual-frequency 2DIR. <i>Optics Express</i> , 2014, 22, 6801.	3.4	24
34	Temperature Dependence of the Ballistic Energy Transport in Perfluoroalkanes. <i>Journal of Physical Chemistry B</i> , 2014, 118, 8381-8387.	2.6	21
35	Surface-Enhanced Dual-Frequency Two-Dimensional Vibrational Spectroscopy of Thin Layers at an Interface. <i>Journal of Physical Chemistry C</i> , 2018, 122, 11015-11023.	3.1	21
36	Sulfoxide stretching mode as a structural reporter via dual-frequency two-dimensional infrared spectroscopy. <i>Journal of Chemical Physics</i> , 2010, 133, 144513.	3.0	20

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37	Communication: Fast transport and relaxation of vibrational energy in polymer chains. Journal of Chemical Physics, 2015, 142, 011101.	3.0	20
38	Radiative Enhancement of Linear and Third-Order Vibrational Excitations by an Array of Infrared Plasmonic Antennas. ACS Nano, 2018, 12, 4521-4528.	14.6	20
39	Evaluating the Extent of Intramolecular Charge Transfer in the Excited States of Rhenium(I) Donor-acceptor Complexes with Time-Resolved Vibrational Spectroscopy. Journal of Physical Chemistry B, 2013, 117, 15903-15916.	2.6	19
40	Full-Electron Ligand-to-Ligand Charge Transfer in a Compact Re(I) Complex. Journal of Physical Chemistry A, 2014, 118, 10407-10415.	2.5	19
41	Energy Transport in PEG Oligomers: Contributions of Different Optical Bands. Journal of Physical Chemistry C, 2016, 120, 26663-26677.	3.1	18
42	Intramolecular vibrational coupling contribution to temperature dependence of vibrational mode frequencies. Journal of Chemical Physics, 2012, 136, 144503.	3.0	16
43	Mode Coupling Pattern Changes Drastically Upon Photoisomerization in Ru ^{II} Complex. Journal of Physical Chemistry C, 2010, 114, 16740-16745.	3.1	15
44	How can infra-red excitation both accelerate and slow charge transfer in the same molecule?. Chemical Science, 2018, 9, 6395-6405.	7.4	15
45	Plasmonic Trimers for Dual-Frequency Surface-Enhanced Two-Dimensional Infrared Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 24731-24739.	3.1	14

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55	Unidirectional coherent energy transport via conjugated oligo(<i>p</i> -phenylene) chains. Journal of Chemical Physics, 2021, 154, 134304.	3.0	7
56	Symmetry controlled photo-selection and charge separation in butadiyne-bridged donor-bridge-acceptor compounds. Physical Chemistry Chemical Physics, 2020, 22, 9664-9676.	2.8	6
57	Intense-field interaction regime with weak laser pulses and localized plasmonic enhancement: Reference-free demonstration by 3rd- and 5th-order infrared spectroscopies. Journal of Chemical Physics, 2019, 151, 121103.	3.0	5
58	Low-Temperature Vibrational Energy Transport via PEG Chains. Journal of Physical Chemistry Letters, 2020, 11, 4578-4583.	4.6	5
59	Multi-mode heterodyned 5th-order infrared spectroscopy. Journal of Chemical Physics, 2016, 145, 154201.	3.0	4
60	Dynamical Models in the Two-Dimensional Infrared Spectroscopy of Peptides. Israel Journal of Chemistry, 2004, 44, 271-280.	2.3	3
61	Electronic torsional sound in linear atomic chains: Chemical energy transport at 1000 km/s. Journal of Chemical Physics, 2016, 145, 034903.	3.0	3
62	Proving and Probing the Presence of the Elusive C-H...O Hydrogen Bond in Liquid Solutions at Room Temperature. Angewandte Chemie, 2020, 132, 17160-17165.	2.0	2
63	2DIR Spectroscopy for Studies of Molecular Structure and Dynamics on Surfaces of Noble Metals. Journal of Physical Chemistry C, 2022, 126, 3314-3327.	3.1	2
64	Competition of Several Energy-Transport Initiation Mechanisms Defines the Ballistic Transport Speed. Journal of Physical Chemistry B, 2021, 125, 7546-7555.	2.6	1
65	Surface-Enhanced 2DIR Spectroscopy of nm-Thick Films Using Plasmonic Nano-arrays. Springer Series in Optical Sciences, 2019, , 287-310.	0.7	1
66	Tribute to David N. Beratan. Journal of Physical Chemistry B, 2020, 124, 3437-3440.	2.6	0