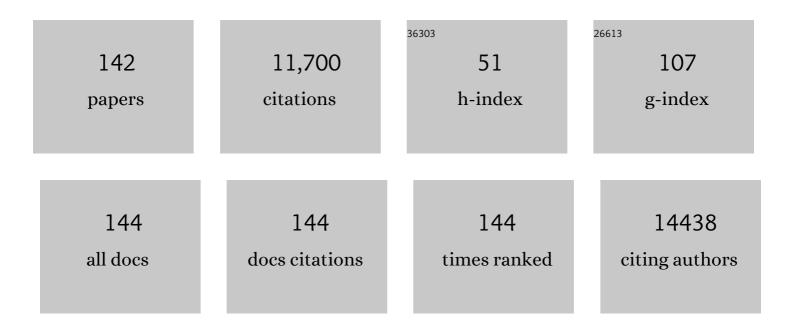
Matthew Sfeir

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Measurement of the Optical Conductivity of Graphene. Physical Review Letters, 2008, 101, 196405.	7.8	1,398
2	Extremely efficient internal exciton dissociation through edge states in layered 2D perovskites. Science, 2017, 355, 1288-1292.	12.6	830
3	Light-activated photocurrent degradation and self-healing in perovskite solar cells. Nature Communications, 2016, 7, 11574.	12.8	584
4	Molecular helices as electron acceptors in high-performance bulk heterojunction solar cells. Nature Communications, 2015, 6, 8242.	12.8	525
5	Efficient Organic Solar Cells with Helical Perylene Diimide Electron Acceptors. Journal of the American Chemical Society, 2014, 136, 15215-15221.	13.7	414
6	A transferable model for singlet-fission kinetics. Nature Chemistry, 2014, 6, 492-497.	13.6	402
7	Polymer bulk heterojunction solar cells employing Förster resonance energy transfer. Nature Photonics, 2013, 7, 479-485.	31.4	389
8	Structural patterns at all scales in a nonmetallic chiral Au ₁₃₃ (SR) ₅₂ nanoparticle. Science Advances, 2015, 1, e1500045.	10.3	339
9	Quantitative Intramolecular Singlet Fission in Bipentacenes. Journal of the American Chemical Society, 2015, 137, 8965-8972.	13.7	324
10	A design strategy for intramolecular singlet fission mediated by charge-transfer states inÂdonor–acceptor organic materials. Nature Materials, 2015, 14, 426-433.	27.5	298
11	Polaron Stabilization by Cooperative Lattice Distortion and Cation Rotations in Hybrid Perovskite Materials. Nano Letters, 2016, 16, 3809-3816.	9.1	245
12	Optical Spectroscopy of Individual Single-Walled Carbon Nanotubes of Defined Chiral Structure. Science, 2006, 312, 554-556.	12.6	231
13	Probing Electronic Transitions in Individual Carbon Nanotubes by Rayleigh Scattering. Science, 2004, 306, 1540-1543.	12.6	228
14	Structural Dependence of Excitonic Optical Transitions and Band-Gap Energies in Carbon Nanotubes. Nano Letters, 2005, 5, 2314-2318.	9.1	226
15	Quintet multiexciton dynamics in singlet fission. Nature Physics, 2017, 13, 182-188.	16.7	220
16	Evolution from the plasmon to exciton state in ligand-protected atomically precise gold nanoparticles. Nature Communications, 2016, 7, 13240.	12.8	205
17	The evolution of electronic structure in few-layer graphene revealed by optical spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14999-15004.	7.1	189
18	A Direct Mechanism of Ultrafast Intramolecular Singlet Fission in Pentacene Dimers. ACS Central Science, 2016, 2, 316-324.	11.3	176

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19	Sharp Transition from Nonmetallic Au ₂₄₆ to Metallic Au ₂₇₉ with Nascent Surface Plasmon Resonance. Journal of the American Chemical Society, 2018, 140, 5691-5695.	13.7	157
20	Three-orders-of-magnitude variation of carrier lifetimes with crystal phase of gold nanoclusters. Science, 2019, 364, 279-282.	12.6	149
21	Tuning Singlet Fission in π-Bridge-π Chromophores. Journal of the American Chemical Society, 2017, 139, 12488-12494.	13.7	147
22	Ultrafast Relaxation Dynamics of [Au ₂₅ (SR) ₁₈] ^{<i>q</i>} Nanoclusters: Effects of Charge State. Journal of Physical Chemistry C, 2010, 114, 19935-19940.	3.1	133
23	Interactions between Individual Carbon Nanotubes Studied by Rayleigh Scattering Spectroscopy. Physical Review Letters, 2006, 96, 167401.	7.8	117
24	Exciton Correlations in Intramolecular Singlet Fission. Journal of the American Chemical Society, 2016, 138, 7289-7297.	13.7	117
