Matthew Pelton

List of Publications by Year
in descending order

114 papers	9,932 citations	44042 48 h-index	38368 95 g-index
116 all docs	116 docs citations	116 times ranked	10412 citing authors

#	Article	IF	Citations
1	Low-Frequency Oscillations in Optical Measurements of Metal-Nanoparticle Vibrations. Nano Letters, 2022, 22, 5365-5371.	4.5	5
2	Second Harmonic Generation from a Single Plasmonic Nanorod Strongly Coupled to a WSe₂ Monolayer. Nano Letters, 2021, 21, 1599-1605.	4.5	27
3	Ultrastrong plasmonâ€“phonon coupling via epsilon-near-zero nanocavities. Nature Photonics, 2021, 15, 125-130.	15.6	78
4	Second Harmonic Generation from a Single Plasmonic Nanorod Strongly Coupled to a WSe2 Monolayer. , 2021, , .		1
5	Tip-Enhanced Strong Coupling of Quantum Dot Single Photon Emitters. , 2021, , .		0
6	Plasmonic Split-Trench Resonator for Trapping and Sensing. ACS Nano, 2021, 15, 6669-6677.	7.3	17
7	Viscoelasticity Enhances Nanometer-Scale Slip in Gigahertz-Frequency Liquid Flows. Journal of Physical Chemistry Letters, 2021, 12, 3449-3455.	2.1	10
8	Angle-independent plasmonic substrates for multi-mode vibrational strong coupling with molecular thin films. Journal of Chemical Physics, 2021, 154, 104305.	1.2	24
9	Highly Spherical Nanoparticles Probe Gigahertz Viscoelastic Flows of Simple Liquids Without the No-Slip Condition. Journal of Physical Chemistry Letters, 2021, 12, 4440-4446.	2.1	9
10	Weakly conjugated bacteriochlorin-bacteriochlorin dyad: Synthesis and photophysical properties. Journal of Porphyrins and Phthalocyanines, 2021, 25, 724-733.	0.4	6
11	Single-Molecule Measurements Spatially Probe States Involved in Electron Transfer from CdSe/CdS Core/Shell Nanorods. Journal of Physical Chemistry C, 2021, 125, 21246-21253.	1.5	3
12	Room-Temperature Strong Coupling to Plasmonic Nanocavities. , 2021, , .		0
13	Nanoâ€Cavity QED with Tunable Nanoâ€Tip Interaction. Advanced Quantum Technologies, 2020, 3, 1900087.	1.8	22
14	Hot-Carrier Relaxation in CdSe/CdS Core/Shell Nanoplatelets. Journal of Physical Chemistry C, 2020, 124, 1020-1026.	1.5	9
15	Visualizing Heterogeneity of Monodisperse CdSe Nanocrystals by Their Assembly into Three-Dimensional Supercrystals. ACS Nano, 2020, 14, 14989-14998.	7.3	4
16	Solvent-dependent energy and charge transfer dynamics in hydroporphyrin-BODIPY arrays. Journal of Chemical Physics, 2020, 153, 074302.	1.2	5
17	Strongly Coupled Quantum-Dot Plasmonic-Nanoparticle Assemblies for Low-Power Optical Nonlinearities. , 2020, , .		0
18	Colloidal Quantum Wells for High-Efficiency Lasers. , 2020, , .		0

