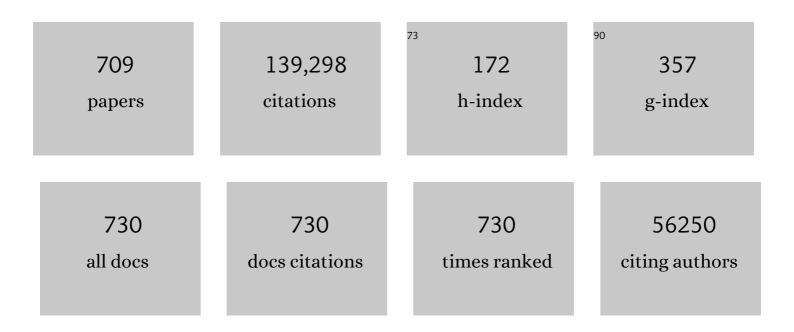
Richard Friend

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/749036/publications.pdf Version: 2024-02-01



#	Article	IF	CITATIONS
1	Light-emitting diodes based on conjugated polymers. Nature, 1990, 347, 539-541.	13.7	10,985
2	Electroluminescence in conjugated polymers. Nature, 1999, 397, 121-128.	13.7	5,746
3	Two-dimensional charge transport in self-organized, high-mobility conjugated polymers. Nature, 1999, 401, 685-688.	13.7	4,364
4	Bright light-emitting diodes based on organometal halide perovskite. Nature Nanotechnology, 2014, 9, 687-692.	15.6	3,627
5	High-Resolution Inkjet Printing of All-Polymer Transistor Circuits. Science, 2000, 290, 2123-2126.	6.0	3,127
6	Efficient photodiodes from interpenetrating polymer networks. Nature, 1995, 376, 498-500.	13.7	3,119
7	Integrated Optoelectronic Devices Based on Conjugated Polymers. Science, 1998, 280, 1741-1744.	6.0	2,627
8	Overcoming the electroluminescence efficiency limitations of perovskite light-emitting diodes. Science, 2015, 350, 1222-1225.	6.0	2,440
9	Organic solar cells based on non-fullerene acceptors. Nature Materials, 2018, 17, 119-128.	13.3	2,315
10	Self-Organized Discotic Liquid Crystals for High-Efficiency Organic Photovoltaics. Science, 2001, 293, 1119-1122.	6.0	2,286
11	General observation of n-type field-effect behaviour in organic semiconductors. Nature, 2005, 434, 194-199.	13.7	2,172
12	An improved experimental determination of external photoluminescence quantum efficiency. Advanced Materials, 1997, 9, 230-232.	11.1	1,843
13	Efficient light-emitting diodes based on polymers with high electron affinities. Nature, 1993, 365, 628-630.	13.7	1,654
14	Perovskite light-emitting diodes based on solution-processed self-organized multiple quantum wells. Nature Photonics, 2016, 10, 699-704.	15.6	1,535
15	High Photoluminescence Efficiency and Optically Pumped Lasing in Solution-Processed Mixed Halide Perovskite Semiconductors. Journal of Physical Chemistry Letters, 2014, 5, 1421-1426.	2.1	1,490
16	Maximizing and stabilizing luminescence from halide perovskites with potassium passivation. Nature, 2018, 555, 497-501.	13.7	1,336
17	Lasing from conjugated-polymer microcavities. Nature, 1996, 382, 695-697.	13.7	1,316
18	Laminated fabrication of polymeric photovoltaic diodes. Nature, 1998, 395, 257-260.	13.7	1,249

#	Article	IF	CITATIONS
19	Enhanced photovoltage for inverted planar heterojunction perovskite solar cells. Science, 2018, 360, 1442-1446.	6.0	1,221
20	The Role of Driving Energy and Delocalized States for Charge Separation in Organic Semiconductors. Science, 2012, 335, 1340-1344.	6.0	1,022
21	Chemically diverse and multifunctional hybrid organic–inorganic perovskites. Nature Reviews Materials, 2017, 2, .	23.3	867
22	Effect of interchain interactions on the absorption and emission of poly(3-hexylthiophene). Physical Review B, 2003, 67, .	1.1	830
23	Role of Intermolecular Coupling in the Photophysics of Disordered Organic Semiconductors: Aggregate Emission in Regioregular Polythiophene. Physical Review Letters, 2007, 98, 206406.	2.9	816
24	Ultrafast Long-Range Charge Separation in Organic Semiconductor Photovoltaic Diodes. Science, 2014, 343, 512-516.	6.0	807
25	Metal halide perovskites for light-emitting diodes. Nature Materials, 2021, 20, 10-21.	13.3	800
26	Synthesis and Optical Properties of Lead-Free Cesium Tin Halide Perovskite Nanocrystals. Journal of the American Chemical Society, 2016, 138, 2941-2944.	6.6	792
27	Ultrasmooth organic–inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. Nature Communications, 2015, 6, 6142.	5.8	784
28	Highly Efficient Perovskite Nanocrystal Lightâ€Emitting Diodes Enabled by a Universal Crosslinking Method. Advanced Materials, 2016, 28, 3528-3534.	11.1	782
29	Exciton diffusion and dissociation in a poly(pâ€phenylenevinylene)/C60 heterojunction photovoltaic cell. Applied Physics Letters, 1996, 68, 3120-3122.	1.5	772
30	Mobility enhancement in conjugated polymer field-effect transistors through chain alignment in a liquid-crystalline phase. Applied Physics Letters, 2000, 77, 406-408.	1.5	767
31	Molecular-scale interface engineering for polymer light-emitting diodes. Nature, 2000, 404, 481-484.	13.7	764
32	Chemical tuning of electroluminescent copolymers to improve emission efficiencies and allow patterning. Nature, 1992, 356, 47-49.	13.7	748
33	High-efficiency perovskite–polymer bulk heterostructure light-emitting diodes. Nature Photonics, 2018, 12, 783-789.	15.6	715
34	Poly(pâ€phenylenevinylene) lightâ€emitting diodes: Enhanced electroluminescent efficiency through charge carrier confinement. Applied Physics Letters, 1992, 61, 2793-2795.	1.5	683
35	New semiconductor device physics in polymer diodes and transistors. Nature, 1988, 335, 137-141.	13.7	660
36	Perovskites for Next-Generation Optical Sources. Chemical Reviews, 2019, 119, 7444-7477.	23.0	640

#	Article	IF	CITATIONS
37	Interfacial Control Toward Efficient and Lowâ€Voltage Perovskite Lightâ€Emitting Diodes. Advanced Materials, 2015, 27, 2311-2316.	11.1	631
38	Efficient Light-Emitting Diodes Based on Nanocrystalline Perovskite in a Dielectric Polymer Matrix. Nano Letters, 2015, 15, 2640-2644.	4.5	621
39	Enhanced optoelectronic quality of perovskite thin films with hypophosphorous acid for planar heterojunction solar cells. Nature Communications, 2015, 6, 10030.	5.8	620
40	Heterojunction Modification for Highly Efficient Organic–Inorganic Perovskite Solar Cells. ACS Nano, 2014, 8, 12701-12709.	7.3	614
41	Photon recycling in lead iodide perovskite solar cells. Science, 2016, 351, 1430-1433.	6.0	600
42	Indium–tin oxide treatments for single- and double-layer polymeric light-emitting diodes: The relation between the anode physical, chemical, and morphological properties and the device performance. Journal of Applied Physics, 1998, 84, 6859-6870.	1.1	599
43	Comprehensive defect suppression in perovskite nanocrystals for high-efficiency light-emitting diodes. Nature Photonics, 2021, 15, 148-155.	15.6	590
44	Angular Dependence of the Emission from a Conjugated Polymer Light-Emitting Diode: Implications for efficiency calculations. Advanced Materials, 1994, 6, 491-494.	11.1	582
45	Efficient Visible Quasiâ€2D Perovskite Lightâ€Emitting Diodes. Advanced Materials, 2016, 28, 7515-7520.	11.1	554
46	Spatial control of the recombination zone in an ambipolar light-emitting organic transistor. Nature Materials, 2006, 5, 69-74.	13.3	534
47	Self-Aligned, Vertical-Channel, Polymer Field-Effect Transistors. Science, 2003, 299, 1881-1884.	6.0	514
48	Close look at charge carrier injection in polymer field-effect transistors. Journal of Applied Physics, 2003, 94, 6129-6137.	1.1	494
49	Built-in field electroabsorption spectroscopy of polymer light-emitting diodes incorporating a doped poly(3,4-ethylene dioxythiophene) hole injection layer. Applied Physics Letters, 1999, 75, 1679-1681.	1.5	492
50	Determining exciton bandwidth and film microstructure in polythiophene films using linear absorption spectroscopy. Applied Physics Letters, 2009, 94, .	1.5	492
51	Hot-carrier cooling and photoinduced refractive index changes in organic–inorganic lead halide perovskites. Nature Communications, 2015, 6, 8420.	5.8	491
52	Efficient blue light-emitting diodes based on quantum-confined bromide perovskite nanostructures. Nature Photonics, 2019, 13, 760-764.	15.6	483
53	The Energy Gap Law for Triplet States in Pt-Containing Conjugated Polymers and Monomers. Journal of the American Chemical Society, 2001, 123, 9412-9417.	6.6	474
54	Spin-dependent exciton formation in π-conjugated compounds. Nature, 2001, 413, 828-831.	13.7	472

#	Article	IF	CITATIONS
55	Cyclodextrin-threaded conjugated polyrotaxanes as insulated molecular wires with reduced interactions. Nature Materials, 2002, 1, 160-164.	13.3	471
56	Ligand-engineered bandgap stability in mixed-halide perovskite LEDs. Nature, 2021, 591, 72-77.	13.7	471
57	Blue-Green Color Tunable Solution Processable Organolead Chloride–Bromide Mixed Halide Perovskites for Optoelectronic Applications. Nano Letters, 2015, 15, 6095-6101.	4.5	461
58	The role of spin in the kinetic control of recombination in organic photovoltaics. Nature, 2013, 500, 435-439.	13.7	460
59	Efficient radical-based light-emitting diodes with doublet emission. Nature, 2018, 563, 536-540.	13.7	453
60	Singlet exciton fission in solution. Nature Chemistry, 2013, 5, 1019-1024.	6.6	450
61	High-performance light-emitting diodes based on carbene-metal-amides. Science, 2017, 356, 159-163.	6.0	444
62	Attaching Perylene Dyes to Polyfluorene:Â Three Simple, Efficient Methods for Facile Color Tuning of Light-Emitting Polymers. Journal of the American Chemical Society, 2003, 125, 437-443.	6.6	441
63	Understanding Energy Loss in Organic Solar Cells: Toward a New Efficiency Regime. Joule, 2018, 2, 25-35.	11.7	440
64	Defect-Assisted Photoinduced Halide Segregation in Mixed-Halide Perovskite Thin Films. ACS Energy Letters, 2017, 2, 1416-1424.	8.8	437
65	Electroluminescence emission pattern of organic light-emitting diodes: Implications for device efficiency calculations. Journal of Applied Physics, 2000, 88, 1073-1081.	1.1	434
66	Enhancing photoluminescence yields in lead halide perovskites by photon recycling and light out-coupling. Nature Communications, 2016, 7, 13941.	5.8	427
67	Giant broadband nonlinear optical absorption response in dispersed graphene single sheets. Nature Photonics, 2011, 5, 554-560.	15.6	425
68	Optical properties and limiting photocurrent of thin-film perovskite solar cells. Energy and Environmental Science, 2015, 8, 602-609.	15.6	417
69	Highly efficient luminescence from space-confined charge-transfer emitters. Nature Materials, 2020, 19, 1332-1338.	13.3	413
70	A transferable model for singlet-fission kinetics. Nature Chemistry, 2014, 6, 492-497.	6.6	402
71	Ultrafast Dynamics of Exciton Fission in Polycrystalline Pentacene. Journal of the American Chemical Society, 2011, 133, 11830-11833.	6.6	394
72	Exciton Regeneration at Polymeric Semiconductor Heterojunctions. Physical Review Letters, 2004, 92, 247402.	2.9	390

5

#	Article	IF	CITATIONS
73	Preparation of Single-Phase Films of CH ₃ NH ₃ Pb(I _{1–<i>x</i>} Br _{<i>x</i>}) ₃ with Sharp Optical Band Edges. Journal of Physical Chemistry Letters, 2014, 5, 2501-2505.	2.1	385
74	Electron Trapping in Dye/Polymer Blend Photovoltaic Cells. Advanced Materials, 2000, 12, 1270-1274.	11.1	382
75	Intermolecular interactions in the molecular ferromagnetic NH4Ni(mnt)2· H2O. Nature, 1996, 380, 144-146.	13.7	375
76	Photovoltaic Performance and Morphology of Polyfluorene Blends:Â A Combined Microscopic and Photovoltaic Investigation. Macromolecules, 2001, 34, 6005-6013.	2.2	367
77	Efficiency Enhancements in Solid-State Hybrid Solar Cells via Reduced Charge Recombination and Increased Light Capture. Nano Letters, 2007, 7, 3372-3376.	4.5	363
78	Interchain vs. intrachain energy transfer in acceptor-capped conjugated polymers. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 10982-10987.	3.3	362
79	Perovskite Crystals for Tunable White Light Emission. Chemistry of Materials, 2015, 27, 8066-8075.	3.2	362
80	Understanding charge transport in lead iodide perovskite thin-film field-effect transistors. Science Advances, 2017, 3, e1601935.	4.7	354
81	An Organic Electronics Primer. Physics Today, 2005, 58, 53-58.	0.3	348
82	Harvesting Singlet and Triplet Energy in Polymer LEDs. Advanced Materials, 1999, 11, 285-288.	11.1	347
83	Lattice strain causes non-radiative losses in halide perovskites. Energy and Environmental Science, 2019, 12, 596-606.	15.6	343
84	Inkjet Printed Via-Hole Interconnections and Resistors for All-Polymer Transistor Circuits. Advanced Materials, 2001, 13, 1601-1605.	11.1	340
85	Fast spin-flip enables efficient and stable organic electroluminescence from charge-transfer states. Nature Photonics, 2020, 14, 636-642.	15.6	331
86	Performance and Stability Enhancement of Dye‧ensitized and Perovskite Solar Cells by Al Doping of TiO ₂ . Advanced Functional Materials, 2014, 24, 6046-6055.	7.8	330
87	Low-Temperature Solution-Grown CsPbBr ₃ Single Crystals and Their Characterization. Crystal Growth and Design, 2016, 16, 5717-5725.	1.4	329
88	Noncontact potentiometry of polymer field-effect transistors. Applied Physics Letters, 2002, 80, 2913-2915.	1.5	328
89	lonic space-charge effects in polymer light-emitting diodes. Physical Review B, 1998, 57, 12951-12963.	1.1	326
90	Photo-excitation in conjugated polymers. Journal Physics D: Applied Physics, 1987, 20, 1367-1384.	1.3	323