25	Multiphonon Relaxation Slows Singlet Fission in Crystalline Hexacene. Journal of the American Chemical Society, 2014, 136, 10654-10660.	13.7	114
26	Three-Stage Evolution from Nonscalable to Scalable Optical Properties of Thiolate-Protected Gold Nanoclusters. Journal of the American Chemical Society, 2019, 141, 19754-19764.	13.7	110
27	Intramolecular Singlet Fission in Oligoacene Heterodimers. Angewandte Chemie - International Edition, 2016, 55, 3373-3377.	13.8	109
28	Distinct properties of the triplet pair state from singlet fission. Science Advances, 2017, 3, e1700241.	10.3	102
29	Variable Electron-Phonon Coupling in Isolated Metallic Carbon Nanotubes Observed by Raman Scattering. Physical Review Letters, 2007, 99, 027402.	7.8	98
30	New insights into the design of conjugated polymers for intramolecular singlet fission. Nature Communications, 2018, 9, 2999.	12.8	97
31	A Library of Selenourea Precursors to PbSe Nanocrystals with Size Distributions near the Homogeneous Limit. Journal of the American Chemical Society, 2017, 139, 2296-2305.	13.7	96
32	Ultrafast Relaxation Dynamics of Rod-Shaped 25-Atom Gold Nanoclusters. Journal of Physical Chemistry C, 2011, 115, 6200-6207.	3.1	89
33	Ultra-fast intramolecular singlet fission to persistent multiexcitons by molecular design. Nature Chemistry, 2019, 11, 821-828.	13.6	85
34	Cobalt Ultrathin Film Catalyzed Ethanol Chemical Vapor Deposition of Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2006, 110, 11103-11109.	2.6	83
35	Controlled Placement of Individual Carbon Nanotubes. Nano Letters, 2005, 5, 1515-1518.	9.1	80
36	Evolution of Excited-State Dynamics in Periodic Au ₂₈ , Au ₃₆ , Au ₄₄ , and Au ₅₂ Nanoclusters. Journal of Physical Chemistry Letters, 2017, 8, 4023-4030.	4.6	77

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37	Singlet Exciton Fission in a Hexacene Derivative. Advanced Materials, 2013, 25, 1445-1448.	21.0	73
38	Triplet Harvesting from Intramolecular Singlet Fission in Polytetracene. Advanced Materials, 2017, 29, 1701416.	21.0	70
39	Singlet Fission in Polypentacene. CheM, 2016, 1, 505-511.	11.7	69
40	Assembly, Structure and Optical Response of Three-Dimensional Dynamically Tunable Multicomponent Superlattices. Nano Letters, 2010, 10, 4456-4462.	9.1	66
41	Room-Temperature Preparation, Characterization, and Photoluminescence Measurements of Solid Solutions of Various Compositionally-Defined Single-Crystalline Alkaline-Earth-Metal Tungstate Nanorods. Chemistry of Materials, 2008, 20, 5500-5512.	6.7	65
42	Intra- to Intermolecular Singlet Fission. Journal of Physical Chemistry C, 2015, 119, 1312-1319.	3.1	65
43	Extracting subnanometer single shells from ultralong multiwalled carbon nanotubes. Proceedings of the United States of America, 2005, 102, 14155-14158.	7.1	64
44	Understanding the Bound Triplet-Pair State in Singlet Fission. CheM, 2019, 5, 1988-2005.	11.7	63
45	On the Nonâ€Metallicity of 2.2â€nm Au ₂₄₆ (SR) ₈₀ Nanoclusters. Angewandte Chemie - International Edition, 2017, 56, 16257-16261.	13.8	61
46	Nanostructured fibers as a versatile photonic platform: radiative cooling and waveguiding through transverse Anderson localization. Light: Science and Applications, 2018, 7, 37.	16.6	60
47	Novel Star-Shaped Helical Perylene Diimide Electron Acceptors for Efficient Additive-Free Nonfullerene Organic Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 27894-27901.	8.0	59
48	Electron localization in rod-shaped triicosahedral gold nanocluster. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E4697-E4705.	7.1	56