#	Article	IF	Citations
19	Tip-enhanced strong coupling spectroscopy, imaging, and control of a single quantum emitter. Science Advances, 2019, 5, eaav5931.	4.7	107
20	Strong coupling of emitters to single plasmonic nanoparticles: exciton-induced transparency and Rabi splitting. Nanoscale, 2019, 11, 14540-14552.	2.8	124
21	Plasmon-exciton coupling. Nanophotonics, 2019, 8, 513-516.	2.9	14
22	Three-dimensional optical trapping and orientation of microparticles for coherent X-ray diffraction imaging. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4018-4024.	3.3	18
23	Preparation and properties of plasmonic-excitonic nanoparticle assemblies. Nanophotonics, 2019, 8, 517-547.	2.9	26
24	Giant Modal Gain Coefficients in Colloidal IIâ€"VI Nanoplatelets. Nano Letters, 2019, 19, 277-282.	4.5	93
25	Carrier Dynamics, Optical Gain, and Lasing with Colloidal Quantum Wells. Journal of Physical Chemistry C, 2018, 122, 10659-10674.	1.5	58
26	When Can the Elastic Properties of Simple Liquids Be Probed Using High-Frequency Nanoparticle Vibrations?. Journal of Physical Chemistry C, 2018, 122, 13347-13353.	1.5	18
27	Strain-Driven Stacking Faults in CdSe/CdS Core/Shell Nanorods. Journal of Physical Chemistry Letters, 2018, 9, 1900-1906.	2.1	30
28	Strong coupling and induced transparency at room temperature with single quantum dots and gap plasmons. Nature Communications, 2018, 9, 4012.	5.8	171
29	Controlled etching and tapering of Au nanorods using cysteamine. Nanoscale, 2018, 10, 16830-16838.	2.8	21
30	All-optical nonlinear activation function for photonic neural networks [Invited]. Optical Materials Express, 2018, 8, 3851.	1.6	162
31	Nonmonotonic Dependence of Auger Recombination Rate on Shell Thickness for CdSe/CdS Core/Shell Nanoplatelets. Nano Letters, 2017, 17, 6900-6906.	4.5	44
32	Dramatic Modification of Coupled-Plasmon Resonances Following Exposure to Electron Beams. Journal of Physical Chemistry Letters, 2017, 8, 3607-3612.	2.1	8
33	A room temperature continuous-wave nanolaser using colloidal quantum wells. Nature Communications, 2017, 8, 143.	5.8	119
34	Understanding How Acoustic Vibrations Modulate the Optical Response of Plasmonic Metal Nanoparticles. ACS Nano, 2017, 11, 9360-9369.	7.3	52
35	Spontaneous emission enhancement of colloidal perovskite nanocrystals by a photonic crystal cavity. Applied Physics Letters, 2017, 111, .	1.5	14
36	Bragg diffraction from sub-micron particles isolated by optical tweezers. AIP Conference Proceedings, 2016, , .	0.3	1

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37	Electron Transfer from Single Semiconductor Nanocrystals to Individual Acceptor Molecules. ACS Energy Letters, 2016, 1, 9-15.	8.8	19
38	Origins and optimization of entanglement in plasmonically coupled quantum dots. Physical Review A, 2016, 94, .	1.0	30
39	pH-Induced Surface Modification of Atomically Precise Silver Nanoclusters: An Approach for Tunable Optical and Electronic Properties. Inorganic Chemistry, 2016, 55, 11522-11528.	1.9	10
40	Entanglement of two, three, or four plasmonically coupled quantum dots. Physical Review B, 2015, 92, .	1.1	54
41	Modified spontaneous emission in nanophotonic structures. Nature Photonics, 2015, 9, 427-435.	15.6	489
42	Auger-Limited Carrier Recombination and Relaxation in CdSe Colloidal Quantum Wells. Journal of Physical Chemistry Letters, 2015, 6, 1032-1036.	2.1	61
43	Plasmon-Enhanced Electron Injection in Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2015, 119, 22640-22645.	1.5	18
44	12.2: <i>Invited Paper</i>: Colloidal Quantum Rods and Wells for Lighting and Lasing Applications. Digest of Technical Papers SID International Symposium, 2014, 45, 134-137.	0.1	0
45	Low-Threshold Stimulated Emission Using Colloidal Quantum Wells. Nano Letters, 2014, 14, 2772-2777.	4.5	338
46	Squeezing Millimeter Waves through a Single, Nanometer-wide, Centimeter-long Slit. Scientific Reports, 2014, 4, 6722.	1.6	34
47	Atomic layer lithography of wafer-scale nanogap arrays for extreme confinement of electromagnetic waves. Nature Communications, 2013, 4, 2361.	5.8	286
48	Viscoelastic Flows in Simple Liquids Generated by Vibrating Nanostructures. Physical Review Letters, 2013, 111, 244502.	2.9	88
49	Why Single-Beam Optical Tweezers Trap Gold Nanowires in Three Dimensions. ACS Nano, 2013, 7, 8794-8800.	7.3	49
50	Controlling the spatial location of photoexcited electrons in semiconductor CdSe/CdS core/shell nanorods. Physical Review B, 2013, 87, .	1.1	31
51	Vibration of Nanoparticles in Viscous Fluids. Journal of Physical Chemistry C, 2013, 117, 8536-8544.	1.5	36
52	Guiding Spatial Arrangements of Silver Nanoparticles by Optical Binding Interactions in Shaped Light Fields. ACS Nano, 2013, 7, 1790-1802.	7.3	96
53	Ultrafast reversal of a Fano resonance in a plasmon-exciton system. Physical Review B, 2013, 88, .	1.1	62
54	Ultrafast Processes in Semiconductor Nanocrystals and Metal Nanoparticles. , 2013, , .		0