#	Article	IF	CITATIONS
91	Minimising efficiency roll-off in high-brightness perovskite light-emitting diodes. Nature Communications, 2018, 9, 608.	5.8	322
92	Charge separation in localized and delocalized electronic states in polymeric semiconductors. Nature, 1998, 392, 903-906.	13.7	321
93	Effects of Packing Structure on the Optoelectronic and Charge Transport Properties in Poly(9,9-di-n-octylfluorene-alt-benzothiadiazole). Journal of the American Chemical Society, 2005, 127, 12890-12899.	6.6	320
94	Dye-Sensitized Solar Cell Based on a Three-Dimensional Photonic Crystal. Nano Letters, 2010, 10, 2303-2309.	4.5	310
95	Highly Efficient Light-Emitting Diodes of Colloidal Metal–Halide Perovskite Nanocrystals beyond Quantum Size. ACS Nano, 2017, 11, 6586-6593.	7.3	310
96	Harnessing singlet exciton fission to break the Shockley–Queisser limit. Nature Reviews Materials, 2017, 2, .	23.3	309
97	The photovoltaic response in poly(p-phenylene vinylene) thin-film devices. Journal of Physics Condensed Matter, 1994, 6, 1379-1394.	0.7	300
98	Bandâ€like Transport in Surfaceâ€Functionalized Highly Solutionâ€Processable Graphene Nanosheets. Advanced Materials, 2008, 20, 3440-3446.	11.1	299
99	Exciton Fission and Charge Generation via Triplet Excitons in Pentacene/C ₆₀ Bilayers. Journal of the American Chemical Society, 2010, 132, 12698-12703.	6.6	295
100	Lithography-Free, Self-Aligned Inkjet Printing with Sub-Hundred-Nanometer Resolution. Advanced Materials, 2005, 17, 997-1001.	11.1	293
101	All-Polymer Optoelectronic Devices. Science, 1999, 285, 233-236.	6.0	286
102	Solution-Processible Conjugated Electrophosphorescent Polymers. Journal of the American Chemical Society, 2004, 126, 7041-7048.	6.6	285
103	Exciton dissociation mechanisms in the polymeric semiconductors poly(9,9-dioctylfluorene) and poly(9,9-dioctylfluorene-co-benzothiadiazole). Physical Review B, 2001, 63, .	1.1	283
104	Enhanced Performance in Fluoreneâ€Free Organometal Halide Perovskite Lightâ€Emitting Diodes using Tunable, Low Electron Affinity Oxide Electron Injectors. Advanced Materials, 2015, 27, 1414-1419.	11.1	283
105	Spin-cast thin semiconducting polymer interlayer for improving device efficiency of polymer light-emitting diodes. Applied Physics Letters, 2005, 87, 023506.	1.5	277
106	Long-range exciton transport in conjugated polymer nanofibers prepared by seeded growth. Science, 2018, 360, 897-900.	6.0	277
107	Effect of Annealing on P3HT:PCBM Charge Transfer and Nanoscale Morphology Probed by Ultrafast Spectroscopy. Nano Letters, 2010, 10, 923-930.	4.5	274
108	Photoexcited states in poly(p-phenylene vinylene): Comparison withtrans,trans-distyrylbenzene, a model oligomer. Physical Review B, 1990, 42, 11670-11681.	1.1	272

#	Article	IF	CITATIONS
109	Photodiodes Based on Polyfluorene Composites: Influence of Morphology. Advanced Materials, 2000, 12, 498-502.	11.1	272
110	Charge- and energy-transfer processes at polymer/polymer interfaces: A joint experimental and theoretical study. Physical Review B, 1999, 60, 5721-5727.	1.1	268
111	Mixed halide perovskites for spectrally stable and high-efficiency blue light-emitting diodes. Nature Communications, 2021, 12, 361.	5.8	268
112	Metal Halide Perovskite Polycrystalline Films Exhibiting Properties of Single Crystals. Joule, 2017, 1, 155-167.	11.7	264
113	Effect of metal films on the photoluminescence and electroluminescence of conjugated polymers. Physical Review B, 1997, 56, 1893-1905.	1.1	261
114	Stable Lightâ€Emitting Diodes Using Phaseâ€Pure Ruddlesden–Popper Layered Perovskites. Advanced Materials, 2018, 30, 1704217.	11.1	258
115	Controlling Electrical Properties of Conjugated Polymers via a Solutionâ€Based pâ€Type Doping. Advanced Materials, 2008, 20, 3319-3324.	11.1	256
116	Effects of Layer Thickness and Annealing of PEDOT:PSS Layers in Organic Photodetectors. Macromolecules, 2009, 42, 6741-6747.	2.2	253
117	Optical spectroscopy of field-induced charge in self-organized high mobility poly(3-hexylthiophene). Physical Review B, 2001, 63, .	1.1	252
118	Formation of Nanopatterned Polymer Blends in Photovoltaic Devices. Nano Letters, 2010, 10, 1302-1307.	4.5	248
119	Evolution of lowest singlet and triplet excited states with number of thienyl rings in platinum poly-ynes. Journal of Chemical Physics, 1999, 110, 4963-4970.	1.2	246
120	Resonant energy transfer of triplet excitons from pentacene to PbSe nanocrystals. Nature Materials, 2014, 13, 1033-1038.	13.3	246
121	Inkjet printing of polymer thin film transistors. Thin Solid Films, 2003, 438-439, 279-287.	0.8	245
122	Efficient Single‣ayer Polymer Lightâ€Emitting Diodes. Advanced Materials, 2010, 22, 3194-3198.	11.1	243
123	Efficient Polythiophene/Polyfluorene Copolymer Bulk Heterojunction Photovoltaic Devices: Device Physics and Annealing Effects. Advanced Functional Materials, 2008, 18, 2309-2321.	7.8	242
124	Determining exciton coherence from the photoluminescence spectral line shape in poly(3-hexylthiophene) thin films. Journal of Chemical Physics, 2009, 130, 074904.	1.2	241
125	High-performance polymer semiconducting heterostructure devices by nitrene-mediated photocrosslinking of alkyl side chains. Nature Materials, 2010, 9, 152-158.	13.3	241
126	Transient electroluminescence of polymer light emitting diodes using electrical pulses. Journal of Applied Physics, 1999, 86, 5116-5130.	1.1	237

#	Article	IF	CITATIONS
127	New Strategies for Defect Passivation in Highâ€Efficiency Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1903090.	10.2	237
128	Unequal Partnership: Asymmetric Roles of Polymeric Donor and Fullerene Acceptor in Generating Free Charge. Journal of the American Chemical Society, 2014, 136, 2876-2884.	6.6	235
129	Phase Separation in Polyfluorene-Based Conjugated Polymer Blends:Â Lateral and Vertical Analysis of Blend Spin-Cast Thin Films. Macromolecules, 2004, 37, 2861-2871.	2.2	232
130	Blue-phase templated fabrication of three-dimensional nanostructures for photonic applications. Nature Materials, 2012, 11, 599-603.	13.3	231
131	Singlet Exciton Fission in Polycrystalline Pentacene: From Photophysics toward Devices. Accounts of Chemical Research, 2013, 46, 1330-1338.	7.6	230
132	Optical spectroscopy of highly ordered poly(p-phenylene vinylene). Journal of Physics Condensed Matter, 1993, 5, 7155-7172.	0.7	227
133	Triplet Energy Back Transfer in Conjugated Polymers with Pendant Phosphorescent Iridium Complexes. Journal of the American Chemical Society, 2006, 128, 6647-6656.	6.6	226
134	The role of charge recombination to triplet excitons in organic solar cells. Nature, 2021, 597, 666-671.	13.7	225
135	Dual electron donor/electron acceptor character of a conjugated polymer in efficient photovoltaic diodes. Applied Physics Letters, 2007, 90, 193506.	1.5	223
136	The origin of the open-circuit voltage in polyfluorene-based photovoltaic devices. Journal of Applied Physics, 2002, 92, 4266-4270.	1.1	221
137	Amine-Based Passivating Materials for Enhanced Optical Properties and Performance of Organic–Inorganic Perovskites in Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2017, 8, 1784-1792.	2.1	220
138	Bimolecular Recombination in Organic Photovoltaics. Annual Review of Physical Chemistry, 2014, 65, 557-581.	4.8	218
139	Charge Generation Kinetics and Transport Mechanisms in Blended Polyfluorene Photovoltaic Devices. Nano Letters, 2002, 2, 1353-1357.	4.5	214
140	Fineâ€Tuning the Energy Levels of a Nonfullerene Smallâ€Molecule Acceptor to Achieve a High Shortâ€Circuit Current and a Power Conversion Efficiency over 12% in Organic Solar Cells. Advanced Materials, 2018, 30, 1704904.	11.1	214
141	Optical spectroscopy of field-induced charge in poly(3-hexyl thienylene) metal-insulator-semiconductor structures: Evidence for polarons. Physical Review Letters, 1991, 66, 2231-2234.	2.9	213
142	High-stability ultrathin spin-on benzocyclobutene gate dielectric for polymer field-effect transistors. Applied Physics Letters, 2004, 84, 3400-3402.	1.5	213
143	High Openâ€Circuit Voltages in Tinâ€Rich Lowâ€Bandgap Perovskiteâ€Based Planar Heterojunction Photovoltaics. Advanced Materials, 2017, 29, 1604744.	11.1	212
144	Perylene-Based Covalent Organic Frameworks for Acid Vapor Sensing. Journal of the American Chemical Society, 2019, 141, 15693-15699.	6.6	212

#	Article	IF	CITATIONS
145	3 <i>d</i> transition-metal intercalates of the niobium and tantalum dichalcogenides. I. Magnetic properties. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1980, 41, 65-93.	0.6	211
146	Improved operational stability of polyfluorene-based organic light-emitting diodes with plasma-treated indium–tin–oxide anodes. Applied Physics Letters, 1999, 74, 3084-3086.	1.5	211
147	Influence of Nanoscale Phase Separation on the Charge Generation Dynamics and Photovoltaic Performance of Conjugated Polymer Blends:  Balancing Charge Generation and Separation. Journal of Physical Chemistry C, 2007, 111, 19153-19160.	1.5	209
148	Charge Recombination in Organic Photovoltaic Devices with High Open-Circuit Voltages. Journal of the American Chemical Society, 2008, 130, 13653-13658.	6.6	204
149	Singlet Exciton Fission-Sensitized Infrared Quantum Dot Solar Cells. Nano Letters, 2012, 12, 1053-1057.	4.5	200
150	Vertically segregated polymer-blend photovoltaic thin-film structures through surface-mediated solution processing. Applied Physics Letters, 2002, 80, 1695-1697.	1.5	199
151	Polymer Blend Solar Cells Based on a Highâ€Mobility Naphthalenediimideâ€Based Polymer Acceptor: Device Physics, Photophysics and Morphology. Advanced Energy Materials, 2011, 1, 230-240.	10.2	199
152	Temperature-Independent Singlet Exciton Fission in Tetracene. Journal of the American Chemical Society, 2013, 135, 16680-16688.	6.6	198
153	High Circular Polarization of Electroluminescence Achieved <i>via</i> Self-Assembly of a Light-Emitting Chiral Conjugated Polymer into Multidomain Cholesteric Films. ACS Nano, 2017, 11, 12713-12722.	7.3	197
154	Impact of Monovalent Cation Halide Additives on the Structural and Optoelectronic Properties of CH ₃ NH ₃ PbI ₃ Perovskite. Advanced Energy Materials, 2016, 6, 1502472.	10.2	196
155	Ultrafast carrier thermalization in lead iodide perovskite probed with two-dimensional electronic spectroscopy. Nature Communications, 2017, 8, 376.	5.8	193
156	Harvesting the Full Potential of Photons with Organic Solar Cells. Advanced Materials, 2016, 28, 1482-1488.	11.1	190
157	Conjugated Zwitterionic Polyelectrolyte as the Charge Injection Layer for High-Performance Polymer Light-Emitting Diodes. Journal of the American Chemical Society, 2011, 133, 683-685.	6.6	189
158	The Physics of Light Emission in Halide Perovskite Devices. Advanced Materials, 2019, 31, e1803336.	11.1	189
159	Synthesis and Electronic Structure of Platinum-Containing Poly-ynes with Aromatic and Heteroaromatic Rings. Macromolecules, 1998, 31, 722-727.	2.2	188
160	Ultrathin Self-Assembled Layers at the ITO Interface to Control Charge Injection and Electroluminescence Efficiency in Polymer Light-Emitting Diodes. Advanced Materials, 1998, 10, 769-774.	11.1	186
161	On the Role of Single Regiodefects and Polydispersity in Regioregular Poly(3-hexylthiophene): Defect Distribution, Synthesis of Defect-Free Chains, and a Simple Model for the Determination of Crystallinity. Journal of the American Chemical Society, 2012, 134, 4790-4805.	6.6	185
162	Tuneable Singlet Exciton Fission and Triplet–Triplet Annihilation in an Orthogonal Pentacene Dimer. Advanced Functional Materials, 2015, 25, 5452-5461.	7.8	184

#	ARTICLE	IF	CITATIONS
163	Vibronically coherent ultrafast triplet-pair formation and subsequent thermally activated dissociation control efficient endothermic singlet fission. Nature Chemistry, 2017, 9, 1205-1212.	6.6	184
164	Strongly exchange-coupled triplet pairs in an organic semiconductor. Nature Physics, 2017, 13, 176-181.	6.5	182
165	Synthesis, Electrochemistry, and Spectroscopy of Blue Platinum(II) Polyynes and Diynes. Angewandte Chemie - International Edition, 1998, 37, 3036-3039.	7.2	181
166	High stability and luminescence efficiency in donor–acceptor neutral radicals not following the Aufbau principle. Nature Materials, 2019, 18, 977-984.	13.3	181
167	Electronic structures of interfacial states formed at polymeric semiconductor heterojunctions. Nature Materials, 2008, 7, 483-489.	13.3	180
168	On the Energetic Dependence of Charge Separation in Low-Band-Gap Polymer/Fullerene Blends. Journal of the American Chemical Society, 2012, 134, 18189-18192.	6.6	180
169	What Controls the Rate of Ultrafast Charge Transfer and Charge Separation Efficiency in Organic Photovoltaic Blends. Journal of the American Chemical Society, 2016, 138, 11672-11679.	6.6	179
170	High Peak Brightness Polymer Light-Emitting Diodes. Advanced Materials, 1998, 10, 64-68.	11.1	178
171	Identification of a triplet pair intermediate in singlet exciton fission in solution. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7656-7661.	3.3	178
172	Spatial extent of the singlet and triplet excitons in transition metalâ€containing polyâ€ynes. Journal of Chemical Physics, 1996, 105, 3868-3877.	1.2	177
173	Singlet Intrachain Exciton Generation and Decay in Poly(p-phenylenevinylene). Physical Review Letters, 1996, 77, 1881-1884.	2.9	173
174	Uniaxial Alignment of Liquid-Crystalline Conjugated Polymers by Nanoconfinement. Nano Letters, 2007, 7, 987-992.	4.5	173
175	Atmospheric Influence upon Crystallization and Electronic Disorder and Its Impact on the Photophysical Properties of Organic–Inorganic Perovskite Solar Cells. ACS Nano, 2015, 9, 2311-2320.	7.3	173
176	Fundamental Carrier Lifetime Exceeding 1 µs in Cs ₂ AgBiBr ₆ Double Perovskite. Advanced Materials Interfaces, 2018, 5, 1800464.	1.9	173
177	A molecular metal with ion-conducting channels. Nature, 1998, 394, 159-162.	13.7	171
178	Solvatochromic covalent organic frameworks. Nature Communications, 2018, 9, 3802.	5.8	171
179	Large Electric Field Effect in Electrolyte-Gated Manganites. Physical Review Letters, 2009, 102, 136402.	2.9	170

