

# Mark A Berg

## List of Publications by Year in descending order

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68  
papers

2,157  
citations

201385

27  
h-index

223531

46  
g-index

71  
all docs

71  
docs citations

71  
times ranked

1780  
citing authors

#	ARTICLE	IF	CITATIONS
1	Excited-State Dynamics of Oligo(p-phenyleneethynylene): Quadratic Coupling and Torsional Motions. <i>Journal of the American Chemical Society</i> , 2001, 123, 6447-6448.	6.6	167
2	Measurement of Local DNA Reorganization on the Picosecond and Nanosecond Time Scales. <i>Journal of the American Chemical Society</i> , 1999, 121, 11644-11649.	6.6	158
3	Power-Law Solvation Dynamics in DNA over Six Decades in Time. <i>Journal of the American Chemical Society</i> , 2005, 127, 7270-7271.	6.6	141
4	Ultrafast Dynamics in DNA: "Fraying" at the End of the Helix. <i>Journal of the American Chemical Society</i> , 2006, 128, 6885-6892.	6.6	130
5	Complex Local Dynamics in DNA on the Picosecond and Nanosecond Time Scales. <i>Physical Review Letters</i> , 2002, 88, 158101.	2.9	129
6	LIBS using dual- and ultra-short laser pulses. <i>Fresenius' Journal of Analytical Chemistry</i> , 2001, 369, 320-327.	1.5	125
7	Local Dynamics in DNA by Temperature-Dependent Stokes Shifts of an Intercalated Dye. <i>Journal of the American Chemical Society</i> , 1998, 120, 2449-2456.	6.6	86
8	Dynamics of Water and Ions Near DNA: Comparison of Simulation to Time-Resolved Stokes-Shift Experiments. <i>Journal of the American Chemical Society</i> , 2009, 131, 1724-1735.	6.6	86
9	Some Comparisons of LIBS Measurements Using Nanosecond and Picosecond Laser Pulses. <i>Applied Spectroscopy</i> , 2001, 55, 279-285.	1.2	80
10	Effects of Solvent Viscosity on Protein Dynamics: Infrared Vibrational Echo Experiments and Theory. <i>Journal of Physical Chemistry B</i> , 2001, 105, 1081-1092.	1.2	79
11	Modeling the Effects of Torsional Disorder on the Spectra of Poly- and Oligo(p-phenyleneethynylenes). <i>Journal of Physical Chemistry B</i> , 2006, 110, 18844-18852.	1.2	66
12	Effect of lesions on the dynamics of DNA on the picosecond and nanosecond timescales using a polarity sensitive probe. <i>Nucleic Acids Research</i> , 2004, 32, 2494-2507.	6.5	55
13	Nanoscale structure and dynamics of DNA. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 1229-1242.	1.3	47
14	Heterogeneity of the Electron-Trapping Kinetics in CdSe Nanoparticles. <i>Nano Letters</i> , 2011, 11, 3493-3498.	4.5	44
15	Coumarin base-pair replacement as a fluorescent probe of ultrafast DNA dynamics. <i>Tetrahedron</i> , 2007, 63, 3450-3456.	1.0	42
16	Time-Resolved Optical Spectroscopy with Multiple Population Dimensions: A General Method for Resolving Dynamic Heterogeneity. <i>ChemPhysChem</i> , 2007, 8, 1761-1765.	1.0	37
17	Sodium-Ion Binding to DNA: Detection by Ultrafast Time-Resolved Stokes-Shift Spectroscopy. <i>Journal of the American Chemical Society</i> , 2003, 125, 11812-11813.	6.6	33
18	A viscoelastic continuum model of nonpolar solvation. III. Electron solvation and nonlinear coupling effects. <i>Journal of Chemical Physics</i> , 1999, 110, 8577-8588.	1.2	32

