Katharine Moore Tibbetts

List of Publications by Year
in descending order

68	1,246	361413	414414
papers	citations	20 h-index	32 g-index

69	69	69	987
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ultrafast Dynamics of Nitroâ€“Nitrite Rearrangement and Dissociation in Nitromethane Cation. Journal of Physical Chemistry A, 2022, , .	2.5	1
2	Conformer-Specific Dissociation Dynamics in Dimethyl Methylphosphonate Radical Cation. Molecules, 2022, 27, 2269.	3.8	1
3	Coherent Control of Molecular Dissociation by Selective Excitation of Nuclear Wave Packets. Frontiers in Chemistry, 2022, 10, 859095.	3.6	4
4	Generation of nanomaterials by reactive laser-synthesis in liquid. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	5.1	17
5	Using computational chemistry to design pumpâ€“probe schemes for measuring nitrobenzene radical cation dynamics. Physical Chemistry Chemical Physics, 2021, 23, 13338-13348.	2.8	6
6	Synthesis of Air-Stable Cu Nanoparticles Using Laser Reduction in Liquid. Nanomaterials, 2021, 11, 814.	4.1	12
7	Deposition of Cubic Copper Nanoparticles on Silicon Laser-Induced Periodic Surface Structures via Reactive Laser Ablation in Liquid. Langmuir, 2021, 37, 3740-3750.	3.5	11
8	Superhalogens Among 3d-Metal Compounds: MF₄, MF₆, MF₁₂, and MF₁₈ (M = Scâ€“Zn). Journal of Physical Chemistry A, 2021, 125, 4409-4419.	2.5	2
9	Laser synthesis of uncapped palladium nanocatalysts. Applied Surface Science, 2021, 557, 149811.	6.1	10
10	Quantitative Analysis of Nitrotoluene Isomer Mixtures Using Femtosecond Time-Resolved Mass Spectrometry. Analytical Chemistry, 2021, 93, 11268-11274.	6.5	5
11	Mechanism of Goldâ€“Silver Alloy Nanoparticle Formation by Laser Coreduction of Gold and Silver Ions in Solution. Journal of Physical Chemistry B, 2021, 125, 907-917.	2.6	21
12	Fabrication of Goldâ€“Silicon Nanostructured Surfaces with Reactive Laser Ablation in Liquid. Langmuir, 2020, 36, 10120-10129.	3.5	14
13	Laser-assisted synthesis of goldâ€“graphene oxide nanocomposites: effect of pulse duration. Physical Chemistry Chemical Physics, 2020, 22, 18294-18303.	2.8	10
14	Dissociation of Singly and Multiply Charged Nitromethane Cations: Femtosecond Laser Mass Spectrometry and Theoretical Modeling. Journal of Physical Chemistry A, 2020, 124, 7427-7438.	2.5	4
15	Mechanism of Nickel Phyllosilicate Formation by Laser Ablation in Liquid. Journal of Physical Chemistry C, 2020, 124, 13273-13282.	3.1	8
16	From Neutral Aniline to Aniline Trication: A Computational and Experimental Study. Journal of Physical Chemistry A, 2020, 124, 3120-3134.	2.5	6
17	Controlling the morphology of copper-silica nanocomposites from laser ablation in liquid. Applied Surface Science, 2020, 510, 145037.	6.1	15
18	Mechanisms of Formation of Nanoparticles in Aqueous Salt Solutions Under the Action of a High-Power Periodic Laser Radiation. Journal of Engineering Physics and Thermophysics, 2019, 92, 369-375.	0.6	1