Theoretical investigation of the lowest singlet and triplet states in poly(paraphenylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf $50.62_{1.2}$ Td (viny 1.20 Tf $1.2_{1.2}$ Td (viny 1.20 Tf $1.2_$

#	Article	IF	CITATIONS
181	Observation of Field-Effect Transistor Behavior at Self-Organized Interfaces. Advanced Materials, 2004, 16, 1609-1615.	11.1	169
182	Correlation between Surface Photovoltage and Blend Morphology in Polyfluorene-Based Photodiodes. Nano Letters, 2005, 5, 559-563.	4.5	169
183	In situ measurement of exciton energy in hybrid singlet-fission solar cells. Nature Communications, 2012, 3, 1019.	5.8	165
184	Metal-encapsulated organolead halide perovskite photocathode for solar-driven hydrogen evolution in water. Nature Communications, 2016, 7, 12555.	5.8	165
185	Triplet states in a series of Pt-containing ethynylenes. Journal of Chemical Physics, 2000, 113, 7627-7634.	1.2	164
186	Efficient Nonfullerene Organic Solar Cells with Small Driving Forces for Both Hole and Electron Transfer. Advanced Materials, 2018, 30, e1804215.	11.1	161
187	Size-Dependent Photon Emission from Organometal Halide Perovskite Nanocrystals Embedded in an Organic Matrix. Journal of Physical Chemistry Letters, 2015, 6, 446-450.	2.1	160
188	The singlet–triplet energy gap in organic and Pt-containing phenylene ethynylene polymers and monomers. Journal of Chemical Physics, 2002, 116, 9457-9463.	1.2	159
189	Understanding the luminescent nature of organic radicals for efficient doublet emitters and pure-red light-emitting diodes. Nature Materials, 2020, 19, 1224-1229.	13.3	159
190	Ultrathin Regioregular Poly(3-hexyl thiophene) Field-Effect Transistors. Langmuir, 2002, 18, 10176-10182.	1.6	156
191	Efficient Triplet Exciton Fusion in Molecularly Doped Polymer Lightâ€Emitting Diodes. Advanced Materials, 2017, 29, 1605987.	11.1	155
192	LiF/Al cathodes and the effect of LiF thickness on the device characteristics and built-in potential of polymer light-emitting diodes. Applied Physics Letters, 2000, 77, 3096-3098.	1.5	154
193	Optical Signature of Delocalized Polarons in Conjugated Polymers. Advanced Functional Materials, 2001, 11, 229-234.	7.8	154
194	The Path to 20% Power Conversion Efficiencies in Nonfullerene Acceptor Organic Solar Cells. Advanced Energy Materials, 2021, 11, 2003441.	10.2	154
195	Triplet dynamics in fluorescent polymer light-emitting diodes. Physical Review B, 2012, 85, .	1.1	153
196	Surface energy and polarity of treated indium–tin–oxide anodes for polymer light-emitting diodes studied by contact-angle measurements. Journal of Applied Physics, 1999, 86, 2774-2778.	1.1	152
197	Solvent Additive Control of Morphology and Crystallization in Semiconducting Polymer Blends. Advanced Materials, 2012, 24, 669-674.	11.1	152
198	The Nature of Singlet Exciton Fission in Carotenoid Aggregates. Journal of the American Chemical Society, 2015, 137, 5130-5139.	6.6	152

#	Article	IF	CITATIONS
199	Ag-nanowire films coated with ZnO nanoparticles as a transparent electrode for solar cells. Applied Physics Letters, 2011, 99, .	1.5	149
200	Efficient electron injection in blue-emitting polymer light-emitting diodes with LiF/Ca/Al cathodes. Applied Physics Letters, 2001, 79, 174-176.	1.5	147
201	Self-Organization of Nanocrystals in Polymer Brushes. Application in Heterojunction Photovoltaic Diodes. Nano Letters, 2005, 5, 1653-1657.	4.5	146
202	Highly Efficient Single‣ayer Polymer Ambipolar Lightâ€Emitting Fieldâ€Effect Transistors. Advanced Materials, 2012, 24, 2728-2734.	11.1	146
203	Electronic line-up in light-emitting diodes with alkali-halide/metal cathodes. Journal of Applied Physics, 2003, 93, 6159-6172.	1.1	144
204	High Efficiency Composite Metal Oxideâ€Polymer Electroluminescent Devices: A Morphological and Material Based Investigation. Advanced Materials, 2008, 20, 3447-3452.	11.1	143
205	Activated Singlet Exciton Fission in a Semiconducting Polymer. Journal of the American Chemical Society, 2013, 135, 12747-12754.	6.6	143
206	Efficient light-emitting diodes from mixed-dimensional perovskites on a fluoride interface. Nature Electronics, 2020, 3, 704-710.	13.1	143
207	Perylene Tetracarboxydiimide as an Electron Acceptor in Organic Solar Cells: A Study of Charge Generation and Recombination. Journal of Physical Chemistry C, 2009, 113, 21225-21232.	1.5	140
208	Periodic lattice distortions and charge density waves in one- and two-dimensional metals. Journal of Physics C: Solid State Physics, 1979, 12, 1441-1477.	1.5	139
209	Highly efficient inverted polymer light-emitting diodes using surface modifications of ZnO layer. Nature Communications, 2014, 5, 4840.	5.8	138
210	Near-infrared electroluminescence of polymer light-emitting diodes doped with a lissamine-sensitized Nd3+ complex. Applied Physics Letters, 2001, 78, 2122-2124.	1.5	136
211	Crystallization-Induced 10-nm Structure Formation in P3HT/PCBM Blends. Macromolecules, 2013, 46, 4002-4013.	2.2	136
212	Morphological and electronic consequences of modifications to the polymer anode †PEDOT:PSS'. Polymer, 2005, 46, 2573-2578.	1.8	135
213	Anomalous Energy Transfer Dynamics due to Torsional Relaxation in a Conjugated Polymer. Physical Review Letters, 2006, 97, 166804.	2.9	135
214	Excitonic versus electronic couplings in molecular assemblies: The importance of non-nearest neighbor interactions. Journal of Chemical Physics, 2009, 130, 044105.	1.2	133
215	Solution-Processable Singlet Fission Photovoltaic Devices. Nano Letters, 2015, 15, 354-358.	4.5	133
216	The Binding Energy of Charge-Transfer Excitons Localized at Polymeric Semiconductor Heterojunctions. Journal of Physical Chemistry C, 2011, 115, 7114-7119.	1.5	131

#	Article	IF	CITATIONS
217	Opportunities and Challenges in Perovskite Light-Emitting Devices. ACS Photonics, 2018, 5, 3866-3875.	3.2	129
218	A general approach for hysteresis-free, operationally stable metal halide perovskite field-effect transistors. Science Advances, 2020, 6, eaaz4948.	4.7	129
219	Scalable Triple Cation Mixed Halide Perovskite–BiVO ₄ Tandems for Biasâ€Free Water Splitting. Advanced Energy Materials, 2018, 8, 1801403.	10.2	128
220	Direct Measurement of Electric Fieldâ€Assisted Charge Separation in Polymer:Fullerene Photovoltaic Diodes. Advanced Materials, 2010, 22, 3672-3676.	11.1	127
221	Metallic Photonic Crystals Based on Solution-Processible Gold Nanoparticles. Nano Letters, 2006, 6, 651-655.	4.5	126
222	Potassium- and Rubidium-Passivated Alloyed Perovskite Films: Optoelectronic Properties and Moisture Stability. ACS Energy Letters, 2018, 3, 2671-2678.	8.8	126
223	The role of bulk and interfacial morphology in charge generation, recombination, and extraction in non-fullerene acceptor organic solar cells. Energy and Environmental Science, 2020, 13, 3679-3692.	15.6	126
224	Efficient Conjugatedâ€Polymer Optoelectronic Devices Fabricated by Thinâ€Film Transferâ€Printing Technique. Advanced Functional Materials, 2008, 18, 1012-1019.	7.8	125
225	The Origin of Collected Charge and Open-Circuit Voltage in Blended Polyfluorene Photovoltaic Devices. Advanced Materials, 2004, 16, 1640-1645.	11.1	124
226	Pressure Dependence of the Phase Transitions in Tetrathiafulvalene-Tetracyanoquinodimethane (TTF-TCNQ): Evidence for a Longitudinal Lockin at 20 kbar. Physical Review Letters, 1978, 40, 1048-1051.	2.9	123
227	Electroluminescence-detected magnetic-resonance study of polyparaphenylenevinylene (PPV)-based light-emitting diodes. Physical Review B, 1992, 46, 15072-15077.	1.1	123
228	Optical spectroscopy of platinum and palladium containing polyâ€ynes. Journal of Chemical Physics, 1994, 101, 2693-2698.	1.2	122
229	Tunable Near-Infrared Luminescence in Tin Halide Perovskite Devices. Journal of Physical Chemistry Letters, 2016, 7, 2653-2658.	2.1	122
230	Factors Influencing Stimulated Emission from Poly(p-phenylenevinylene). Physical Review Letters, 1997, 78, 733-736.	2.9	121
231	The role of photon recycling in perovskite light-emitting diodes. Nature Communications, 2020, 11, 611.	5.8	121
232	Charge-Transfer State Dynamics Following Hole and Electron Transfer in Organic Photovoltaic Devices. Journal of Physical Chemistry Letters, 2013, 4, 209-215.	2.1	120
233	Doping of Organic Semiconductors Using Molybdenum Trioxide: a Quantitative Timeâ€Đependent Electrical and Spectroscopic Study. Advanced Functional Materials, 2011, 21, 1432-1441.	7.8	119
234	Electrical and magnetic properties of some first row transition metal intercalates of niobium disulphide. Philosophical Magazine and Journal, 1977, 35, 1269-1287.	1.8	118

#	Article	IF	CITATIONS
235	All-aromatic liquid crystal triphenylamine-based poly(azomethine)s as hole transport materials for opto-electronic applications. Journal of Materials Chemistry, 2010, 20, 937-944.	6.7	118
236	Stoichiometry dependence of the transport properties of TiS2. Journal of Physics C: Solid State Physics, 1981, 14, 4067-4081.	1.5	116
237	Spectral narrowing in optically pumped poly (p-phenylenevinylene) Films. Advanced Materials, 1997, 9, 547-551.	11.1	116
238	Charge extraction via graded doping of hole transport layers gives highly luminescent and stable metal halide perovskite devices. Science Advances, 2019, 5, eaav2012.	4.7	116
239	Critical Assessment of the Use of Excess Lead Iodide in Lead Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 6505-6512.	2.1	116
240	Identifying and Reducing Interfacial Losses to Enhance Color-Pure Electroluminescence in Blue-Emitting Perovskite Nanoplatelet Light-Emitting Diodes. ACS Energy Letters, 2019, 4, 1181-1188.	8.8	115
241	Photophysics of pentacene thin films: The role of exciton fission and heating effects. Physical Review B, 2011, 84, .	1.1	114
242	Surface-Directed Spinodal Decomposition in Poly[3-hexylthiophene] and C ₆₁ -Butyric Acid Methyl Ester Blends. ACS Nano, 2011, 5, 329-336.	7.3	113
243	Doped conducting-polymer–semiconducting-polymer interfaces: Their use in organic photovoltaic devices. Physical Review B, 1999, 60, 1854-1860.	1.1	112
244	Order enables efficient electron-hole separation at an organic heterojunction with a small energy loss. Nature Communications, 2018, 9, 277.	5.8	112
245	Improving the Stability and Performance of Perovskite Lightâ€Emitting Diodes by Thermal Annealing Treatment. Advanced Materials, 2016, 28, 6906-6913.	11.1	111
246	Synthesis and optical spectroscopy of linear long-chain di-terminal alkynes and their Pt–σ-acetylide polymeric complexes. Journal of Materials Chemistry, 1994, 4, 1227-1232.	6.7	110
247	High-Efficiency Polycrystalline Perovskite Light-Emitting Diodes Based on Mixed Cations. ACS Nano, 2018, 12, 2883-2892.	7.3	109
248	Growth of Nanosized Single Crystals for Efficient Perovskite Light-Emitting Diodes. ACS Nano, 2018, 12, 3417-3423.	7.3	109
249	Suppression of Green Emission in a New Class of Blue-Emitting Polyfluorene Copolymers with Twisted Biphenyl Moieties. Advanced Functional Materials, 2005, 15, 981-988.	7.8	108
250	Facile Synthesis of Stable and Highly Luminescent Methylammonium Lead Halide Nanocrystals for Efficient Light Emitting Devices. Journal of the American Chemical Society, 2019, 141, 1269-1279.	6.6	108
251	Proton-transfer-induced 3D/2D hybrid perovskites suppress ion migration and reduce luminance overshoot. Nature Communications, 2020, 11, 3378.	5.8	108
252	A novel RGB multicolor light-emitting polymer display. Synthetic Metals, 2000, 111-112, 125-128.	2.1	106