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55	Long-Lived Charge-Separated States in Ligand-Stabilized Silver Clusters. Journal of the American Chemical Society, 2012, 134, 11856-11859.	6.6	64
56	Carrier Cooling in Colloidal Quantum Wells. Nano Letters, 2012, 12, 6158-6163.	4.5	105
57	Controlling the Position and Orientation of Single Silver Nanowires on a Surface Using Structured Optical Fields. ACS Nano, 2012, 6, 8144-8155.	7.3	46
58	Three-Dimensional Optical Trapping and Manipulation of Single Silver Nanowires. Nano Letters, 2012, 12, 5155-5161.	4.5	101
59	Effects of Lattice Strain and Band Offset on Electron Transfer Rates in Type-II Nanorod Heterostructures. Journal of Physical Chemistry Letters, 2012, 3, 1094-1098.	2.1	44
60	Propagation Lengths and Group Velocities of Plasmons in Chemically Synthesized Gold and Silver Nanowires. ACS Nano, 2012, 6, 472-482.	7.3	148
61	Governing factors in stress response of nanoparticle films on water surface. Journal of Applied Physics, 2011, 110, .	1.1	12
62	Mechanical Damping of Longitudinal Acoustic Oscillations of Metal Nanoparticles in Solution. Journal of Physical Chemistry C, 2011, 115, 23732-23740.	1.5	41
63	Observation of Size-Dependent Thermalization in CdSe Nanocrystals Using Time-Resolved Photoluminescence Spectroscopy. Physical Review Letters, 2011, 107, 177403.	2.9	39
64	Using Shape to Control Photoluminescence from CdSe/CdS Core/Shell Nanorods. Journal of Physical Chemistry Letters, 2011, 2, 1469-1475.	2.1	91
65	Gold Nanoparticles as Optical and Mechanical Resonators. , 2011, , .		0
66	Emergence of Excited-State Plasmon Modes in Linear Hydrogen Chains from Time-Dependent Quantum Mechanical Methods. Physical Review Letters, 2011, 107, 196806.	2.9	26
67	Solvent-Mediated End-to-End Assembly of Gold Nanorods. Journal of Physical Chemistry Letters, 2010, 1, 2692-2698.	2.1	70
68	Facts and Artifacts in the Blinking Statistics of Semiconductor Nanocrystals. Nano Letters, 2010, 10, 1692-1698.	4.5	118
69	Quantum-dot-induced transparency in a nanoscale plasmonic resonator. Optics Express, 2010, 18, 23633.	1.7	198
70	Laser-Driven Growth of Silver Nanoplates on p-Type GaAs Substrates and Their Surface-Enhanced Raman Scattering Activity. Journal of Physical Chemistry C, 2009, 113, 6061-6067.	1.5	12
71	Damping of acoustic vibrations in gold nanoparticles. Nature Nanotechnology, 2009, 4, 492-495.	15.6	191
72	Excitation of Dark Plasmons in Metal Nanoparticles by a Localized Emitter. Physical Review Letters, 2009, 102, 107401.	2.9	201

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73	Reduced damping of surface plasmons at low temperatures. Physical Review B, 2009, 79, .	1.1	98
74	Recombination rates for single colloidal quantum dots near a smooth metal film. Physical Chemistry Chemical Physics, 2009, 11, 5867.	1.3	20
75	Metalâ€nanoparticle plasmonics. Laser and Photonics Reviews, 2008, 2, 136-159.	4.4	592
76	Characterization of Thermally Reduced Graphene Oxide by Imaging Ellipsometry. Journal of Physical Chemistry C, 2008, 112, 8499-8506.	1.5	196
77	Evidence for a diffusion-controlled mechanism for fluorescence blinking of colloidal quantum dots. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14249-14254.	3.3	158
78	Plasmon-enhanced optical trapping of individual metal nanorods. , 2007, , .		0
79	Metallic colloids and their plasmonic properties. , 2007, , .		0
80	Plasmon resonance-based optical trapping of single and multiple Au nanoparticles. Optics Express, 2007, 15, 12017.	1.7	103
81	Simple Approach for High-Contrast Optical Imaging and Characterization of Graphene-Based Sheets. Nano Letters, 2007, 7, 3569-3575.	4.5	311
82	Ultrafast Resonant Dynamics of Surface Plasmons in Gold Nanorods. Journal of Physical Chemistry C, 2007, 111, 116-123.	1.5	81
83	Microcavity modified spontaneous emission of single quantum dots. Physica Status Solidi (B): Basic Research, 2007, 244, 2792-2802.	0.7	0
84	Ultrafast Optical Nonlinearities of Single Metal Nanoparticles. Springer Series in Chemical Physics, 2007, , 639-641.	0.2	1
85	Theory and experiment of entanglement in a quasi-phase-matched two-crystal source. Physical Review A, 2006, 73, .	1.0	21
86	Ultrafast resonant optical scattering from single gold nanorods: Large nonlinearities and plasmon saturation. Physical Review B, 2006, 73, .	1.1	120
87	Optical trapping and alignment of single gold nanorods by using plasmon resonances. Optics Letters, 2006, 31, 2075.	1.7	184
88	Optical nonlinearities of metal nanoparticles: single-particle measurements and correlation to structure. , 2006, , .		1
89	Optical trapping and alignment of single gold nanorods using plasmon resonances. , 2006, , .		1
90	Ultrafast optical nonlinearities of plasmons in single gold nanorods. , 2005, , .		1