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19	Kinetic Control of [AuCl₄]^{â˜’} Photochemical Reduction and Gold Nanoparticle Size with Hydroxyl Radical Scavengers. Journal of Physical Chemistry B, 2019, 123, 7204-7213.	2.6	45
20	Frontispiece: Coherent Vibrational and Dissociation Dynamics of Polyatomic Radical Cations. Chemistry - A European Journal, 2019, 25, .	3.3	1
21	Nucleation of Gold Nanoparticles in a Solution via Laser Hell: Simulation and Experiments. International Journal of Nanoscience, 2019, 18, 1940059.	0.7	2
22	Homocoupling and Heterocoupling of Grignard Perfluorobenzene Reagents via Aryne Intermediates: A DFT Study. Journal of Physical Chemistry A, 2019, 123, 9693-9700.	2.5	1
23	Conserved Vibrational Coherence in the Ultrafast Rearrangement of 2-Nitrotoluene Radical Cation. Journal of Physical Chemistry A, 2019, 123, 1140-1152.	2.5	24
24	Probing Coherent Vibrations of Organic Phosphonate Radical Cations with Femtosecond Time-Resolved Mass Spectrometry. Molecules, 2019, 24, 509.	3.8	5
25	Coherent Vibrational and Dissociation Dynamics of Polyatomic Radical Cations. Chemistry - A European Journal, 2019, 25, 8431-8439.	3.3	9
26	One-step femtosecond laser ablation synthesis of sub-3â€¯nm gold nanoparticles stabilized by silica. Applied Surface Science, 2019, 475, 1048-1057.	6.1	41
27	Dissociation dynamics of 3- and 4-nitrotoluene radical cations: Coherently driven Câ€“NO2 bond homolysis. Journal of Chemical Physics, 2018, 148, 134305.	3.0	17
28	Ultrafast coherent vibrational dynamics in dimethyl methylphosphonate radical cation. Physical Chemistry Chemical Physics, 2018, 20, 4636-4640.	2.8	11
29	Nucleation and growth of gold nanoparticles initiated by nanosecond and femtosecond laser irradiation of aqueous [AuCl₄]^{â˜’}. Physical Chemistry Chemical Physics, 2018, 20, 28465-28475.	2.8	49
30	Au Nanoparticle Synthesis Via Femtosecond Laser-Induced Photochemical Reduction of [AuCl4]â˜’. , 2018, , .		4
31	Measurement of Ultrafast Vibrational Coherences in Polyatomic Radical Cations with Strong-Field Adiabatic Ionization. Journal of Visualized Experiments, 2018, , .	0.3	5
32	Radical Chemistry in a Femtosecond Laser Plasma: Photochemical Reduction of Ag+ in Liquid Ammonia Solution. Molecules, 2018, 23, 532.	3.8	32
33	Exploring experimental fitness landscapes for chemical synthesis and property optimization. Physical Chemistry Chemical Physics, 2017, 19, 4266-4287.	2.8	10
34	Gold Nanotriangle Formation through Strong-Field Laser Processing of Aqueous KAuCl₄ and Postirradiation Reduction by Hydrogen Peroxide. Langmuir, 2017, 33, 243-252.	3.5	19
35	A Theoretical and Mass Spectrometry Study of Dimethyl Methylphosphonate: New Isomers and Cation Decay Channels in an Intense Femtosecond Laser Field. Journal of Physical Chemistry A, 2017, 121, 8414-8424.	2.5	22
36	Roles of Free Electrons and H₂O₂ in the Optical Breakdown-Induced Photochemical Reduction of Aqueous [AuCl₄]^{â˜’}. Journal of Physical Chemistry A, 2017, 121, 6742-6754.	2.5	52