#	Article	IF	CITATIONS
253	Transfer Processes in Semiconducting Polymer-Porphyrin Blends. Advanced Materials, 2001, 13, 44-47.	11.1	105
254	Solution-Processed Anodes from Layer-Structure Materials for High-Efficiency Polymer Light-Emitting Diodes. Journal of the American Chemical Society, 2003, 125, 5998-6007.	6.6	105
255	Improved efficiency of light-emitting diodes based on polyfluorene blends upon insertion of a poly(p-phenylene vinylene) electron- confinement layer. Applied Physics Letters, 2002, 80, 2436-2438.	1.5	104
256	Identification of a Quenching Species in Ruthenium Tris-Bipyridine Electroluminescent Devices. Journal of the American Chemical Society, 2006, 128, 7761-7764.	6.6	104
257	Intrinsic and Extrinsic Stability of Formamidinium Lead Bromide Perovskite Solar Cells Yielding High Photovoltage. Nano Letters, 2016, 16, 7155-7162.	4.5	104
258	Exploiting Excited-State Aromaticity To Design Highly Stable Singlet Fission Materials. Journal of the American Chemical Society, 2019, 141, 13867-13876.	6.6	104
259	Semiconductor Device Physics of Conjugated Polymers. Solid State Physics, 1996, 49, 1-149.	1.3	103
260	Degradation mechanisms of perovskite solar cells under vacuum and one atmosphere of nitrogen. Nature Energy, 2021, 6, 977-986.	19.8	103
261	Exciton migration in a polythiophene: Probing the spatial and energy domain by line-dipole Förster-type energy transfer. Journal of Chemical Physics, 2005, 122, 094903.	1.2	102
262	3 <i>d</i> transition-metal intercalates of the niobium and tantalum dichalcogenides. II. Transport properties. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1980, 41, 95-112.	0.6	101
263	Light-induced luminescence quenching in precursor-route poly(p-phenylene vinylene). Journal of Physics Condensed Matter, 1989, 1, 3671-3678.	0.7	101
264	Dedoping of Lead Halide Perovskites Incorporating Monovalent Cations. ACS Nano, 2018, 12, 7301-7311.	7.3	101
265	Improved photoinduced charge carriers separation in organic-inorganic hybrid photovoltaic devices. Applied Physics Letters, 2010, 97, .	1.5	100
266	Current heating in polymer light emitting diodes. Applied Physics Letters, 1998, 73, 732-734.	1.5	99
267	Efficient exciton dissociation via two-step photoexcitation in polymeric semiconductors. Physical Review B, 2001, 64, .	1.1	99
268	Efficient Energy Transfer in Mixed Columnar Stacks of Hydrogen-Bonded Oligo(p-phenylene vinylene)s in Solution. Angewandte Chemie - International Edition, 2004, 43, 1976-1979.	7.2	99
269	Tunable Ultrafast Optical Switching via Waveguided Gold Nanowires. Advanced Materials, 2008, 20, 4455-4459.	11.1	99
270	Excitonâ€Charge Annihilation in Organic Semiconductor Films. Advanced Functional Materials, 2012, 22, 1567-1577.	7.8	99

#	Article	IF	CITATIONS
271	Blue-to-green electrophosphorescence of iridium-based cyclometallated materials. Chemical Communications, 2005, , 4708.	2.2	98
272	Visualizing excitations at buried heterojunctions in organic semiconductor blends. Nature Materials, 2017, 16, 551-557.	13.3	98
273	Increased efficiency in vertically segregated thin-film conjugated polymer blends for light-emitting diodes. Applied Physics Letters, 2003, 82, 299-301.	1.5	97
274	Deciphering exciton-generation processes in quantum-dot electroluminescence. Nature Communications, 2020, 11, 2309.	5.8	96
275	Synthesis and Exciton Dynamics of Donor-Orthogonal Acceptor Conjugated Polymers: Reducing the Singlet–Triplet Energy Gap. Journal of the American Chemical Society, 2017, 139, 11073-11080.	6.6	95
276	Efficient Ruddlesden–Popper Perovskite Lightâ€Emitting Diodes with Randomly Oriented Nanocrystals. Advanced Functional Materials, 2019, 29, 1901225.	7.8	95
277	Inorganic solution-processed hole-injecting and electron-blocking layers in polymer light-emitting diodes. Journal of Applied Physics, 2002, 92, 7556-7563.	1.1	94
278	Improved Open―Circuit Voltage in ZnO–PbSe Quantum Dot Solar Cells by Understanding and Reducing Losses Arising from the ZnO Conduction Band Tail. Advanced Energy Materials, 2014, 4, 1301544.	10.2	94
279	Quantitative Bimolecular Recombination in Organic Photovoltaics through Triplet Exciton Formation. Journal of the American Chemical Society, 2014, 136, 3424-3429.	6.6	93
280	Photodoping through local charge carrier accumulation in alloyed hybrid perovskites for highly efficient luminescence. Nature Photonics, 2020, 14, 123-128.	15.6	93
281	Influence of the Molecular Weight on the Thermotropic Alignment of Thin Liquid Crystalline Polyfluorene Copolymer Films. Macromolecules, 2003, 36, 2838-2844.	2.2	92
282	Enhancement of Charge-Transport Characteristics in Polymeric Films Using Polymer Brushes. Nano Letters, 2006, 6, 573-578.	4.5	92
283	Optical Spectroscopy of a Polyfluorene Copolymer at High Pressure: Intra- and Intermolecular Interactions. Physical Review Letters, 2007, 99, 167401.	2.9	92
284	A Unified Description of Current–Voltage Characteristics in Organic and Hybrid Photovoltaics under Low Light Intensity. Nano Letters, 2008, 8, 1393-1398.	4.5	92
285	Control of Interface Defects for Efficient and Stable Quasiâ€2D Perovskite Lightâ€Emitting Diodes Using Nickel Oxide Hole Injection Layer. Advanced Science, 2018, 5, 1801350.	5.6	92
286	Supramolecular Complexes of Conjugated Polyelectrolytes with Poly(ethylene oxide): Multifunctional Luminescent Semiconductors Exhibiting Electronic and Ionic Transport. Advanced Materials, 2005, 17, 2659-2663.	11.1	91
287	Photoinduced absorption and photoluminescence in poly(2,5-dimethoxy-p-phenylene vinylene). Physical Review B, 1992, 46, 7379-7389.	1.1	90
288	Morphology dependence of the triplet excited state formation and absorption in polyfluorene. Physical Review B, 2005, 71, .	1.1	90

#	Article	IF	CITATIONS
289	Charge transport polymers for light emitting diodes. Advanced Materials, 1995, 7, 898-900.	11.1	89
290	Photoluminescence of poly(p-phenylenevinylene)–silica nanocomposites: Evidence for dual emission by Franck–Condon analysis. Journal of Chemical Physics, 2001, 115, 2709-2720.	1.2	89
291	Quantum efficiency of ambipolar light-emitting polymer field-effect transistors. Journal of Applied Physics, 2008, 103, .	1.1	89
292	Excited-State Dynamics in Fully Conjugated 2D Covalent Organic Frameworks. Journal of the American Chemical Society, 2019, 141, 11565-11571.	6.6	89
293	Intermolecular Interactions of Perylene diimides in Photovoltaic Blends of Fluorene Copolymers: Disorder Effects on Photophysical Properties, Film Morphology and Device Efficiency. Advanced Functional Materials, 2008, 18, 3189-3202.	7.8	87
294	Semimetallic character of TiSe2and semiconductor character of TiS2under pressure. Journal of Physics C: Solid State Physics, 1977, 10, L705-L708.	1.5	86
295	Stoichiometry effects in angle -resolved photoemission and transport studies of Ti1+xS2. Journal of Physics C: Solid State Physics, 1983, 16, 393-402.	1.5	86
296	Circularly Polarized Photoluminescence from Chiral Perovskite Thin Films at Room Temperature. ACS Nano, 2020, 14, 7610-7616.	7.3	86
297	Efficient ZnO Nanowire Solid-State Dye-Sensitized Solar Cells Using Organic Dyes and Coreâ^'shell Nanostructures. Journal of Physical Chemistry C, 2009, 113, 18515-18522.	1.5	85
298	The Dependence of Device Dark Current on the Active‣ayer Morphology of Solutionâ€Processed Organic Photodetectors. Advanced Functional Materials, 2010, 20, 3895-3903.	7.8	85
299	Impact of a Mesoporous Titania–Perovskite Interface on the Performance of Hybrid Organic–Inorganic Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 3264-3269.	2.1	85
300	Semiconductor to semimetal transition in TiS2at 40 kbar. Journal of Physics C: Solid State Physics, 1984, 17, 2713-2734.	1.5	84
301	Optoelectronic and Charge Transport Properties at Organicâ ^{~,} Organic Semiconductor Interfaces: Comparison between Polyfluorene-Based Polymer Blend and Copolymer. Journal of the American Chemical Society, 2008, 130, 13120-13131.	6.6	84
302	Solutionâ€Processed Zinc Oxide as Highâ€Performance Airâ€Stable Electron Injector in Organic Ambipolar Lightâ€Emitting Fieldâ€Effect Transistors. Advanced Functional Materials, 2010, 20, 3457-3465.	7.8	84
303	Surface conditioning of indium-tin oxide anodes for organic light-emitting diodes. Thin Solid Films, 2003, 445, 358-366.	0.8	83
304	Mechanically tunable conjugated polymer distributed feedback lasers. Applied Physics Letters, 2010, 97,	1.5	83
305	High internal quantum efficiency in fullerene solar cells based on crosslinked polymer donor networks. Nature Communications, 2012, 3, 1321.	5.8	83
306	Perovskite-molecule composite thin films for efficient and stable light-emitting diodes. Nature Communications, 2020, 11, 891.	5.8	83

#	Article	IF	CITATIONS
307	Photophysical properties of solid films of fullerene, C60. Journal of Physics Condensed Matter, 1991, 3, 9259-9270.	0.7	82
308	Low-Temperature Control of Nanoscale Morphology for High Performance Polymer Photovoltaics. Nano Letters, 2008, 8, 3942-3947.	4.5	82
309	Ultrafast Long-Range Charge Separation in Nonfullerene Organic Solar Cells. ACS Nano, 2017, 11, 12473-12481.	7.3	82
310	Stable Hexylphosphonate-Capped Blue-Emitting Quantum-Confined CsPbBr ₃ Nanoplatelets. ACS Energy Letters, 2020, 5, 1900-1907.	8.8	82
311	Emission enhancement in singleâ€layer conjugated polymer microcavities. Journal of Applied Physics, 1996, 80, 207-215.	1.1	81
312	A microscopic view of charge transport in polymer transistors. Synthetic Metals, 2004, 146, 297-309.	2.1	81
313	Optically Switchable Smart Windows with Integrated Photovoltaic Devices. Advanced Energy Materials, 2015, 5, 1401347.	10.2	81
314	Excitation Migration along Oligophenylenevinylene-Based Chiral Stacks:Â Delocalization Effects on Transport Dynamics. Journal of Physical Chemistry B, 2005, 109, 10594-10604.	1.2	80
315	Control of morphology in efficient photovoltaic diodes from discotic liquid crystals. Journal of Chemical Physics, 2006, 124, 174704.	1.2	80
316	Subnanosecond Geminate Charge Recombination in Polymer-Polymer Photovoltaic Devices. Physical Review Letters, 2010, 104, 177701.	2.9	79
317	Barium Hydroxide as an Interlayer Between Zinc Oxide and a Luminescent Conjugated Polymer for Lightâ€Emitting Diodes. Advanced Functional Materials, 2012, 22, 4165-4171.	7.8	79
318	Limits for Recombination in a Low Energy Loss Organic Heterojunction. ACS Nano, 2016, 10, 10736-10744.	7.3	79
319	Structural characterisation of a series of acetylide-functionalised oligopyridines and the synthesis, characterisation and optical spectroscopy of platinum di-ynes and poly-ynes containing oligopyridyl linker groups in the backbone. Dalton Transactions RSC, 2002, , 1358-1368.	2.3	78
320	Improved Performance of Perylene-Based Photovoltaic Cells Using Polyisocyanopeptide Arrays. Macromolecules, 2009, 42, 2023-2030.	2.2	78
321	Ion-Induced Formation of Charge-Transfer States in Conjugated Polyelectrolytes. Journal of the American Chemical Society, 2009, 131, 8913-8921.	6.6	78
322	High-Performance Electron-Transporting Polymers Derived from a Heteroaryl Bis(trifluoroborate). Journal of the American Chemical Society, 2011, 133, 9949-9951.	6.6	78
323	Formation of Wellâ€Ordered Heterojunctions in Polymer:PCBM Photovoltaic Devices. Advanced Functional Materials, 2011, 21, 139-146.	7.8	78
324	Temperature―and Voltageâ€Induced Ligand Rearrangement of a Dynamic Electroluminescent Metallopolymer. Angewandte Chemie - International Edition, 2014, 53, 8388-8391.	7.2	77

#	Article	IF	CITATIONS
325	A Silicon–Singlet Fission Tandem Solar Cell Exceeding 100% External Quantum Efficiency with High Spectral Stability. ACS Energy Letters, 2017, 2, 476-480.	8.8	77
326	<i>In situ</i> simultaneous photovoltaic and structural evolution of perovskite solar cells during film formation. Energy and Environmental Science, 2018, 11, 383-393.	15.6	77
327	Efficient and Spectrally Stable Blue Perovskite Lightâ€Emitting Diodes Employing a Cationic Ï€â€Conjugated Polymer. Advanced Materials, 2021, 33, e2103640.	11.1	77
328	Toward Stable and Efficient Perovskite Lightâ€Emitting Diodes. Advanced Functional Materials, 2022, 32, 2109495.	7.8	77
329	Synthesis and optical spectroscopy of platinum-metal-containing di- and tri-acetylenic polymers. Journal of Materials Chemistry, 1991, 1, 485.	6.7	76
330	Efficient blue LEDs from a partially conjugated Si-containing PPV copolymer in a double-layer configuration. Advanced Materials, 1997, 9, 127-131.	11.1	75
331	Comparison of the performance of photonic band-edge liquid crystal lasers using different dyes as the gain medium. Journal of Applied Physics, 2010, 107, .	1.1	75
332	Improved performance of perovskite light-emitting diodes using a PEDOT:PSS and MoO ₃ composite layer. Journal of Materials Chemistry C, 2016, 4, 8161-8165.	2.7	75
333	Site-selective fluorescence studies of poly(p-phenylene vinylene) and its derivatives. Physical Review B, 1996, 53, 15815-15822.	1.1	74
334	Unifying Charge Generation, Recombination, and Extraction in Lowâ€Offset Nonâ€Fullerene Acceptor Organic Solar Cells. Advanced Energy Materials, 2020, 10, 2001203.	10.2	74
335	Light-Emitting Diodes Based on Conjugated Polymers: Control of Colour and Efficiency. Materials Research Society Symposia Proceedings, 1992, 247, 647.	0.1	73
336	De-mixing of Polyfluorene-Based Blends by Contact with Acetone: Electro- and Photo-luminescence Probes. Advanced Materials, 2001, 13, 810-814.	11.1	73
337	Fast exciton diffusion in chiral stacks of conjugatedp-phenylene vinylene oligomers. Physical Review B, 2003, 68, .	1.1	73
338	Long-lived and disorder-free charge transfer states enable endothermic charge separation in efficient non-fullerene organic solar cells. Nature Communications, 2020, 11, 5617.	5.8	73
339	Correlation between conjugation length and non-radiative relaxation rate in poly(p-phenylene) Tj ETQq1 1 0.784 L187-L194.	314 rgBT 1.5	/Overlock 10 72
340	Optical excitations in poly(2,5-thienylene vinylene). Physical Review B, 1990, 41, 10586-10594.	1.1	72
341	Efficient green electroluminescent diodes based on poly (2-dimethyloctylsilyl-1,4-phenylenevinylene). Advanced Materials, 1996, 8, 979-982.	11.1	72
342	Electrical resistivity anomaly in β-MoTe2(metallic behaviour). Journal of Physics C: Solid State Physics, 1978, 11, L103-L105.	1.5	70

