Patanjali Kambhampati

List of Publications by Year
in descending order

81 papers	7,593 citations	87888 38 h-index	64796 79 g-index
81 all docs	81 docs citations	81 times ranked	7394 citing authors

#	Article	IF	Citations
1	Polaronic quantum confinement in bulk <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>CsPb</mml:mi><mml:msub><mml:mi>Br</mml:mi><mml perovskite crystals revealed by state-resolved pump/probe spectroscopy. Physical Review Research, 2021, 3, .	3.6	24
2	Nanoparticles, Nanocrystals, and Quantum Dots: What are the Implications of Size in Colloidal Nanoscale Materials?. Journal of Physical Chemistry Letters, 2021, 12, 4769-4779.	4.6	32
3	Resonance Raman Vibrational Mode Enhancement of Adsorbed Benzenethiols on CdSe Is Predominantly Franckâ€"Condon in Nature and Governed by Symmetry. Journal of Physical Chemistry Letters, 2021, 12, 7935-7941.	4.6	1
4	OPA-driven hollow-core fiber as a tunable, broadband source for coherent multidimensional spectroscopy. Optics Express, 2021, 29, 28352.	3.4	6
5	Learning about the Structural Dynamics of Semiconductor Perovskites from Electron Solvation Dynamics. Journal of Physical Chemistry C, 2021, 125, 23571-23586.	3.1	9
6	The Temperature Dependence of the Photoluminescence of CsPbBr₃ Nanocrystals Reveals Phase Transitions and Homogeneous Linewidths. Journal of Physical Chemistry C, 2021, 125, 27504-27508.	3.1	14
7	Emitting State of Bulk CsPbBr₃ Perovskite Nanocrystals Reveals a Quantum-Confined Excitonic Structure. Journal of Physical Chemistry C, 2020, 124, 18816-18822.	3.1	13
8	An analysis of hollow-core fiber for applications in coherent femtosecond spectroscopies. Journal of Applied Physics, 2020, 128, .	2.5	4
9	Fifth-order two-quantum absorptive two-dimensional electronic spectroscopy of CdSe quantum dots. Journal of Chemical Physics, 2020, 153, 234703.	3.0	16
10	Atomic fluctuations in electronic materials revealed by dephasing. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11940-11946.	7.1	27
11	Investigating the electronic structure of confined multiexcitons with nonlinear spectroscopies. Journal of Chemical Physics, 2020, 152, 104710.	3.0	29
12	Two-dimensional electronic spectroscopy reveals liquid-like lineshape dynamics in CsPbI3 perovskite nanocrystals. Nature Communications, 2019, 10, 4962.	12.8	63
13	Excited State Phononic Processes in Semiconductor Nanocrystals Revealed by Excitonic State-Resolved Pump/Probe Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 3868-3875.	3.1	8
14	Probing biexciton structure in CdSe nanocrystals using 2D optical spectroscopy. EPJ Web of Conferences, 2019, 205, 06020.	0.3	1
15	Strategy for Exploiting Self-Trapped Excitons in Semiconductor Nanocrystals for White Light Generation. ACS Photonics, 2019, 6, 1118-1124.	6.6	16
16	Direct Observation of Vibronic Coupling between Excitonic States of CdSe Nanocrystals and Their Passivating Ligands. Journal of Physical Chemistry C, 2019, 123, 5084-5091.	3.1	20
17	Photophysical Action Spectra of Emission from Semiconductor Nanocrystals Reveal Violations to the Vavilov Rule Behavior from Hot Carrier Effects. Journal of Physical Chemistry C, 2019, 123, 5092-5098.	3.1	24
18	Efficient Optical Gain in CdSe/CdS Dots-in-Rods. ACS Photonics, 2019, 6, 382-388.	6.6	20