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37	Elucidating Strong Field Photochemical Reduction Mechanisms of Aqueous [AuCl₄]^{â^'}: Kinetics of Multiphoton Photolysis and Radical-Mediated Reduction. Journal of Physical Chemistry A, 2016, 120, 3562-3569.	2.5	36
38	Resolving the source of blue luminescence from alkyl-capped silicon nanoparticles synthesized by laser pulse ablation. Journal of Materials Chemistry C, 2016, 4, 6894-6899.	5.5	9
39	Amorphous aluminum-carbide and aluminumâ€“magnesium-carbide nanoparticles from gas phase activation of trimethylaluminum and octamethyldialuminummagnesium using simultaneous spatially and temporally focused ultrashort laser pulses. Nano Structures Nano Objects, 2016, 6, 1-4.	3.5	8
40	Constrained control landscape for population transfer in a two-level system. Physical Chemistry Chemical Physics, 2015, 17, 3164-3178.	2.8	8
41	Formation of carbon nanospheres via ultrashort pulse laser irradiation of methane. Materials Chemistry and Physics, 2015, 156, 47-53.	4.0	8
42	Controlling the dissociation dynamics of acetophenone radical cation through excitation of ground and excited state wavepackets. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 164002.	1.5	15
43	Searching for quantum optimal controls under severe constraints. Physical Review A, 2015, 91, .	2.5	23
44	Triangular Gold Nanoplate Growth by Oriented Attachment of Au Seeds Generated by Strong Field Laser Reduction. Nano Letters, 2015, 15, 3377-3382.	9.1	61
45	Characterization of control noise effects in optimal quantum unitary dynamics. Physical Review A, 2014, 90, .	2.5	28
46	Strong Field Adiabatic Ionization Prepares a Launch State for Coherent Control. Journal of Physical Chemistry Letters, 2014, 5, 4305-4309.	4.6	18
47	Searching for quantum optimal control fields in the presence of singular critical points. Physical Review A, 2014, 90, .	2.5	29
48	Applications of Shaped Femtosecond near-IR Laser Irradiation in the Generation of Metal Nanoparticles. Materials Research Society Symposia Proceedings, 2014, 1654, 1.	0.1	4
49	Fundamental Principles of Control Landscapes with Applications to Quantum Mechanics, Chemistry and Evolution. Emergence, Complexity and Computation, 2014, , 33-70.	0.3	7
50	Mechanism of Improved Au Nanoparticle Size Distributions Using Simultaneous Spatial and Temporal Focusing for Femtosecond Laser Irradiation of Aqueous KAuCl₄. Journal of Physical Chemistry C, 2014, 118, 23986-23995.	3.1	33
51	Controlling Dissociation of Alkyl Phenyl Ketone Radical Cations in the Strong-Field Regime through Hydroxyl Substitution Position. Journal of Physical Chemistry A, 2014, 118, 8170-8176.	2.5	12
52	Radical cation spectroscopy of substituted alkyl phenyl ketones via tunnel ionization. Chemical Physics, 2014, 442, 81-85.	1.9	13
53	Laboratory transferability of optimally shaped laser pulses for quantum control. Journal of Chemical Physics, 2014, 140, 074302.	3.0	2
54	Optimal control of molecular fragmentation with homologous families of photonic reagents and chemical substrates. Physical Chemistry Chemical Physics, 2013, 15, 18012.	2.8	20

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55	Discovering predictive rules of chemistry from property landscapes. Chemical Physics Letters, 2013, 572, 1-12.	2.6	9
56	Gold Nanoparticle Synthesis Using Spatially and Temporally Shaped Femtosecond Laser Pulses: Post-Irradiation Auto-Reduction of Aqueous [AuCl₄]^{â˜’}. Journal of Physical Chemistry C, 2013, 117, 18719-18727.	3.1	52
57	Measurement of an Electronic Resonance in a Ground-State, Gas-Phase Acetophenone Cation via Strong-Field Mass Spectrometry. Journal of Physical Chemistry Letters, 2013, 4, 1587-1591.	4.6	23
58	Measurement of Ionic Resonances in Alkyl Phenyl Ketone Cations via Infrared Strong Field Mass Spectrometry. Journal of Physical Chemistry A, 2013, 117, 12374-12381.	2.5	18
59	Systematic Trends in Photonic Reagent Induced Reactions in a Homologous Chemical Family. Journal of Physical Chemistry A, 2013, 117, 8205-8215.	2.5	9
60	Exploring control landscapes for laser-driven molecular fragmentation. Journal of Chemical Physics, 2013, 139, 144201.	3.0	11
61	Exploring constrained quantum control landscapes. Journal of Chemical Physics, 2012, 137, 134113.	3.0	65
62	Exploring the tradeoff between fidelity and time optimal control of quantum unitary transformations. Physical Review A, 2012, 86, .	2.5	54
63	Manipulating molecules. Nature Chemistry, 2012, 4, 72-73.	13.6	27
64	NMR Landscapes for Chemical Shift Prediction. Journal of Physical Chemistry A, 2012, 116, 9142-9157.	2.5	8
65	Search complexity and resource scaling for the quantum optimal control of unitary transformations. Physical Review A, 2011, 83, .	2.5	48
66	Exploring quantum control landscapes: Topology, features, and optimization scaling. Physical Review A, 2011, 84, .	2.5	46
67	On the relationship between quantum control landscape structure and optimization complexity. Journal of Chemical Physics, 2008, 128, 154117.	3.0	42
68	Association analysis of CHMP1.5 genetic variation and bipolar disorder. Psychiatric Genetics, 2005, 15, 211-214.	1.1	3