#	Article	IF	CITATIONS
343	Electronic Transport Properties of Ensembles of Peryleneâ€Substituted Polyâ€isocyanopeptide Arrays. Advanced Functional Materials, 2008, 18, 3947-3955.	7.8	70
344	Vibrationally Assisted Intersystem Crossing in Benchmark Thermally Activated Delayed Fluorescence Molecules. Journal of Physical Chemistry Letters, 2018, 9, 4053-4058.	2.1	69
345	Synthesis and Photophysics of Fully π-Conjugated Heterobis-Functionalized Polymeric Molecular Wires via Suzuki Chain-Growth Polymerization. Journal of the American Chemical Society, 2012, 134, 17769-17777.	6.6	68
346	Long-Range Charge Extraction in Back-Contact Perovskite Architectures via Suppressed Recombination. Joule, 2019, 3, 1301-1313.	11.7	68
347	Efficient energy transport in an organic semiconductor mediated by transient exciton delocalization. Science Advances, 2021, 7, .	4.7	68
348	Electric Field Distribution in Polymer Light-Emitting Electrochemical Cells. Physical Review Letters, 2000, 85, 421-424.	2.9	67
349	Charge arrier Balance and Color Purity in Polyfluorene Polymer Blends for Blue Lightâ€Emitting Diodes. Advanced Functional Materials, 2012, 22, 144-150.	7.8	67
350	Triplet diffusion in singlet exciton fission sensitized pentacene solar cells. Applied Physics Letters, 2013, 103, .	1.5	67
351	Direct Observation of Photoinduced Bound Charge-Pair States at an Organic-Inorganic Semiconductor Interface. Physical Review Letters, 2012, 108, 246605.	2.9	66
352	Bandgap lowering in mixed alloys of Cs ₂ Ag(Sb _x Bi _{1â^'x})Br ₆ double perovskite thin films. Journal of Materials Chemistry A, 2020, 8, 21780-21788.	5.2	66
353	Photoexcited states in poly(3-alkyl thienylenes). Journal of Physics Condensed Matter, 1990, 2, 5465-5477.	0.7	65
354	Electrical degradation of triarylamine-based light-emitting polymer diodes monitored by micro-Raman spectroscopy. Chemical Physics Letters, 2004, 386, 2-7.	1.2	65
355	Charge Recombination and Exciton Annihilation Reactions in Conjugated Polymer Blends. Journal of the American Chemical Society, 2010, 132, 328-335.	6.6	65
356	Influence of Copolymer Interface Orientation on the Optical Emission of Polymeric Semiconductor Heterojunctions. Physical Review Letters, 2006, 96, 117403.	2.9	64
357	"Helter‣kelterâ€Like―Perylene Polyisocyanopeptides. Chemistry - A European Journal, 2009, 15, 2536-254	471.7	64
358	X-ray stability and response of polymeric photodiodes for imaging applications. Applied Physics Letters, 2008, 92, 023304.	1.5	63
359	All-solution based device engineering of multilayer polymeric photodiodes: Minimizing dark current. Applied Physics Letters, 2009, 94, .	1.5	63
360	Aqueous Self-Assembly of an Electroluminescent Double-Helical Metallopolymer. Journal of the American Chemical Society, 2012, 134, 19170-19178.	6.6	63

#	Article	IF	CITATIONS
361	Nanosecond Intersystem Crossing Times in Fullerene Acceptors: Implications for Organic Photovoltaic Diodes. Advanced Materials, 2014, 26, 4851-4854.	11.1	63
362	Interfacial disorder in efficient polymer solar cells: the impact of donor molecular structure and solvent additives. Journal of Materials Chemistry A, 2017, 5, 24749-24757.	5.2	63
363	Photoexcitation in Durham-route polyacetylene: Self-localization and charge transport. Physical Review B, 1989, 40, 3112-3120.	1.1	62
364	Triplet energy transfer in conjugated polymers. I. Experimental investigation of a weakly disordered compound. Physical Review B, 2008, 78, .	1.1	62
365	Triplet Dynamics in Pentacene Crystals: Applications to Fissionâ€5ensitized Photovoltaics. Advanced Materials, 2014, 26, 919-924.	11.1	62
366	Electroluminescence from Organometallic Lead Halide Perovskiteâ€Conjugated Polymer Diodes. Advanced Electronic Materials, 2015, 1, 1500008.	2.6	62
367	Improved Exciton Dissociation at Semiconducting Polymer:ZnO Donor:Acceptor Interfaces via Nitrogen Doping of ZnO. Advanced Functional Materials, 2014, 24, 3562-3570.	7.8	60
368	Excitation Energy Delocalization and Transfer to Guests within M ^{II} ₄ L ₆ Cage Frameworks. Journal of the American Chemical Society, 2017, 139, 12050-12059.	6.6	60
369	The magnetic susceptibility and EPR of the organic conductors α'-(BEDT-TTF)2X, X=AuBr2, CuCl2and Ag(CN)2. Journal of Physics Condensed Matter, 1989, 1, 5671-5680.	0.7	59
370	First Principles Calculations of Charge Transfer Excitations in Polymer–Fullerene Complexes: Influence of Excess Energy. Advanced Functional Materials, 2015, 25, 1972-1984.	7.8	59
371	Unraveling Mechanisms of Chiral Induction in Double-Helical Metallopolymers. Journal of the American Chemical Society, 2018, 140, 10344-10353.	6.6	59
372	Best practices for measuring emerging light-emitting diode technologies. Nature Photonics, 2019, 13, 818-821.	15.6	59
373	Highly Absorbing Lead-Free Semiconductor Cu ₂ AgBil ₆ for Photovoltaic Applications from the Quaternary Cul–Agl–Bil ₃ Phase Space. Journal of the American Chemical Society, 2021, 143, 3983-3992.	6.6	59
374	Formation of the accumulation layer in polymer field-effect transistors. Applied Physics Letters, 2003, 82, 1482-1484.	1.5	58
375	Exciton trapping at heterojunctions in polymer blends. Journal of Chemical Physics, 2005, 122, 244906.	1.2	58
376	Probing the Morphology and Energy Landscape of Blends of Conjugated Polymers with Sub-10Ânm Resolution. Physical Review Letters, 2008, 101, 016102.	2.9	57
377	Control of Intrachain Charge Transfer in Model Systems for Block Copolymer Photovoltaic Materials. Journal of the American Chemical Society, 2013, 135, 5074-5083.	6.6	57
378	Suppressing Recombination in Polymer Photovoltaic Devices via Energy‣evel Cascades. Advanced Materials, 2013, 25, 4131-4138.	11.1	57

#	Article	IF	CITATIONS
379	A Highly Emissive Surface Layer in Mixedâ€Halide Multication Perovskites. Advanced Materials, 2019, 31, e1902374.	11.1	57
380	Endothermic exciplex–exciton energy-transfer in a blue-emitting polymeric heterojunction system. Chemical Physics Letters, 2004, 391, 81-84.	1.2	56
381	Control of Rapid Formation of Interchain Excited States in Sugarâ€Threaded Supramolecular Wires. Advanced Materials, 2008, 20, 3218-3223.	11.1	56
382	Collective osmotic shock in ordered materials. Nature Materials, 2012, 11, 53-57.	13.3	56
383	Conjugated Polyelectrolytes as Efficient Hole Transport Layers in Perovskite Light-Emitting Diodes. ACS Nano, 2018, 12, 5826-5833.	7.3	56
384	The pressure dependence of the transport properties of YBa2Cu3O7-δ. Journal of Physics C: Solid State Physics, 1988, 21, L345-L352.	1.5	55
385	Förster energy transfer and control of the luminescence in blends of an orangeÂemitting poly(pÂphenylenevinylene) and a redÂemitting tetraphenylporphyrin. Journal of Materials Chemistry, 2001, 11, 278-283.	6.7	55
386	Efficient light harvesting in a photovoltaic diode composed of a semiconductor conjugated copolymer blend. Applied Physics Letters, 2002, 80, 2204-2206.	1.5	55
387	Opticallyâ€Pumped Lasing in Hybrid Organic–Inorganic Lightâ€Emitting Diodes. Advanced Functional Materials, 2009, 19, 2130-2136.	7.8	55
388	Hybrid pentacene/a-silicon solar cells utilizing multiple carrier generation via singlet exciton fission. Applied Physics Letters, 2012, 101, .	1.5	54
389	Light-emitting devices based on a poly(p-phenylene vinylene) derivative with ion-coordinating side groups. Journal of Applied Physics, 1999, 86, 6392-6395.	1.1	53
390	Controlled Phase Separation of Polyfluorene Blends via Inkjet Printing. Macromolecules, 2005, 38, 6466-6471.	2.2	52
391	The Relationship between Nanoscale Architecture and Charge Transport in Conjugated Nanocrystals Bridged by Multichromophoric Polymers. Journal of the American Chemical Society, 2009, 131, 7055-7063.	6.6	52
392	Enhancing Phase Separation and Photovoltaic Performance of All-Conjugated Donor–Acceptor Block Copolymers with Semifluorinated Alkyl Side Chains. Macromolecules, 2015, 48, 7851-7860.	2.2	52
393	On the Effect of Prevalent Carbazole Homocoupling Defects on the Photovoltaic Performance of PCDTBT:PC ₇₁ BM Solar Cells. Advanced Energy Materials, 2016, 6, 1601232.	10.2	52
394	Regioisomer effects of [70]fullerene mono-adduct acceptors in bulk heterojunction polymer solar cells. Chemical Science, 2017, 8, 181-188.	3.7	52
395	Synthesis and characterisation of new acetylide-functionalised aromatic and hetero-aromatic ligands and their dinuclear platinum complexes. Dalton Transactions, 2003, , 65-73.	1.6	51
396	Thin-film ZnO/Cu2O solar cells incorporating an organic buffer layer. Solar Energy Materials and Solar Cells, 2012, 96, 148-154.	3.0	51

#	Article	IF	CITATIONS
397	Synthesis, characterisation and electronic properties of a series of platinum(ii) poly-ynes containing novel thienyl-pyridine linker groups. Dalton Transactions RSC, 2002, , 2441-2448.	2.3	50
398	Organic Thin Film Photovoltaic Devices from Discotic Materials. Molecular Crystals and Liquid Crystals, 2003, 396, 73-90.	0.4	50
399	Surfaceâ€Directed Phase Separation of Conjugated Polymer Blends for Efficient Lightâ€Emitting Diodes. Advanced Functional Materials, 2008, 18, 2897-2904.	7.8	50
400	Increased <i>T</i> _c in Electrolyteâ€Gated Cuprates. Advanced Materials, 2010, 22, 2529-2533.	11.1	50
401	Local Versus Longâ€Range Diffusion Effects of Photoexcited States on Radiative Recombination in Organic–Inorganic Lead Halide Perovskites. Advanced Science, 2015, 2, 1500136.	5.6	50
402	Synthesis and optical characterisation of platinum(ii) poly-yne polymers incorporating substituted 1,4-diethynylbenzene derivatives and an investigation of the intermolecular interactions in the diethynylbenzene molecular precursorsElectronic supplementary information (ESI) available: atomic cooordinates for 6 and 7. See http://www.rsc.org/suppdata/nj/b2/b206946f/. New Journal of Chemistry,	1.4	49
403	2003, 27, 140-149. Efficient non-fullerene organic solar cells employing sequentially deposited donor–acceptor layers. Journal of Materials Chemistry A, 2018, 6, 18225-18233.	5.2	49
404	Effects of aggregation on the excitation transfer in perylene-end-capped polyindenofluorene studied by time-resolved photoluminescence spectroscopy. Physical Review B, 2001, 64, .	1.1	48
405	Influence of the Casting Solvent on the Thermotropic Alignment of Thin Liquid Crystalline Polyfluorene Copolymer Films. Macromolecules, 2004, 37, 6079-6085.	2.2	48
406	Structural and electronic properties of Cs(Pd(dmit)2)2. Journal of Physics Condensed Matter, 1991, 3, 933-954.	0.7	47
407	Enhanced Photoresponse in Solid-State Excitonic Solar Cells via Resonant Energy Transfer and Cascaded Charge Transfer from a Secondary Absorber. Nano Letters, 2010, 10, 4981-4988.	4.5	47
408	In Situ Atmospheric Deposition of Ultrasmooth Nickel Oxide for Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 41849-41854.	4.0	47
409	Efficient green lightâ€emitting diodes from a phenylated derivative of poly(pâ€phenylene–vinylene). Applied Physics Letters, 1996, 69, 3794-3796.	1.5	46
410	High-mobility conjugated polymer field-effect transistors. , 1999, , 101-110.		46
411	Self-Organized Photonic Structures in Polymer Light-Emitting Diodes. Advanced Materials, 2004, 16, 1908-1912.	11.1	46
412	Donor–acceptor interface modification by zwitterionic conjugated polyelectrolytes in polymer photovoltaics. Energy and Environmental Science, 2013, 6, 1589.	15.6	46
413	Compatibilization of All-Conjugated Polymer Blends for Organic Photovoltaics. ACS Nano, 2016, 10, 8087-8096.	7.3	46
414	Triple-Cation-Based Perovskite Photocathodes with AZO Protective Layer for Hydrogen Production Applications. ACS Applied Materials & amp; Interfaces, 2019, 11, 23198-23206.	4.0	46