49	Effect of Surface Stoichiometry on Blinking and Hole Trapping Dynamics in CdSe Nanocrystals. Journal of Physical Chemistry C, 2015, 119, 27797-27803.	3.1	55
50	Panchromatic polymer–polymer ternary solar cells enhanced by Förster resonance energy transfer and solvent vapor annealing. Journal of Materials Chemistry A, 2015, 3, 18611-18621.	10.3	55
51	Effects of single atom doping on the ultrafast electron dynamics of M1Au24(SR)18(M = Pd, Pt) nanoclusters. Nanoscale, 2016, 8, 7163-7171.	5.6	55
52	A Hot Electron–Hole Pair Breaks the Symmetry of a Semiconductor Quantum Dot. Nano Letters, 2013, 13, 6091-6097.	9.1	51
53	Annihilator dimers enhance triplet fusion upconversion. Chemical Science, 2019, 10, 3969-3975.	7.4	51
54	Quantifying Bulk and Surface Recombination Processes in Nanostructured Water Splitting Photocatalysts via In Situ Ultrafast Spectroscopy. Nano Letters, 2015, 15, 1076-1082.	9.1	50

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55	Light-Harvesting Nanoparticle Core–Shell Clusters with Controllable Optical Output. ACS Nano, 2015, 9, 5657-5665.	14.6	50
56	Ultrafast Supercontinuum Spectroscopy of Carrier Multiplication and Biexcitonic Effects in Excited States of PbS Quantum Dots. Nano Letters, 2012, 12, 2658-2664.	9.1	48
57	Coevaporated Bisquaraine Inverted Solar Cells: Enhancement Due to Energy Transfer and Open Circuit Voltage Control. ACS Photonics, 2015, 2, 86-95.	6.6	47
58	Quaternary Organic Solar Cells Enhanced by Cocrystalline Squaraines with Power Conversion Efficiencies >10%. Advanced Energy Materials, 2016, 6, 1600660.	19.5	46
59	Photon Upconversion in Aqueous Nanodroplets. Journal of the American Chemical Society, 2019, 141, 9180-9184.	13.7	46
60	Excited-State Behaviors of M ₁ Au ₂₄ (SR) ₁₈ Nanoclusters: The Number of Valence Electrons Matters. Journal of Physical Chemistry C, 2018, 122, 13435-13442.	3.1	44
61	Molecular Engineering of Chromophores to Enable Triplet–Triplet Annihilation Upconversion. Journal of the American Chemical Society, 2020, 142, 19917-19925.	13.7	42
62	Ultrafast Relaxation Dynamics of Au ₃₈ (SC ₂ H ₄ Ph) ₂₄ Nanoclusters and Effects of Structural Isomerism. Journal of Physical Chemistry C, 2017, 121, 10686-10693.	3.1	41
63	Intramolecular Singlet Fission in Oligoacene Heterodimers. Angewandte Chemie, 2016, 128, 3434-3438.	2.0	38
64	Singlet fission in a hexacene dimer: energetics dictate dynamics. Chemical Science, 2020, 11, 1079-1084.	7.4	35
65	Efficient Charge Separation in Multidimensional Nanohybrids. Nano Letters, 2011, 11, 4562-4568.	9.1	34
66	Fast Singlet Exciton Decay in Push–Pull Molecules Containing Oxidized Thiophenes. Journal of Physical Chemistry B, 2015, 119, 7644-7650.	2.6	34
67	Properties of Poly- and Oligopentacenes Synthesized from Modular Building Blocks. Macromolecules, 2016, 49, 1279-1285.	4.8	34
68	The Role of Long-Lived Excitons in the Dynamics of Strongly Coupled Molecular Polaritons. ACS Photonics, 2020, 7, 2292-2301.	6.6	34
69	Hole Extraction by Design in Photocatalytic Architectures Interfacing CdSe Quantum Dots with Topochemically Stabilized Tin Vanadium Oxide. Journal of the American Chemical Society, 2018, 140, 17163-17174.	13.7	33
70	Static and Dynamic Optical Properties of La _{1–<i>x</i>} Sr _{<i>x</i>} FeO _{3â^'δ} : The Effects of A-Site and Oxygen Stoichiometry. Chemistry of Materials, 2016, 28, 97-105.	6.7	32