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19	Two-pulse echo experiments in the spectral diffusion regime. <i>Journal of Chemical Physics</i> , 2000, 113, 3233-3242.	1.2	32
20	Effect of Protein Binding on Ultrafast DNA Dynamics: Characterization of a DNA:APE1 Complex. <i>Biophysical Journal</i> , 2005, 89, 4129-4138.	0.2	32
21	Electron-Phonon Coupling in Phenyleneethynylene Oligomers: A Nonlinear One-Dimensional Configuration-Coordinate Model. <i>Journal of Physical Chemistry C</i> , 2007, 111, 5770-5782.	1.5	32
22	Role of Monovalent Counterions in the Ultrafast Dynamics of DNA. <i>Journal of Physical Chemistry B</i> , 2006, 110, 13248-13255.	1.2	30
23	Dispersed Kinetics without Rate Heterogeneity in an Ionic Liquid Measured with Multiple Population-Period Transient Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 161-164.	2.1	29
24	Torsional Relaxation and Friction on the Nanometer Length Scale: Comparison of Small-Molecule Rotation in Poly(dimethylsiloxane) and Poly(isobutylene). <i>Macromolecules</i> , 2003, 36, 2721-2732.	2.2	28
25	Heterogeneous Reaction Rates in an Ionic Liquid: Quantitative Results from Two-Dimensional Multiple Population-Period Transient Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2011, 115, 7984-7993.	1.1	28
26	A viscoelastic continuum model of non-polar solvation.. <i>Chemical Physics</i> , 1998, 233, 257-266.	0.9	27
27	Parallels between multiple population-period transient spectroscopy and multidimensional coherence spectroscopies. <i>Journal of Chemical Physics</i> , 2008, 129, 064504.	1.2	27
28	Friction on Small Objects and the Breakdown of Hydrodynamics in Solution: Rotation of Anthracene in Poly(isobutylene) from the Small-Molecule to Polymer Limits. <i>Journal of Physical Chemistry B</i> , 2002, 106, 7385-7397.	1.2	26
29	Ultrafast dichroism spectroscopy of anthracene in solution. I. Inertial versus diffusive rotation in benzyl alcohol. <i>Journal of Chemical Physics</i> , 2001, 115, 4212-4222.	1.2	23
30	Analyzing Nonexponential Kinetics with Multiple Population-Period Transient Spectroscopy (MUPPETS). <i>Journal of Physical Chemistry A</i> , 2008, 112, 3364-3375.	1.1	23
31	Rate and Amplitude Heterogeneity in the Solvation Response of an Ionic Liquid. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 504-508.	2.1	22
32	When is a single molecule heterogeneous? A multidimensional answer and its application to dynamics near the glass transition. <i>Journal of Chemical Physics</i> , 2015, 143, 024110.	1.2	18
33	High-Resolution Raman Spectra with Femtosecond Pulses: An Example of Combined Time- and Frequency-Domain Spectroscopy. <i>Physical Review Letters</i> , 2006, 97, 267401.	2.9	16
34	Simultaneous time and frequency detection in femtosecond coherent Raman spectroscopy. I. Theory and model calculations. <i>Journal of Chemical Physics</i> , 2007, 127, 044306.	1.2	15
35	Reactions of vinylcyclopropane induced by multiphoton absorption of infrared radiation. <i>Journal of the American Chemical Society</i> , 1979, 101, 6468-6470.	6.6	14
36	Rate Dispersion in the Biexciton Decay of CdSe/ZnS Nanoparticles from Multiple Population-Period Transient Spectroscopy. <i>Journal of the American Chemical Society</i> , 2013, 135, 1002-1005.	6.6	14