#	Article	IF	CITATIONS
415	Device Performance of Small-Molecule Azomethine-Based Bulk Heterojunction Solar Cells. Chemistry of Materials, 2015, 27, 2990-2997.	3.2	45
416	Degradation Kinetics of Inverted Perovskite Solar Cells. Scientific Reports, 2018, 8, 5977.	1.6	44
417	Femtosecond visualization of oxygen vacancies in metal oxides. Science Advances, 2020, 6, eaax9427.	4.7	44
418	Localized phonons associated with solitons in polyacetylene: Coupling to the nonuniform mode. Physical Review B, 1987, 36, 7537-7541.	1.1	43
419	Spin signatures of exchange-coupled triplet pairs formed by singlet fission. Physical Review B, 2016, 94,	1.1	43
420	Charge Carrier Localization in Doped Perovskite Nanocrystals Enhances Radiative Recombination. Journal of the American Chemical Society, 2021, 143, 8647-8653.	6.6	43
421	Analysis of the turn-off dynamics in polymer light-emitting diodes. Applied Physics Letters, 2000, 76, 1137-1139.	1.5	42
422	Exciton and polaron dynamics in a step-ladder polymeric semiconductor: the influence of interchain order. Journal of Physics Condensed Matter, 2002, 14, 9803-9824.	0.7	42
423	Photovoltaic Performance and Morphology of Polyfluorene Blends:Â The Influence of Phase Separation Evolution. Macromolecules, 2006, 39, 5393-5399.	2.2	42
424	Amplified Spontaneous Emission of Poly(ladderâ€ŧype phenylene)s – The Influence of Photophysical Properties on ASE Thresholds. Advanced Functional Materials, 2008, 18, 3265-3275.	7.8	42
425	Phase-Separated Thin Film Structures for Efficient Polymer Blend Light-Emitting Diodes. Nano Letters, 2010, 10, 385-392.	4.5	41
426	Measurement of thermal modulation of optical absorption in pump-probe spectroscopy of semiconducting polymers. Applied Physics Letters, 2011, 98, 223304.	1.5	41
427	Electrical conductivity and charge density wave formation in 4HbTaS2under pressure. Journal of Physics C: Solid State Physics, 1977, 10, 1013-1025.	1.5	40
428	Ï€-electronic and electrical transport properties of conjugated polymer nanocomposites: Poly(p-phenylenevinylene) with homogeneously dispersed silica nanoparticles. Journal of Chemical Physics, 2002, 116, 6782-6794.	1.2	40
429	Anisotropic optical properties in electroluminescent conjugated polymers based on grazing angle photoluminescence measurements. Journal of Chemical Physics, 2006, 124, 184706.	1.2	40
430	Effect of Temperature and Chain Length on the Bimodal Emission Properties of Single Polyfluorene Copolymer Moleculesâ€. Journal of Physical Chemistry B, 2006, 110, 18898-18903.	1.2	40
431	Correlation of Heterojunction Luminescence Quenching and Photocurrent in Polymerâ€Blend Photovoltaic Diodes. Advanced Materials, 2009, 21, 3924-3927.	11.1	40
432	Interface-Dependent Radiative and Nonradiative Recombination in Perovskite Solar Cells. Journal of Physical Chemistry C, 2018, 122, 10691-10698.	1.5	40

#	Article	IF	CITATIONS
433	Crystal Structure and Magnetism of (BEDT-TTF)2MCl4 (BEDT-TTF =) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	50 742 Td	(Big(ethylene
434	Macromolecular Scaffolding: The Relationship Between Nanoscale Architecture and Function in Multichromophoric Arrays for Organic Electronics. Advanced Materials, 2010, 22, E81-8.	11.1	39
435	Site-selective measurement of coupled spin pairs in an organic semiconductor. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5077-5082.	3.3	39
436	Understanding the Role of Grain Boundaries on Chargeâ€Carrier and Ion Transport in Cs ₂ AgBiBr ₆ Thin Films. Advanced Functional Materials, 2021, 31, 2104981.	7.8	39
437	Increase in chain conjugation length in highly oriented Durham-route polyacetylene. Journal of Physics C: Solid State Physics, 1985, 18, L283-L289.	1.5	38
438	Synthesis and material and electronic properties of conjugated polymers. Journal of Materials Science, 1990, 25, 3796-3805.	1.7	38
439	In situ identification of a luminescence quencher in an organic light-emitting device. Journal of Materials Chemistry, 2007, 17, 76-81.	6.7	38
440	Investigation into the Phosphorescence of a Series of Regioisomeric Iridium(III) Complexes. Organometallics, 2008, 27, 2980-2989.	1.1	38
441	Time-Evolution of Poly(3-Hexylthiophene) as an Energy Relay Dye in Dye-Sensitized Solar Cells. Nano Letters, 2012, 12, 634-639.	4.5	38
442	Excitons and charges at organic semiconductor heterojunctions. Faraday Discussions, 2012, 155, 339-348.	1.6	38
443	Infra-red studies of TiSe ₂ : IR phonons and free carriers. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1979, 39, 133-146.	0.6	37
444	Trap-assisted hole injection and quantum efficiency enhancement in poly(9,9′) Tj ETQq0 0 0 rgBT /Overlock 1 96, 7643-7649.	0 Tf 50 30 1.1	7 Td (dioctylf 37
445	Morphological dependence of charge generation and transport in blended polyfluorene photovoltaic devices. Thin Solid Films, 2004, 451-452, 567-571.	0.8	37
446	Electric field-induced transition from heterojunction to bulk charge recombination in bilayer polymer light-emitting diodes. Applied Physics Letters, 2005, 86, 163501.	1.5	37
447	Tunable Charge Transport Using Supramolecular Self-Assembly of Nanostructured Crystalline Block Copolymers. ACS Nano, 2011, 5, 3506-3515.	7.3	37
448	How disorder controls the kinetics of triplet charge recombination in semiconducting organic polymer photovoltaics. Physical Chemistry Chemical Physics, 2014, 16, 20321-20328.	1.3	37
449	High-pressure transport measurements of α'-BEDT-TTF salts. Journal of Physics Condensed Matter, 1989, 1, 5681-5688.	0.7	36
450	Crystal and electronic structures and electrical, magnetic, and optical properties of two copper tetrahalide salts of bis(ethylenedithio)-tetrathiafulvalene. Physical Review B, 1994, 50, 2118-2127.	1.1	36

#	Article	IF	CITATIONS
451	Luminescence properties of poly(p-phenylenevinylene): Role of the conversion temperature on the photoluminescence and electroluminescence efficiencies. Journal of Applied Physics, 1999, 85, 1784-1791.	1.1	36
452	Influence of Side Chains on Geminate and Bimolecular Recombination in Organic Solar Cells. Journal of Physical Chemistry C, 2011, 115, 25046-25055.	1.5	36
453	Improved electron injection in poly(9,9′-dioctylfluorene)- co-benzothiodiazole via cesium carbonate by means of coannealing. Applied Physics Letters, 2011, 98, 113306.	1.5	36
454	Structure formation in P3HT/F8TBT blends. Energy and Environmental Science, 2014, 7, 1725-1736.	15.6	36
455	Improved Performance of ZnO/Polymer Hybrid Photovoltaic Devices by Combining Metal Oxide Doping and Interfacial Modification. Journal of Physical Chemistry C, 2014, 118, 18945-18950.	1.5	36
456	Air-Stable <i>n</i> -channel Diketopyrrolopyrroleâ~'Diketopyrrolopyrrole Oligomers for High Performance Ambipolar Organic Transistors. ACS Applied Materials & Interfaces, 2016, 8, 25415-25427.	4.0	36
457	Sequentially Deposited versus Conventional Nonfullerene Organic Solar Cells: Interfacial Trap States, Vertical Stratification, and Exciton Dissociation. Advanced Energy Materials, 2019, 9, 1902145.	10.2	36
458	Minimizing the Trade-Off between Photocurrent and Photovoltage in Triple-Cation Mixed-Halide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 10188-10195.	2.1	36
459	Impact of exciton delocalization on exciton-vibration interactions in organic semiconductors. Physical Review B, 2020, 102, .	1.1	36
460	High-pressure transport properties of TiS2and TiSe2. Journal of Physics C: Solid State Physics, 1982, 15, 2183-2192.	1.5	35
461	Mechanism for photogeneration of metastable charged solitons in polyacetylene. Physical Review B, 1988, 38, 3960-3965.	1.1	35
462	Large-area two-dimensional photonic crystals of metallic nanocylinders based on colloidal gold nanoparticles. Applied Physics Letters, 2007, 90, 133114.	1.5	35
463	To branch or not to branch: C–H selectivity of thiophene-based donor–acceptor–donor monomers in direct arylation polycondensation exemplified by PCDTBT. Polymer Chemistry, 2017, 8, 4738-4745.	1.9	35
464	A new low-dimensional metal, Cs[Pd(S2C2(CN)2)2]·0.5 H2O. Nature, 1986, 324, 547-549.	13.7	34
465	Electron spin resonance and electron nuclear double resonance of photogenerated polarons in polyfluorene and its fullerene composite. Physical Review B, 2009, 79, .	1.1	34
466	Tuning the electronic coupling in a low-bandgap donor–acceptor copolymer via the placement of side-chains. Journal of Chemical Physics, 2011, 134, 114901.	1.2	34
467	Förster Resonance Energy Transfer Drives Higher Efficiency in Ternary Blend Organic Solar Cells. ACS Applied Energy Materials, 2018, 1, 4874-4882.	2.5	34
468	Nonlithographic patterning through inkjet printing via holes. Applied Physics Letters, 2007, 90, 253513.	1.5	33

#	Article	IF	CITATIONS
469	Charge-transfer character of excitons in poly[2,7-(9,9-di-n-octylfluorene)(1â°'x)-co-4,7-(2,1,3-benzothiadiazole)(x)]. Journal of Chemical Physics, 2009, 131, 035104.	1.2	33
470	Tuning interchain and intrachain interactions in polyfluorene copolymers. Physical Review B, 2011, 84,	1.1	33
471	Inâ€Situ Switching from Barrierâ€Limited to Ohmic Anodes for Efficient Organic Optoelectronics. Advanced Functional Materials, 2014, 24, 3051-3058.	7.8	33
472	Interface limited charge extraction and recombination in organic photovoltaics. Energy and Environmental Science, 2014, 7, 2227.	15.6	33
473	A new blue light emitting and electrochromic polyfluorene derivative for display applications. Organic Electronics, 2014, 15, 500-508.	1.4	33
474	Vertical Cavity Biexciton Lasing in 2D Dodecylammonium Lead Iodide Perovskites. Advanced Optical Materials, 2018, 6, 1800616.	3.6	33
475	Stabilisation of the metallic state at low temperatures in HMTTF-TCNQ under pressure. Journal of Physics C: Solid State Physics, 1978, 11, 263-275.	1.5	32
476	Polarization dependence of transient photoconductivity intrans-polyacetylene. Physical Review B, 1987, 36, 4296-4300.	1.1	32
477	Role ofÎ-Hole-Doped Interfaces at Ohmic Contacts to Organic Semiconductors. Physical Review Letters, 2009, 103, 036601.	2.9	32
478	High Quality Hybrid Perovskite Semiconductor Thin Films with Remarkably Enhanced Luminescence and Defect Suppression via Quaternary Alkyl Ammonium Salt Based Treatment. Advanced Materials Interfaces, 2017, 4, 1700562.	1.9	32
479	Ligand Shell Structure in Lead Sulfide–Oleic Acid Colloidal Quantum Dots Revealed by Small-Angle Scattering. Journal of Physical Chemistry Letters, 2019, 10, 4713-4719.	2.1	32
480	Halide Homogenization for High-Performance Blue Perovskite Electroluminescence. Research, 2020, 2020, 9017871.	2.8	32
481	Microcavity-like exciton-polaritons can be the primary photoexcitation in bare organic semiconductors. Nature Communications, 2021, 12, 6519.	5.8	32
482	Transport properties of LixTiS2(O<ï‡<1): a metal with a tunable Fermi level. Journal of Physics C: Solid State Physics, 1987, 20, 4169-4179.	1.5	31
483	Direct Evidence for the Role of the Madelung Potential in Determining the Work Function of Doped Organic Semiconductors. Physical Review Letters, 2009, 102, 096602.	2.9	31
484	Correlation between Photovoltaic Performance and Interchain Ordering Induced Delocalization of Electronics States in Conjugated Polymer Blends. ACS Applied Materials & (Interfaces, 2016, 8, 20243-20250.	4.0	31
485	Organic double-gate field-effect transistors: Logic-AND operation. Applied Physics Letters, 2005, 87, 253512.	1.5	30
486	Polymer bilayer structure via inkjet printing. Applied Physics Letters, 2006, 88, 163508.	1.5	30

#	Article	lF	CITATIONS
487	Recombination Dynamics of Charge Pairs in a Push–Pull Polyfluorene-Derivative. Journal of Physical Chemistry B, 2013, 117, 4649-4653.	1.2	30
488	Fluorescence scanning nearâ€field optical microscopy of polyfluorene composites. Journal of Microscopy, 2001, 202, 433-438.	0.8	29
489	Poly(9,9â€dioctylfluorene)â€Based Conjugated Polyelectrolyte: Extended Ï€â€Electron Conjugation Induced by Complexation with a Surfactant Zwitterion. Advanced Materials, 2010, 22, 2073-2077.	11.1	29
490	Dielectric switching of the nature of excited singlet state in a donor-acceptor-type polyfluorene copolymer. Physical Review B, 2010, 81, .	1.1	29
491	Compositional and Morphological Studies of Polythiophene/Polyflorene Blends in Inverted Architecture Hybrid Solar Cells. Advanced Functional Materials, 2012, 22, 2418-2424.	7.8	29
492	Extrinsic Electron Concentration in SnO ₂ Electron Extracting Contact in Lead Halide Perovskite Solar Cells. Advanced Materials Interfaces, 2019, 6, 1801788.	1.9	29
493	Excited-state absorption in luminescent conjugated polymer thin films: ultrafast studies of processable polyindenofluorene derivatives. Chemical Physics Letters, 2000, 319, 494-500.	1.2	28
494	Polarization anisotropy dynamics for thin films of a conjugated polymer aligned by nanoimprinting. Physical Review B, 2008, 77, .	1.1	28
495	Synthesis and characterization of low bandgap conjugated donor–acceptor polymers for polymer:PCBM solar cells. Journal of Materials Chemistry, 2010, 20, 9231.	6.7	28
496	Spin-dependent recombination probed through the dielectric polarizability. Nature Communications, 2015, 6, 8534.	5.8	28
497	Is the Chemical Strategy for Imbuing "Polyene―Character in Diketopyrrolopyrrole-Based Chromophores Sufficient for Singlet Fission?. Journal of Physical Chemistry Letters, 2017, 8, 984-991.	2.1	28
498	Elucidating and Mitigating Degradation Processes in Perovskite Lightâ€Emitting Diodes. Advanced Energy Materials, 2020, 10, 2002676.	10.2	28
499	Beyond 17% stable perovskite solar module via polaron arrangement of tuned polymeric hole transport layer. Nano Energy, 2021, 82, 105685.	8.2	28
500	An optical study of the arsenic pentafluoride doping of poly(p-phenylene sulphide): polaron and bipolaron transitions. Journal of the Chemical Society Chemical Communications, 1984, , 1101.	2.0	27
501	Electronic properties of HfTe2. Journal of Physics C: Solid State Physics, 1986, 19, 4953-4963.	1.5	27
502	Tuning the wavelength of lasing emission in organic semiconducting laser by the orientation of liquid crystalline conjugated polymer. Journal of Applied Physics, 2008, 104, .	1.1	27
503	Polymer Crystallization as a Tool To Pattern Hybrid Nanostructures: Growth of 12 nm ZnO Arrays in Poly(3-hexylthiophene). Nano Letters, 2013, 13, 4499-4504.	4.5	27
504	Mapping Morphological and Structural Properties of Lead Halide Perovskites by Scanning Nanofocus XRD. Advanced Functional Materials, 2016, 26, 8221-8230.	7.8	27