71	Au _{130â^'<i>x</i>} Ag _{<i>x</i>} Nanoclusters with Nonâ€Metallicity: A Drum of Silverâ€Rich Sites Enclosed in a Marksâ€Decahedral Cage of Goldâ€Rich Sites. Angewandte Chemie - International Edition, 2019, 58, 18798-18802.	13.8	32
72	Achieving Long-Lived Triplet States in Intramolecular SF Films through Molecular Engineering. CheM, 2019, 5, 2405-2417.	11.7	31

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73	Persistent Multiexcitons from Polymers with Pendent Pentacenes. Journal of the American Chemical Society, 2019, 141, 9564-9569.	13.7	31
74	Preferential Charge Generation at Aggregate Sites in Narrow Band Gap Infrared Photoresponsive Polymer Semiconductors. Advanced Optical Materials, 2018, 6, 1701138.	7.3	29
75	Anomalous phonon relaxation in Au ₃₃₃ (SR) ₇₉ nanoparticles with nascent plasmons. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13215-13220.	7.1	29
76	Covalent Synthesis and Optical Characterization of Double-Walled Carbon Nanotubeâ `Nanocrystal Heterostructures. Journal of Physical Chemistry C, 2010, 114, 8766-8773.	3.1	27
77	Graphite, Tubular PAHs, and the Diffuse Interstellar Bands. Astrophysical Journal, 2006, 638, L105-L108.	4.5	25
78	Directional Charge Transfer Mediated by Mid-Gap States: A Transient Absorption Spectroscopy Study of CdSe Quantum Dot/l²-Pb _{0.33} V ₂ O ₅ Heterostructures. Journal of Physical Chemistry C, 2016, 120, 5221-5232.	3.1	25
79	Solutionâ€Processable Donor–Acceptor Polymers with Modular Electronic Properties and Very Narrow Bandgaps. Macromolecular Rapid Communications, 2014, 35, 1516-1521.	3.9	23
80	Unravelling Photocarrier Dynamics beyond the Space Charge Region for Photoelectrochemical Water Splitting. Chemistry of Materials, 2017, 29, 4036-4043.	6.7	23
81	Crystalline Graphite from an Organometallic Solution-Phase Reaction. Journal of the American Chemical Society, 2006, 128, 15590-15591.	13.7	22
82	Multiphonon Raman Scattering from Individual Single-Walled Carbon Nanotubes. Physical Review Letters, 2007, 98, 047402.	7.8	22
83	Role of size and defects in ultrafast broadband emission dynamics of ZnO nanostructures. Applied Physics Letters, 2014, 104, .	3.3	21
84	Anticipating Acene-Based Chromophore Spectra with Molecular Orbital Arguments. Journal of Physical Chemistry A, 2019, 123, 2527-2536.	2.5	21
85	Edge States Drive Exciton Dissociation in Ruddlesden–Popper Lead Halide Perovskite Thin Films. , 2020, 2, 1360-1367.		20
86	Linear and Nonlinear Optical Properties of Photoresponsive [60]Fullerene Hybrid Triads and Tetrads with Dual NIR Two-Photon Absorption Characteristics. Journal of Physical Chemistry C, 2013, 117, 17186-17195.	3.1	19
87	Enhanced broadband ultrafast detection of ultraviolet emission using optical Kerr gating. Review of Scientific Instruments, 2014, 85, 055114.	1.3	19
88	Charge Transfer from Carbon Nanotubes to Silicon in Flexible Carbon Nanotube/Silicon Solar Cells. Small, 2017, 13, 1702387.	10.0	18
89	Growth kinetics determine the polydispersity and size of PbS and PbSe nanocrystals. Chemical Science, 2022, 13, 4555-4565.	7.4	18
90	Ultrathin Europium Oxide Nanoplatelets: "Hidden―Parameters and Controlled Synthesis, Unusual Crystal Structure, and Photoluminescence Properties. Chemistry of Materials, 2015, 27, 965-974.	6.7	17

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91	Quantifying Exciton Transport in Singlet Fission Diblock Copolymers. Journal of the American Chemical Society, 2022, 144, 3269-3278.	13.7	17
92	Effect of number of walls on plasmon behavior in carbon nanotubes. Carbon, 2009, 47, 162-168.	10.3	16