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91	Fabrication of InAs quantum dots in AlAsâˆ•GaAs DBR pillar microcavities for single photon sources. Journal of Applied Physics, 2005, 97, 073507.	1.1	17
92	A Source of Entangled Photon-Pairs: Optimizing Emission in Two Quasi-Phasematched Crystals. AIP Conference Proceedings, 2004, , .	0.3	0
93	Characterizing quantum-dot blinking using noise power spectra. Applied Physics Letters, 2004, 85, 819-821.	1.5	114
94	Comment on â€œTheoretical Study of the Optical Manipulation of Semiconductor Nanoparticles under an Excitonic Resonance Conditionâ€• Physical Review Letters, 2004, 92, 089701; author reply 089702.	2.9	4
95	Transport and fractionation in periodic potential-energy landscapes. Physical Review E, 2004, 70, 031108.	0.8	95
96	Bright, single-spatial-mode source of frequency non-degenerate, polarization-entangled photon pairs using periodically poled KTP. Optics Express, 2004, 12, 3573.	1.7	69
97	Tuning the single optical mode spontaneous emission coupling of a quantum dot in a micropost cavity. Journal of Crystal Growth, 2003, 251, 737-741.	0.7	0
98	An efficient source of single photons: a single quantum dot in a micropost microcavity. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 564-567.	1.3	10
99	Spectral tuning of the coupling between isolated InAs quantum dots and the fundamental micropost cavity mode. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 1205-1208.	0.8	0
100	High-efficiency triggered photons using single-cavity mode coupling of single quantum dot emission. , 2003, , .		0
101	Time-resolved spectroscopy of multiexcitonic decay in an InAs quantum dot. Physical Review B, 2002, 65, .	1.1	89
102	Optimization of three-dimensional micropost microcavities for cavity quantum electrodynamics. Physical Review A, 2002, 66, .	1.0	72
103	<title>Toward high-efficiency regulated single-photon generation using a single quantum dot in a three-dimensional microcavity</title>. , 2002, 4656, 49.		1
104	Efficient Source of Single Photons: A Single Quantum Dot in a Micropost Microcavity. Physical Review Letters, 2002, 89, 233602.	2.9	575
105	Three-dimensionally confined modes in micropost microcavities: quality factors and Purcell factors. IEEE Journal of Quantum Electronics, 2002, 38, 170-177.	1.0	63
106	Polarization-correlated photon pairs from a single quantum dot. Physical Review B, 2002, 66, .	1.1	212
107	Regulated Single Photons and Entangled Photons From a Quantum Dot Microcavity. Nanoscience and Technology, 2002, , 277-305.	1.5	0
108	Triggered single photons and entangled photons from a quantum dot microcavity. European Physical Journal D, 2002, 18, 179-190.	0.6	2

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109	Single-mode Spontaneous Emission from a Single Quantum Dot in a Three-Dimensional Microcavity. Physical Review Letters, 2001, 86, 3903-3906.	2.9	326
110	Triggered Single Photons from a Quantum Dot. Physical Review Letters, 2001, 86, 1502-1505.	2.9	861
111	Modification of Spontaneous Emission of a Single Quantum Dot. Physica Status Solidi A, 2000, 178, 341-344.	1.7	18
112	Regulated and Entangled Photons from a Single Quantum Dot. Physical Review Letters, 2000, 84, 2513-2516.	2.9	884
113	Ultralow threshold laser using a single quantum dot and a microsphere cavity. Physical Review A, 1999, 59, 2418-2421.	1.0	100
114	The optical absorption edge of diamond-like carbon: A quantum well model. Journal of Applied Physics, 1998, 83, 1029-1035.	1.1	14