#	Article	IF	CITATIONS
505	How Exciton Interactions Control Spin-Depolarization in Layered Hybrid Perovskites. Nano Letters, 2020, 20, 5678-5685.	4.5	27
506	Singlet and triplet to doublet energy transfer: improving organic light-emitting diodes with radicals. Nature Communications, 2022, 13, 2744.	5.8	27
507	(BEDT-TTF)2CuCl2, a new conducting charge transfer salt. Synthetic Metals, 1988, 22, 415-418.	2.1	26
508	Pressure dependence of the transport properties of the molecular superconductor, κ-(BEDT) Tj ETQq0 0 0 rgBT /(Overlock 1 0.7	0 Tf 50 622 ⁻ 26
509	Morphology-Dependent Charge Photogeneration in Donor–Acceptor Block Copolymer Films Based on Poly(3-hexylthiophene)- <i>bloc<i>k</i></i> Poly(perylene bisimide acrylate). Journal of Physical Chemistry B, 2012, 116, 10070-10078.	1.2	26
510	A nanoimprinted, optically tuneable organic laser. Applied Physics Letters, 2012, 100, .	1.5	26
511	White-light bias external quantum efficiency measurements of standard and inverted P3HT : PCBM photovoltaic cells. Journal Physics D: Applied Physics, 2012, 45, 415101.	1.3	26
512	Liquid crystalline chromophores for photonic band-edge laser devices. Optical Materials, 2013, 35, 837-842.	1.7	26
513	PCDTBT: From Polymer Photovoltaics to Light-Emitting Diodes by Side-Chain-Controlled Luminescence. Macromolecules, 2016, 49, 9382-9387.	2.2	26
514	FRET-mediated near infrared whispering gallery modes: studies on the relevance of intracavity energy transfer with <i>Q</i> -factors. Materials Chemistry Frontiers, 2018, 2, 270-274.	3.2	26
515	Singlet exciton fission in a modified acene with improved stability and high photoluminescence yield. Nature Communications, 2021, 12, 1527.	5.8	26
516	Transport and magnetic properties of Ag1/3TiS2. Journal of Physics C: Solid State Physics, 1987, 20, 271-276.	1.5	25
517	Ultrafast charge photogeneration in conjugated polymer thin films. Synthetic Metals, 2001, 116, 9-13.	2.1	25
518	Engineering Schottky Contacts in Open-Air Fabricated Heterojunction Solar Cells to Enable High Performance and Ohmic Charge Transport. ACS Applied Materials & Interfaces, 2014, 6, 22192-22198.	4.0	25
519	Visualizing the Vertical Energetic Landscape in Organic Photovoltaics. Joule, 2019, 3, 2513-2534.	11.7	25
520	Efficient Energy Funneling in Spatially Tailored Segmented Conjugated Block Copolymer Nanofiber–Quantum Dot or Rod Conjugates. Journal of the American Chemical Society, 2021, 143, 7032-7041.	6.6	25
521	Oligoethyleneoxide functionalised sexithiophene organic field effect transistors. Synthetic Metals, 2003, 137, 885-886.	2.1	24
522	Tuning Interfacial Charge-Transfer Excitons at Polymer-Polymer Heterojunctions under Hydrostatic Pressure. Physical Review Letters, 2008, 100, 157401.	2.9	24

#	Article	IF	CITATIONS
523	Improved fill factors in solution-processed ZnO/Cu2O photovoltaics. Thin Solid Films, 2013, 536, 280-285.	0.8	24
524	Efficient blue–green light emitting poly(1,4-phenylene vinylene) copolymers. Chemical Communications, 2000, , 291-292.	2.2	23
525	Grazing emitted light from films of derivative polymer of polyfluorene. Synthetic Metals, 2000, 111-112, 583-586.	2.1	23
526	Multichromophoric Phthalocyanine–(Perylenediimide) ₈ Molecules: A Photophysical Study. Chemistry - A European Journal, 2010, 16, 10021-10029.	1.7	23
527	The Influence of Sideâ€Chain Position on the Optoelectronic Properties of a Redâ€Emitting Conjugated Polymer. Macromolecular Chemistry and Physics, 2013, 214, 967-974.	1.1	23
528	On the energetics of bound charge-transfer states in organic photovoltaics. Journal of Materials Chemistry A, 2017, 5, 11949-11959.	5.2	23
529	Direct Bandgap Behavior in Rashbaâ€∓ype Metal Halide Perovskites. Advanced Materials, 2018, 30, e1803379.	11.1	23
530	Efficient and Tunable Electroluminescence from In Situ Synthesized Perovskite Quantum Dots. Small, 2019, 15, e1804947.	5.2	23
531	Femtosecond Transient Absorption Microscopy of Singlet Exciton Motion in Side-Chain Engineered Perylene-Diimide Thin Films. Journal of Physical Chemistry A, 2020, 124, 2721-2730.	1.1	23
532	Electro-Optic Properties of Precursor Route Poly(arylene vinylene) Polymers. Springer Series in Solid-state Sciences, 1992, , 304-309.	0.3	23
533	Ultralow-voltage operation of light-emitting diodes. Nature Communications, 2022, 13, .	5.8	23
534	Pressure-Induced Delocalization of Photoexcited States in a Semiconducting Polymer. Physical Review Letters, 2010, 105, 195501.	2.9	22
535	Effective work functions for the evaporated metal/organic semiconductor contacts from in-situ diode flatband potential measurements. Applied Physics Letters, 2012, 101, 013501.	1.5	22
536	Influence of an Inorganic Interlayer on Exciton Separation in Hybrid Solar Cells. ACS Nano, 2015, 9, 11863-11871.	7.3	22
537	Singlet exciton fission via an intermolecular charge transfer state in coevaporated pentacene-perfluoropentacene thin films. Journal of Chemical Physics, 2019, 151, 164706.	1.2	22
538	Geminate and Nongeminate Pathways for Triplet Exciton Formation in Organic Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	22
539	Role of PbSe Structural Stabilization in Photovoltaic Cells. Advanced Functional Materials, 2015, 25, 928-935.	7.8	21
540	Ultrafast Dynamics of Polariton Cooling and Renormalization in an Organic Single-Crystal Microcavity under Nonresonant Pumping. ACS Photonics, 2018, 5, 2182-2188.	3.2	21

#	ARTICLE	IF	CITATIONS
541	Transport and Raman studies of the group iv layered compounds and their lithium intercalates: Li _x TiS ₂ , Li _x TiSe ₂ , Li _x , Li _x , Li ₂ , Li _x and Li _x HfSe ₂ . The Philosophical Magazine: Physics of Condensed Matter B,	0.6	20
542	Monovalent Cation Doping of CH ₃ NH ₃ PbI ₃ for Efficient Perovskite Solar Cells. Journal of Visualized Experiments, 2017, , .	0.2	20
543	Excimer Formation in Carboxylic Acid-Functionalized Perylene Diimides Attached to Silicon Dioxide Nanoparticles. Journal of Physical Chemistry C, 2019, 123, 3433-3440.	1.5	20
544	Conformational defects in Durham polyacetylene: photo-induced IR absorption. Journal of Physics C: Solid State Physics, 1987, 20, 6013-6023.	1.5	19
545	Polarization of singlet and triplet excited states in a platinum-containing conjugated polymer. Physical Review B, 2003, 67, .	1.1	19
546	Negative Correlation between Intermolecular vs Intramolecular Disorder in Bulk-Heterojunction Organic Solar Cells. ACS Applied Materials & amp; Interfaces, 2018, 10, 44576-44582.	4.0	19
547	Electrical conductivity in polymeric sulphur nitride at high pressures. Journal of Physics C: Solid State Physics, 1977, 10, 1001-1012.	1.5	18
548	Neutral photo-excitations in oriented polyacetylene. Journal of Physics C: Solid State Physics, 1987, 20, 4221-4228.	1.5	18
549	New luminescent polymers for leds and LECS. Macromolecular Symposia, 1998, 125, 111-120.	0.4	18
550	Polymers show they're metal. Nature, 2006, 441, 37-37.	13.7	18
551	Recent Advances in Hybrid Optoelectronics. Israel Journal of Chemistry, 2012, 52, 496-517.	1.0	18
552	Spontaneous exciton dissociation enables spin state interconversion in delayed fluorescence organic semiconductors. Nature Communications, 2021, 12, 6640.	5.8	18
553	The transport properties of hydrazine-intercalated TiSe2. Journal of Physics C: Solid State Physics, 1982, 15, 4367-4378.	1.5	17
554	Transport and optical properties of the hydrazine intercalation complexes of TiS2, TiSe2and ZrS2. Journal of Physics C: Solid State Physics, 1987, 20, 4181-4200.	1.5	17
555	Sequential absorption processes in two-photon-excitation transient absorption spectroscopy in a semiconductor polymer. Physical Review B, 2006, 73, .	1.1	17
556	Monte Carlo Simulation of Exciton Bimolecular Annihilation Dynamics in Supramolecular Semiconductor Architectures. Journal of Physical Chemistry C, 2007, 111, 19111-19119.	1.5	17
557	Efficiency limitations in a low band-gap diketopyrrolopyrrole-based polymer solar cell. Physical Chemistry Chemical Physics, 2014, 16, 6743-6752.	1.3	17
558	Role of Morphology and Förster Resonance Energy Transfer in Ternary Blend Organic Solar Cells. ACS Applied Energy Materials, 2020, 3, 12025-12036.	2.5	17

#	Article	IF	CITATIONS
559	Suppressing aggregation induced quenching in anthracene based conjugated polymers. Polymer Chemistry, 2021, 12, 1830-1836.	1.9	17
560	Thickness-Attuned CsPbBr ₃ Nanosheets with Enhanced <i>p</i> -Type Field Effect Mobility. Journal of Physical Chemistry Letters, 2021, 12, 1560-1566.	2.1	17
561	Design of an alternating current source for resistivity and Hall effect measurements. Journal of Physics E: Scientific Instruments, 1980, 13, 294-297.	0.7	16
562	Transport and optical properties of the hydrazine intercalation complexes of 1T-TaS2. Journal of Physics C: Solid State Physics, 1982, 15, 477-493.	1.5	16
563	Temperature measurement in high pressure cells using a rhodium +0.5% iron-chromel thermocouple pair. Journal of Physics E: Scientific Instruments, 1986, 19, 430-433.	0.7	16
564	Solution-processed niobium diselenide as conductor and anode for polymer light-emitting diodes. Applied Physics Letters, 2003, 82, 1123-1125.	1.5	16
565	Charge recombination in distributed heterostructures of semiconductor discotic and polymeric materials Journal of Applied Physics, 2008, 103, 124510.	1.1	16
566	Direct Evidence for Delocalization of Charge Carriers at the Fermi Level in a Doped Conducting Polymer. Physical Review Letters, 2008, 100, 186601.	2.9	16
567	Probing thin-film morphology of conjugated polymers by Raman spectroscopy. Journal of Applied Physics, 2010, 107, 024902.	1.1	16
568	Sequential Energy and Electron Transfer in Polyisocyanopeptide-Based Multichromophoric Arrays. Journal of Physical Chemistry B, 2011, 115, 1590-1600.	1.2	16
569	Roomâ€Temperature Phase Demixing in Bulk Heterojunction Layers of Solutionâ€Processed Organic Photodetectors: the Effect of Active Layer Ageing on the Device Electroâ€optical Properties. Advanced Functional Materials, 2011, 21, 1355-1363.	7.8	16
570	A facile low temperature route to deposit a TiO2 scattering layer for efficient dye-sensitized solar cells. RSC Advances, 2016, 6, 70895-70901.	1.7	16
571	Zinc tin oxide thin film transistors produced by a high rate reactive sputtering: Effect of tin composition and annealing temperatures. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600470.	0.8	16
572	Kinetic Control of Perovskite Thin-Film Morphology and Application in Printable Light-Emitting Diodes. ACS Energy Letters, 2017, 2, 81-87.	8.8	16
573	Wavelength-Dependent Charge Carrier Dynamics for Single Pixel Color Sensing Using Graded Perovskite Structures. Nano Letters, 2019, 19, 6577-6584.	4.5	16
574	Synthesis of porphyrin-PPV copolymers for application in LEDs. Journal of Materials Science: Materials in Electronics, 2000, 11, 97-103.	1.1	15
575	34.1: Active Matrix Displays Made with Printed Polymer Thin Film Transistors. Digest of Technical Papers SID International Symposium, 2003, 34, 1084.	0.1	15
576	The effects of supramolecular assembly on exciton decay rates in organic semiconductors. Journal of Chemical Physics, 2005, 123, 084902.	1.2	15

#	Article	IF	CITATIONS
577	Molecular aggregation method for perovskite–fullerene bulk heterostructure solar cells. Journal of Materials Chemistry A, 2020, 8, 1326-1334.	5.2	15
578	Polymer Light Emitting Diodes with Doublet Emission. Journal of Physical Chemistry Letters, 2020, 11, 5638-5642.	2.1	15
579	Deoxyribonucleic Acid Encoded and Size-Defined π-Stacking of Perylene Diimides. Journal of the American Chemical Society, 2022, 144, 368-376.	6.6	15
580	Magnetic properties of the organic superconductor β(BEDT-TTF)2AuI2. Journal of Physics C: Solid State Physics, 1986, 19, L383-L388.	1.5	14
581	Polymers from the Soviet Union. Nature, 1987, 326, 335-335.	13.7	14
582	Highly-efficient broadband waveguide outcoupling in light-emitting diodes with self-organized polymer blends. Applied Physics Letters, 2004, 85, 2965-2967.	1.5	14
583	The use of electrical pulses to study the physics of bilayer organic light-emitting diodes. Journal of Applied Physics, 2005, 97, 014504.	1.1	14
584	Multiphoton excited photoconductivity in polyfluorene. Physical Review B, 2007, 75, .	1.1	14
585	Dark Subgap States in Metal-Halide Perovskites Revealed by Coherent Multidimensional Spectroscopy. Journal of the American Chemical Society, 2020, 142, 777-782.	6.6	14
586	Electrically Induced Mixed Valence Increases the Conductivity of Copper Helical Metallopolymers. Advanced Materials, 2021, 33, e2100403.	11.1	14
587	The effect of irradiation of polymeric sulphur nitride with neutrons and heavy ions. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1978, 37, 321-328.	0.6	13
588	Femtosecond optical absorption in poly(3-alkyl thienylene)s. Physical Review B, 1991, 44, 9731-9734.	1.1	13
589	Recent developments in the controlled synthesis and manipulation of electroactive organic polymers. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1997, 355, 707-714.	1.6	13
590	Control of luminescence in conjugated polymers through control of chain microstructure. Journal of Materials Chemistry, 2007, 17, 907-912.	6.7	13
591	A nano-patterned photonic crystal laser with a dye-doped liquid crystal. Applied Physics Letters, 2013, 103, 051101.	1.5	13
592	A first-principles study of the vibrational properties of crystalline tetracene under pressure. Journal of Physics Condensed Matter, 2015, 27, 375402.	0.7	13
593	Efficient singlet exciton fission in pentacene prepared from a soluble precursor. APL Materials, 2016, 4, .	2.2	13
594	Metallic properties of lithium-intercalated ZrS2. Journal of Physics C: Solid State Physics, 1987, 20, 4105-4114.	1.5	12