93	On the Nonâ€Metallicity of 2.2â€nm Au 246 (SR) 80 Nanoclusters. Angewandte Chemie, 2017, 129, 16475-16	47290	16
94	Bridge Resonance Effects in Singlet Fission. Journal of Physical Chemistry A, 2020, 124, 9392-9399.	2.5	16
95	Influence of Nanostructure on the Exciton Dynamics of Multichromophore Donor–Acceptor Block Copolymers. ACS Nano, 2017, 11, 4593-4598.	14.6	15
96	Au _{130â^'<i>x</i>} Ag _{<i>x</i>} Nanoclusters with Nonâ€Metallicity: A Drum of Silverâ€Rich Sites Enclosed in a Marksâ€Decahedral Cage of Goldâ€Rich Sites. Angewandte Chemie, 2019, 131, 18974-18978.	2.0	15
97	The Effects of Side-Chain-Induced Disorder on the Emission Spectra and Quantum Yields of Oligothiophene Nanoaggregates: A Combined Experimental and MD-TDDFT Study. Journal of Physical Chemistry A, 2014, 118, 10464-10473.	2.5	14
98	Efficient Free Triplet Generation Follows Singlet Fission in Diketopyrrolopyrrole Polymorphs with Goldilocks Coupling. Journal of Physical Chemistry C, 2021, 125, 12207-12213.	3.1	14
99	Singlet fission and triplet pair recombination in bipentacenes with a twist. Materials Horizons, 2022, 9, 462-470.	12.2	14
100	Ultrafast optical snapshots of hybrid perovskites reveal the origin of multiband electronic transitions. Physical Review B, 2017, 96, .	3.2	13
101	Charge transfer states impact the triplet pair dynamics of singlet fission polymers. Journal of Chemical Physics, 2020, 153, 244902.	3.0	13
102	Electrical transport measurements of nanotubes with known (n,m) indices. Physica Status Solidi (B): Basic Research, 2006, 243, 3359-3364.	1.5	12
103	Probing Structure-Induced Optical Behavior in a New Class of Self-Activated Luminescent 0D/1D CaWO ₄ Metal Oxide–CdSe Nanocrystal Composite Heterostructures. Chemistry of Materials, 2015, 27, 778-792.	6.7	12
104	Multimodal Optical Nanoprobe for Advanced In-Situ Electron Microscopy. Microscopy Today, 2012, 20, 32-37.	0.3	11
105	Programming Interfacial Energetic Offsets and Charge Transfer in β-Pb _{0.33} V ₂ O ₅ /Quantum-Dot Heterostructures: Tuning Valence-Band Edges to Overlap with Midgap States. Journal of Physical Chemistry C, 2016, 120, 28992-29001.	3.1	11
106	Excitonic Lasing in Solution-Processed Subwavelength Nanosphere Assemblies. Nano Letters, 2016, 16, 2004-2010.	9.1	11
107	Exciton–Exciton Annihilation as a Probe of Interchain Interactions in PPV–Oligomer Aggregates. Journal of Physical Chemistry B, 2017, 121, 1707-1714.	2.6	11
108	Infrared spectra of individual semiconducting single-walled carbon nanotubes: Testing the scaling of transition energies for large diameter nanotubes. Physical Review B, 2010, 82, .	3.2	9

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109	Modifying the Spectral Weights of Vibronic Transitions via Strong Coupling to Surface Plasmons. ACS Photonics, 2020, 7, 43-48.	6.6	9
110	Ultrafast thermal modification of strong coupling in an organic microcavity. APL Photonics, 2021, 6, 016103.	5.7	9
111	Probing differential optical and coverage behavior in nanotube–nanocrystal heterostructures synthesized by covalent versus non-covalent approaches. Dalton Transactions, 2014, 43, 7480.	3.3	8
112	Doping-driven electronic and lattice dynamics in the phase-change material vanadium dioxide. Physical Review B, 2020, 102, .	3.2	8
113	Au10(TBBT)10: The beginning and the end of Au <i>n</i> (TBBT) <i>m</i> nanoclusters. Chinese Journal of Chemical Physics, 2018, 31, 555-562.	1.3	7
114	Multicomponent Oxynitride Thin Films: Precise Growth Control and Excited State Dynamics. Chemistry of Materials, 2019, 31, 3461-3467.	6.7	7