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37	Nonparametric analysis of nonexponential and multidimensional kinetics. I. Quantifying rate dispersion, rate heterogeneity, and exchange dynamics. <i>Journal of Chemical Physics</i> , 2017, 146, 054104.	1.2	14
38	Ultrafast dichroism spectroscopy of anthracene in solution. III. Nonpolar solvation dynamics in benzyl alcohol. <i>Journal of Chemical Physics</i> , 2001, 115, 4231-4238.	1.2	13
39	Ultrafast dichroism spectroscopy of anthracene in solution. II. Solvation dynamics from a one-dimensional experiment. <i>Journal of Chemical Physics</i> , 2001, 115, 4223-4230.	1.2	13
40	Raman free-induction-decay measurements in low viscosity and supercooled toluene: Vibrational dephasing by shear fluctuations. <i>Journal of Chemical Physics</i> , 2001, 114, 3662-3673.	1.2	12
41	Measuring a hidden coordinate: Rate-exchange kinetics from 3D correlation functions. <i>Journal of Chemical Physics</i> , 2016, 145, 054119.	1.2	12
42	Simultaneous time and frequency detection in femtosecond coherent Raman spectroscopy. II. Application to acetonitrile. <i>Journal of Chemical Physics</i> , 2007, 127, 044307.	1.2	11
43	Hilbert-space treatment of incoherent, time-resolved spectroscopy. I. Formalism, a tensorial classification of high-order orientational gratings and generalized MUPPETS. <i>Journal of Chemical Physics</i> , 2010, 132, 144105.	1.2	11
44	Hilbert-space treatment of incoherent, time-resolved spectroscopy. II. Pathway description of optical multiple population-period transient spectroscopy. <i>Journal of Chemical Physics</i> , 2010, 132, 144106.	1.2	11
45	Multiple population-period transient spectroscopy (MUPPETS) in excitonic systems. <i>Journal of Chemical Physics</i> , 2013, 138, 034201.	1.2	11
46	Biphasic rate exchange in supercooled $\alpha$ -terphenyl from an ensemble analysis of single-molecule data. <i>Physical Review E</i> , 2018, 98, .	0.8	10
47	Differential heterodyne detection with diffractive optics for multidimensional transient-grating spectroscopy. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2009, 26, 2357.	0.9	9
48	Thermal gratings and phase in high-order, transient-grating spectroscopy. <i>Journal of Chemical Physics</i> , 2011, 134, 144502.	1.2	8
49	Ultrafast dichroism spectroscopy of anthracene in solution. IV. Merging of inertial and diffusive motions in toluene. <i>Journal of Chemical Physics</i> , 2003, 118, 7534.	1.2	7
50	Multiple Population-Period Transient Spectroscopy (MUPPETS) of CdSe/ZnS Nanoparticles. I. Exciton and Biexciton Dynamics. <i>Journal of Physical Chemistry B</i> , 2013, 117, 15257-15271.	1.2	6
51	Two-Dimensional Anisotropy Measurements Showing Local Heterogeneity in a Polymer Melt. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 2608-2612.	2.1	6
52	Micelle Heterogeneity from the 2D Kinetics of Solute Rotation. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 6885-6891.	2.1	4
53	Multiple Population-Period Transient Spectroscopy (MUPPETS) of CdSe/ZnS Nanoparticles. II. Effects of High Fluence and Solvent Heating. <i>Journal of Physical Chemistry B</i> , 2013, 117, 15272-15284.	1.2	3
54	Jump-precursor state emerges below the crossover temperature in supercooled $\alpha$ -terphenyl. <i>Physical Review E</i> , 2021, 103, L050601.	0.8	2

#	ARTICLE	IF	CITATIONS
55	Nonlinear measurements of kinetics and generalized dynamical modes. II. Application to a simulation of solvation dynamics in an ionic liquid. <i>Journal of Chemical Physics</i> , 2021, 155, 024123.	1.2	2
56	Nonlinear measurements of kinetics and generalized dynamical modes. I. Extracting the one-dimensional Greenâ€™s function from a time series. <i>Journal of Chemical Physics</i> , 2021, 155, 024122.	1.2	2
57	Well-Resolved Coherent Raman Spectra from Femtosecond Pulses. <i>Springer Series in Chemical Physics</i> , 2007, , 386-388.	0.2	1
58	Multidimensional Population â€™Echoâ€™ Distinguishes Between Homogeneous and Heterogeneous Dynamics. <i>Springer Series in Chemical Physics</i> , 2007, , 329-331.	0.2	1
59	Ultrafast Raman echo experiments in the liquid phase. , 1992, , .		0
60	Structural relaxation in liquids and glasses by transient hole burning. , 1992, 1638, 12.		0
61	Nanoscale versus Macroscale Friction in Polymers and Small-Molecule Liquids: Anthracene Rotation in PIB and PDMS. <i>ACS Symposium Series</i> , 2003, , 177-190.	0.5	0
62	Ultrafast dynamics in DNA. , 2000, , .		0
63	Separating Inertial and Diffusive Rotation and Solvation for a Nonpolar Solute. <i>Springer Series in Chemical Physics</i> , 2001, , 557-559.	0.2	0
64	Ultrafast Dynamics in DNA. <i>Springer Series in Chemical Physics</i> , 2001, , 563-565.	0.2	0
65	BREAKDOWN OF HYDRODYNAMIC BEHAVIOR: SOLUTE ROTATIONAL DYNAMICS FROM THE SMALL-MOLECULE TO THE POLYMER LIMIT. , 2002, , .		0
66	Ultrafast dynamics of normal and damaged DNA. , 2004, , 479-482.		0
67	Separating Sub-Ensembles on Ultrafast Timescales: Multiple-Population Period Transient Spectroscopy (MUPPETS). , 2010, , .		0
68	<title>Mechanical mechanism for the ultrafast perturbation of electronic states in solution</title>. , 1994, , .		0