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19	Seeing Multiexcitons through Sample Inhomogeneity: Band-Edge Biexciton Structure in CdSe Nanocrystals Revealed by Two-Dimensional Electronic Spectroscopy. Nano Letters, 2018, 18, 2999-3006.	9.1	44
20	Investigating exciton structure and dynamics in colloidal CdSe quantum dots with two-dimensional electronic spectroscopy. Journal of Chemical Physics, 2018, 149, 074702.	3.0	22
21	Understanding and Exploiting the Interface of Semiconductor Nanocrystals for Light Emissive Applications. ACS Photonics, 2017, 4, 412-423.	6.6	19
22	Investigating the influence of ligands on the surface-state emission of colloidal CdSe quantum dots. Proceedings of SPIE, 2017, , .	0.8	3
23	Extending Semiconductor Nanocrystals from the Quantum Dot Regime to the Molecular Cluster Regime. Journal of Physical Chemistry C, 2017, 121, 26102-26107.	3.1	40
24	Coherent multi-dimensional spectroscopy at optical frequencies in a single beam with optical readout. Journal of Chemical Physics, 2017, 147, 094203.	3.0	14
25	Temperature Dependence of Emission Line Widths from Semiconductor Nanocrystals Reveals Vibronic Contributions to Line Broadening Processes. Journal of Physical Chemistry C, 2017, 121, 28537-28545.	3.1	52
26	Electron Dynamics at the Surface of Semiconductor Nanocrystals. Journal of Physical Chemistry C, 2017, 121, 26519-26527.	3.1	26
27	Simple fiber-based solution for coherent multidimensional spectroscopy in the visible regime. Optics Letters, 2017, 42, 643.	3.3	23
28	The Effect of Excitonâ€Delocalizing Thiols on Intrinsic Dual Emitting Semiconductor Nanocrystals. ChemPhysChem, 2016, 17, 665-669.	2.1	21
29	Interfacial Electronic Structure in Graded Shell Nanocrystals Dictates Their Performance for Optical Gain. Journal of Physical Chemistry C, 2016, 120, 19409-19415.	3.1	19
30	Surface and interface effects on non-radiative exciton recombination and relaxation dynamics in CdSe/Cd,Zn,S nanocrystals. Chemical Physics, 2016, 471, 11-17.	1.9	17
31	Kilohertz generation of high contrast polarization states for visible femtosecond pulses via phase-locked acousto-optic pulse shapers. Journal of Applied Physics, 2015, 118, .	2.5	7
32	Toward Ratiometric Nanothermometry via Intrinsic Dual Emission from Semiconductor Nanocrystals. Journal of Physical Chemistry Letters, 2015, 6, 718-721.	4.6	61
33	Unraveling photoluminescence quenching pathways in semiconductor nanocrystals. Chemical Physics Letters, 2015, 633, 65-69.	2.6	11
34	Controlling the Surface of Semiconductor Nanocrystals for Efficient Light Emission from Single Excitons to Multiexcitons. Journal of Physical Chemistry C, 2015, 119, 16383-16389.	3.1	17
35	Linking surface chemistry to optical properties of semiconductor nanocrystals. Physical Chemistry Chemical Physics, 2015, 17, 18882-18894.	2.8	83
36	Ligand Surface Chemistry Dictates Light Emission from Nanocrystals. Journal of Physical Chemistry Letters, 2015, 6, 4292-4296.	4.6	33