115	Quantifying the Relationship between the Maximum Achievable Voltage and Current Levels in Low-Bandgap Polymer Photovoltaics. Journal of Physical Chemistry C, 2013, 117, 25955-25960.	3.1	6
116	Predicting excitonic gaps of semiconducting single-walled carbon nanotubes from a field theoretic analysis. Physical Review B, 2015, 91, .	3.2	6
117	Type-II heterostructures of α -V2O5 nanowires interfaced with cadmium chalcogenide quantum dots: Programmable energetic offsets, ultrafast charge transfer, and photocatalytic hydrogen evolution. Journal of Chemical Physics, 2019, 151, 224702.	3.0	6
118	Characterization of plasmonic hole arrays as transparent electrical contacts for organic photovoltaics using high-brightness Fourier transform methods. Journal of Modern Optics, 2014, 61, 1735-1742.	1.3	4
119	Plasmonic hole arrays for combined photon and electron management. Applied Physics Letters, 2016, 109, .	3.3	3
120	Improving the performance of P3HT/PCBM solar cells with squaraine dye. Proceedings of SPIE, 2013, , .	0.8	1
121	Plasmonic transparent conductors. , 2016, , .		1
122	Solar Cells: Quaternary Organic Solar Cells Enhanced by Cocrystalline Squaraines with Power Conversion Efficiencies >10% (Adv. Energy Mater. 21/2016). Advanced Energy Materials, 2016, 6, .	19.5	1
123	The Elusive Nature of Excited States in Singlet Fission Materials. CheM, 2018, 4, 935-936.	11.7	1
124	Largeâ€Area Lasing in Nanoscale Complex Media: The Critical Role of Local Dielectric Environment. Advanced Optical Materials, 0, , 2200650.	7.3	1
125	Probing nano-structures using Rayleigh scattering with supercontinuum radiation. , 0, , .		0
126	Simultaneous determination of structure and optical transitions of individual single-walled carbon nanotubes. , 2006, , .		0

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127	Raman scattering from individual, isolated metallic carbon nanotubes. , 2007, , .		0
128	Hafnium (IV) and zirconium (IV) porphyrinoid diacetate complexes as new dyes for solar cells. , 2010, , .		0
129	Ultrafast supercontinuum spectroscopy of multiple exciton states in lead chalcogenide nanorods and nanocrystals. , 2012, , .		Ο
130	Ultrafast Optical Properties of PbSe Nano-Rods: One Dimensional Excitons. , 2014, , .		0
131	The optical properties of conjugated materials and their aggregates: towards imaging of films and devices. Proceedings of SPIE, 2014, , .	0.8	0
132	Charge Transfer Dynamics between Colloidal Nanocrystals and Graphene. , 2014, , .		0
133	Quantifying singlet fission in novel organic materials using nonlinear optics. , 2014, , .		Ο
134	Electronic and optical properties of novel carbazole-based donor-acceptor compounds for applications in blue-emitting organic light-emitting diodes. , 2015, , .		0
135	Unique Photophysical Properties of Infrared Absorbing Polymers. , 2019, , .		0
136	Probing Interactions between Individual Carbon Nanotubes by Rayleigh Scattering Spectroscopy. , 2006, , .		0
137	Spectroscopy of the Electronic Transitions of Individual Carbon Nanotubes of Defined Crystal Structure. , 2006, , .		0
138	Probing Electronic States and Dynamics in Graphene by Optical Spectroscopy. , 2011, , .		0
139	Examining Nanoscale Photovoltaics with High Brightness Fourier Transform Measurements. , 2013, , .		0
140	Stimulated polariton emission from ZnO-nanoparticles based microcavity. , 2014, , .		0
141	Room-Temperature Exciton Lasing In Ultrathin Film of Coupled Nanocrystals. , 2015, , .		0
142	Singlet Fission: Current Challenges and Spectroscopy. , 2019, , .		0