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37	On the kinetics and thermodynamics of excitons at the surface of semiconductor nanocrystals: Are there surface excitons?. Chemical Physics, 2015, 446, 92-107.	1.9	71
38	Correction to â€œGet the Basics Right: Jacobian Conversion of Wavelength and Energy Scales for Quantitative Analysis of Emission Spectraâ€• Journal of Physical Chemistry Letters, 2014, 5, 3497-3497.	4.6	44
39	Connecting the Dots: The Kinetics and Thermodynamics of Hot, Cold, and Surface-Trapped Excitons in Semiconductor Nanocrystals. Journal of Physical Chemistry C, 2014, 118, 7730-7739.	3.1	61
40	Control of Phonons in Semiconductor Nanocrystals via Femtosecond Pulse Chirp-Influenced Wavepacket Dynamics and Polarization. Journal of Physical Chemistry B, 2013, 117, 15651-15658.	2.6	19
41	Spectral and spatial contributions to white light generation from InGaN/GaN dot-in-a-wire nanostructures. Journal of Applied Physics, 2013, 114, 164305.	2.5	3
42	Ultrafast Electron Trapping at the Surface of Semiconductor Nanocrystals: Excitonic and Biexcitonic Processes. Journal of Physical Chemistry B, 2013, 117, 4412-4421.	2.6	52
43	Challenge to the deep-trap model of the surface in semiconductor nanocrystals. Physical Review B, 2013, 87, .	3.2	127
44	Terahertz Bandwidth All-Optical Modulation and Logic Using Multiexcitons in Semiconductor Nanocrystals. Nano Letters, 2013, 13, 722-727.	9.1	18
45	A microscopic picture of surface charge trapping in semiconductor nanocrystals. Journal of Chemical Physics, 2013, 138, 204705.	3.0	69
46	Chemical and Thermodynamic Control of the Surface of Semiconductor Nanocrystals for Designer White Light Emitters. ACS Nano, 2013, 7, 5922-5929.	14.6	82
47	Two-Color Two-Dimensional Electronic Spectroscopy Using Dual Acousto-Optic Pulse Shapers for Complete Amplitude, Phase, and Polarization Control of Femtosecond Laser Pulses. Journal of Physical Chemistry A, 2013, 117, 6264-6269.	2.5	20
48	Get the Basics Right: Jacobian Conversion of Wavelength and Energy Scales for Quantitative Analysis of Emission Spectra. Journal of Physical Chemistry Letters, 2013, 4, 3316-3318.	4.6	264
49	Two-dimensional spectroscopy using dual acousto-optic pulse shapers for complete polarization, phase and amplitude control. EPJ Web of Conferences, 2013, 41, 11004.	0.3	1
50	Independent Control of Electron and Hole Localization in Core/Barrier/Shell Nanostructures. Journal of Physical Chemistry C, 2012, 116, 8154-8160.	3.1	21
51	Improving Optical Gain Performance in Semiconductor Quantum Dots via Coupled Quantum Shells. Journal of Physical Chemistry C, 2012, 116, 5407-5413.	3.1	37
52	Multiexcitons in Semiconductor Nanocrystals: A Platform for Optoelectronics at High Carrier Concentration. Journal of Physical Chemistry Letters, 2012, 3, 1182-1190.	4.6	119
53	Colloidal and Self-Assembled Quantum Dots for Optical Gain. , 2011, , 493-542.		8
54	Hot Exciton Relaxation Dynamics in Semiconductor Quantum Dots: Radiationless Transitions on the Nanoscale. Journal of Physical Chemistry C, 2011, 115, 22089-22109.	3.1	330

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55	False multiple exciton recombination and multiple exciton generation signals in semiconductor quantum dots arise from surface charge trapping. Journal of Chemical Physics, 2011, 134, 094706.	3.0	171
56	Unraveling the Structure and Dynamics of Excitons in Semiconductor Quantum Dots. Accounts of Chemical Research, 2011, 44, 1-13.	15.6	337
57	State-resolved observation in real time of the structural dynamics of multiexcitons in semiconductor nanocrystals. Physical Review B, 2011, 84, .	3.2	50
58	Controlling Piezoelectric Response in Semiconductor Quantum Dots via Impulsive Charge Localization. Nano Letters, 2010, 10, 3062-3067.	9.1	59
59	Gain Control in Semiconductor Quantum Dots via State-Resolved Optical Pumping. Physical Review Letters, 2009, 102, 127404.	7.8	101
60	State-resolved manipulations of optical gain in semiconductor quantum dots: Size universality, gain tailoring, and surface effects. Journal of Chemical Physics, 2009, 131, 164706.	3.0	62
61	Direct observation of the structure of band-edge biexcitons in colloidal semiconductor CdSe quantum dots. Physical Review B, 2009, 80, .	3.2	93
62	Experimental tests of effective mass and atomistic approaches to quantum dot electronic structure: Ordering of electronic states. Applied Physics Letters, 2009, 94, .	3.3	49
63	State-resolved studies of biexcitons and surface trapping dynamics in semiconductor quantum dots. Journal of Chemical Physics, 2008, 129, 084701.	3.0	179
64	Size dependent, state-resolved studies of exciton-phonon couplings in strongly confined semiconductor quantum dots. Physical Review B, 2008, 77, .	3.2	162
65	State-Resolved Excitonâ^'Phonon Couplings in CdSe Semiconductor Quantum Dots. Journal of Physical Chemistry C, 2008, 112, 9124-9127.	3.1	65
66	Single Dot Spectroscopy of Two-Color Quantum Dot/Quantum Shell Nanostructures. Journal of Physical Chemistry C, 2008, 112, 14229-14232.	3.1	36
67	Noise analysis and noise reduction methods in kilohertz pump-probe experiments. Review of Scientific Instruments, 2007, 78, 073101.	1.3	25
68	Breaking the Phonon Bottleneck for Holes in Semiconductor Quantum Dots. Physical Review Letters, 2007, 98, .	7.8	187
69	Unified picture of electron and hole relaxation pathways in semiconductor quantum dots. Physical Review B, 2007, 75, .	3.2	170
70	Light Harvesting and Carrier Transport in Core/Barrier/Shell Semiconductor Nanocrystals. Journal of Physical Chemistry C, 2007, 111, 708-713.	3.1	59
71	State-to-state exciton dynamics in semiconductor quantum dots. Physical Review B, 2006, 74, .	3.2	168
72	Solvation Dynamics of the Hydrated Electron Depends on Its Initial Degree of Electron Delocalizationâ€. Journal of Physical Chemistry A, 2002, 106, 2374-2378.	2.5	112

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73	Femtosecond Multicolor Pumpâ˘'Probe Study of Ultrafast Electron Transfer of [(NH3)5RuIIINCRuII(CN)5]-in Aqueous Solution. Journal of Physical Chemistry A, 2002, 106, 4591-4597.	2.5	64
74	A Unified Electron Transfer Model for the Different Precursors and Excited States of the Hydrated Electron. Journal of Physical Chemistry A, 2001, 105, 8434-8439.	2.5	80
75	One-photon UV detrapping of the hydrated electron. Chemical Physics Letters, 2001, 342, 571-577.	2.6	44
76	Solvent Effects on Vibrational Coherence and Ultrafast Reaction Dynamics in the Multicolor Pumpâ˘'Probe Spectroscopy of Intervalence Electron Transfer. Journal of Physical Chemistry A, 2000, 104, 10637-10644.	2.5	70
77	Two-dimensional localization of adsorbate/substrate charge-transfer excited states of molecules adsorbed on metal surfaces. Journal of Chemical Physics, 1999, 110, 551-558.	3.0	23
78	Probing Photoinduced Charge Transfer at Atomically Smooth Metal Surfaces Using Surface Enhanced Raman Scattering. Physica Status Solidi A, 1999, 175, 233-239.	1.7	11
79	Surface-enhanced Raman scattering. Chemical Society Reviews, 1998, 27, 241.	38.1	2,771
80	On the chemical mechanism of surface enhanced Raman scattering: Experiment and theory. Journal of Chemical Physics, 1998, 108, 5013-5026.	3.0	260
81	Learning about the Structural Dynamics of Semiconductor Perovskites from Ultrafast Solvation Dynamics. , 0, , .		0