#	Article	IF	CITATIONS
595	The Hall effect and resistivity of amorphous copper-titanium alloys. Journal of Physics F: Metal Physics, 1987, 17, 1739-1749.	1.6	12
596	New Luminescent PPV Derivatives for Led Applications. Materials Research Society Symposia Proceedings, 1997, 488, 87.	0.1	12
597	Exciplex emission from electroluminescent ladder-type pentaphenylene oligomers bearing both electron- and hole-accepting substituents. Journal of Chemical Physics, 2008, 128, 044703.	1.2	12
598	Oligomeric Compatibilizers for Control of phase Separation in Conjugated Polymer Blend Films. Macromolecules, 2012, 45, 1468-1475.	2.2	12
599	Low-Temperature Transport Properties of Photogenerated Charges in Organic Materials. Physical Review Letters, 2014, 112, 126802.	2.9	12
600	Low thresholds for a nonconventional polymer blend—Amplified spontaneous emission and lasing in <scp>F</scp> 8 _{1â^'} _{<i>x</i>} : <scp>SY</scp> _{<i>x</i>} system. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 15-21.	2.4	12
601	Direct Probing of Gap States and Their Passivation in Halide Perovskites by High-Sensitivity, Variable Energy Ultraviolet Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2021, 125, 5217-5225.	1.5	12
602	Kinetics and energeticsÂof metal halide perovskite conversion reactions at the nanoscale. Communications Materials, 2022, 3, .	2.9	12
603	Synthesis and Properties of Novel High-Electron-Affinity Polymers for Electroluminescent Devices. ACS Symposium Series, 1997, , 322-344.	0.5	11
604	Photovoltaic devices fabricated from an aqueous dispersion of polyfluorene nanoparticles using an electroplating method. Synthetic Metals, 2004, 147, 105-109.	2.1	11
605	Bright and efficient blue polymer light emitting diodes with reduced operating voltages processed entirely at low-temperature. Journal of Materials Chemistry C, 2015, 3, 9327-9336.	2.7	11
606	Red-shifted delayed fluorescence at the expense of photoluminescence quantum efficiency – an intramolecular charge-transfer molecule based on a benzodithiophene-4,8-dione acceptor. Physical Chemistry Chemical Physics, 2019, 21, 10580-10586.	1.3	11
607	Magnetic properties of the hydrazine intercalation complexes of 1T-TaS2. Journal of Physics C: Solid State Physics, 1982, 15, L1245-L1249.	1.5	10
608	Printing of polymer thin-film transistors for active-matrix-display applications. Journal of the Society for Information Display, 2003, 11, 599.	0.8	10
609	Synthesis, characterization and comparative OFET behaviour of indenofluorene–bithiophene and terthiophene alternating copolymers. Synthetic Metals, 2010, 160, 468-474.	2.1	10
610	Multiâ€Functional Transparent Luminescent Configuration for Advanced Photovoltaics. Advanced Energy Materials, 2016, 6, 1502404.	10.2	10
611	Perovskite Lightâ€Emitting Diodes: Efficient Visible Quasiâ€2D Perovskite Lightâ€Emitting Diodes (Adv. Mater.) 1	⁻ j ETQq1 1 11.1	0,784314 rg
612	Control of Geminate Recombination by the Material Composition and Processing Conditions in Novel Polymer: Nonfullerene Acceptor Photovoltaic Devices. Journal of Physical Chemistry A, 2018, 122, 1253-1260.	1.1	10

#	Article	IF	CITATIONS
613	Highly Efficient Energy Transfer in Light Emissive Poly(9,9-dioctylfluorene) and Poly(p-phenylenevinylene) Blend System. ACS Photonics, 2018, 5, 607-613.	3.2	10
614	Temperature dependence of the unit cell of (TMTSF)2ReO4through the metal-insulator transition. Journal of Physics C: Solid State Physics, 1983, 16, 691-698.	1.5	9
615	Cyano-Derivatives Of Poly (P-Phenylene Vinylene) For Use In Thin-Film Light-Emitting Diodes. Materials Research Society Symposia Proceedings, 1993, 328, 351.	0.1	9
616	6.1: Invited Paper: All-Polymer Thin Film Transistors Fabricated by High-Resolution Ink-jet Printing. Digest of Technical Papers SID International Symposium, 2001, 32, 40.	0.1	9
617	Thick polymer light-emitting diodes with very high power efficiency using Ohmic charge-injection layers. Semiconductor Science and Technology, 2014, 29, 025005.	1.0	9
618	In situ synthesis, crystallisation, and thin-film processing of single crystals of trans-[Ru(SO ₂)(NH ₃) ₄ (H ₂ O)][p-TolSO ₃] ₂ (D)][p-TolSO ₃] ₂ 22] ₂ 2] ₂ 2] ₂ 2] ₂ 2] ₂ 22] ₂ 22	2	9
619	Transport properties of VSe2intercalated with hydrazine. Journal of Physics C: Solid State Physics, 1981, 14, L1055-L1060.	1.5	8
620	Modeling the effect of the structure of polymer photocells on their absorption spectrum. Journal of Applied Physics, 2007, 102, 013105.	1.1	8
621	A study of tin oxide as an election injection layer in hybrid polymer light-emitting diodes. Semiconductor Science and Technology, 2014, 29, 125002.	1.0	8
622	In Situ Optical Measurement of Charge Transport Dynamics in Organic Photovoltaics. Nano Letters, 2015, 15, 931-935.	4.5	8
623	Field-enhanced recombination at low temperatures in an organic photovoltaic blend. Physical Review B, 2015, 92, .	1.1	8
624	Optical and Electronic Properties of Colloidal CdSe Quantum Rings. ACS Nano, 2020, 14, 14740-14760.	7.3	8
625	Impact of Orientational Class Formation and Local Strain on Photo-Induced Halide Segregation in Hybrid Metal-Halide Perovskites. Journal of Physical Chemistry C, 2021, 125, 15025-15034.	1.5	8
626	Magnetic susceptibility of hydrazine intercalated TiSe2. Journal of Physics C: Solid State Physics, 1982, 15, L1251-L1255.	1.5	7
627	Photo-emission and transport studies of HfxTi1-xSe2alloys. Journal of Physics C: Solid State Physics, 1987, 20, 1483-1493.	1.5	7
628	Use of multiple electrical pulses to study charge transport in polymer light-emitting diodes. Applied Physics Letters, 2000, 77, 1493-1495.	1.5	7
629	L-4: Late-New Paper: Active-Matrix Operation of Electrophoretic Devices with Inkjet-Printed Polymer Thin Film Transistors. Digest of Technical Papers SID International Symposium, 2002, 33, 1017.	0.1	7
630	Effects of Polymer Packing Structure on Photoinduced Triplet Generation and Dynamics. Journal of Physical Chemistry C, 2012, 116, 11298-11305.	1.5	7

#	Article	IF	CITATIONS
631	Benzoyl side-chains push the open-circuit voltage of PCDTBT/PCBM solar cells beyond 1ÂV. Organic Electronics, 2017, 49, 142-151.	1.4	7
632	Phenothiazineâ€Based D–A–π–A Dyes for Highly Efficient Dyeâ€Sensitized Solar Cells: Effect of Internal Acceptor and Nonâ€Conjugated Ï€â€Spacer on Device Performance. ChemPlusChem, 2017, 82, 280-286.	1.3	7
633	Ultrafast endothermic transfer of non-radiative exciplex state to radiative excitons in polyfluorene random copolymer for blue electroluminescence. Applied Physics Letters, 2018, 112, .	1.5	7
634	Localization in the Peierls gap. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1985, 52, 611-642.	0.6	6
635	Preparation and solid-state characterization of the 7,7,8,8-tetracyano-p-quinodimethanide salt of the bis(triphenylphosphoranylidinium) cation: (PPN)2(TCNQ)3(MeCN)2. Journal of the Chemical Society Perkin Transactions II, 1988, , 1151.	0.9	6
636	Optical spectroscopy of photoinduced and field-induced excitations in polyacetylene prepared by the Durham 'photoisomer' route. Journal of Physics Condensed Matter, 1991, 3, 3007-3021.	0.7	6
637	Role of indium chloride on the luminescence properties of PPV. Synthetic Metals, 2000, 111-112, 549-552.	2.1	6
638	The copolymer route to new luminescent materials for LEDs. Macromolecular Symposia, 2000, 154, 177-186.	0.4	6
639	Novel optoelectronic technique for direct tracking of ultrafast triplet excitons in polymeric semiconductor. Applied Physics Reviews, 2021, 8, .	5.5	6
640	Transport and magnetic measurements on Bi2+xCa1-xSr2Cu2O8+l̂´. Journal of Physics C: Solid State Physics, 1988, 21, L529-L534.	1.5	5
641	Precision and control in polymer synthesis why it's important and some recent examples of how to do it. Macromolecular Symposia, 1999, 143, 81-93.	0.4	5
642	Organic Materials for Large Area Electronics. Materials Science Forum, 0, 608, 159-179.	0.3	5
643	Tailored Local Bandgap Modulation as a Strategy to Maximize Luminescence Yields in Mixedâ€Halide Perovskites. Advanced Optical Materials, 2021, 9, 2100635.	3.6	5
644	Model for the impurity-induced stabilization of the intermediate phase in Ti4O7. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1980, 42, 479-484.	0.6	4
645	The transport properties of vanadium-doped TiSe2under pressure. Journal of Physics C: Solid State Physics, 1982, 15, L871-L874.	1.5	4
646	ESR Observation of Optically-Generated Polarons in Conjugated Electroluminescent Polymers. Molecular Crystals and Liquid Crystals, 2001, 371, 159-162.	0.3	4
647	Single-photon pumping and two-photon probing spectroscopy for the determination of absorption cross-sections in an organic semiconductor. Optics Express, 2005, 13, 10873.	1.7	4
648	Chemical reversability of the electrical dedoping of conducting polymers: An organic chemically erasable programmable read-only memory. Applied Physics Letters, 2008, 93, 033314.	1.5	4

#	Article	IF	CITATIONS
649	Electroluminescence from Solution-Processed Pinhole-Free Nanometer-Thickness Layers of Conjugated Polymers. Nano Letters, 2018, 18, 5382-5388.	4.5	4
650	Inter-ligand energy transfer in dye chromophores attached to high bandgap SiO ₂ nanoparticles. Chemical Communications, 2019, 55, 8804-8807.	2.2	4
651	Controlling the structures of organic semiconductor–quantum dot nanocomposites through ligand shell chemistry. Soft Matter, 2020, 16, 7970-7981.	1.2	4
652	Transport and Raman Investigation of the Group IV Layered Compounds and their Lithium Intercalates. , 1984, , 549-559.		4
653	Back-Contact Perovskite Solar Cells. , 2019, 1, 1-10.		4
654	Stoichiometry dependence of the transport properties of TiS2. Journal of Physics C: Solid State Physics, 1982, 15, 159-159.	1.5	3
655	Inclusion of chalcogens raises electron mobility. Nature, 1987, 329, 14-15.	13.7	3
656	Optical Applications. , 0, , 516-558.		3
657	Cathodes incorporating thin fluoride layers for efficient injection in blue polymer light-emitting diodes. , 2002, , .		3
658	Does interchain stacking morphology contribute to the singlet–triplet interconversion dynamics in polymer heterojunctions?. Chemical Physics, 2009, 357, 159-162.	0.9	3
659	Ultrafast Pump-Push Photocurrent Spectroscopy of Organic Photoconversion Systems. EPJ Web of Conferences, 2013, 41, 05020.	0.1	3
660	Organic semiconductor spintronics: utilizing triplet excitons in organic electronics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20150121.	1.6	3
661	Room temperature magneto-optic effect in silicon light-emitting diodes. Nature Communications, 2018, 9, 398.	5.8	3
662	Energy Landscape of Vertically Anisotropic Polymer Blend Films toward Highly Efficient Polymer Lightâ€Emitting Diodes (PLEDs). Advanced Functional Materials, 2018, 28, 1705903.	7.8	3
663	Graphene-passivated nickel as an efficient hole-injecting electrode for large area organic semiconductor devices. Applied Physics Letters, 2020, 116, .	1.5	3
664	Resonance Raman Spectroscopy of Accumulation Layers in Durham-Route Polyacetylene. Springer Series in Solid-state Sciences, 1989, , 127-131.	0.3	3
665	Optical and Electronic Properties of a Highly Disordered Form of Polyacetylene — Distinguishing Between Localized Defects and Conformational Disorder. Springer Series in Solid-state Sciences, 1992, , 238-241.	0.3	3
666	Perovskite LEDs. , 2019, 1, 1-5.		3

1

#	Article	IF	CITATIONS
667	The effect of pressure on the charge density wave transitions in 4H b TaS2. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1977, 38, 554-561.	0.2	2
668	Jim Feast: a career in polymer science. Polymer, 2005, 46, 1427-1438.	1.8	2
669	Ultrafast carrier cooling and thermalization in lead iodide perovskite probed with two-dimensional electronic spectroscopy. , 2017, , .		2
670	Femtosecond Optical Absorption in Conjugated Polymers. Springer Series in Solid-state Sciences, 1992, , 162-166.	0.3	2
671	Insights into the Structure and Selfâ€Assembly of Organicâ€Semiconductor/Quantumâ€Dot Blends. Advanced Functional Materials, 2022, 32, 2109252.	7.8	2
672	Hopping Conductivity in The Peierls Gap In Hydrazine Intercalated TaS ₂ . Molecular Crystals and Liquid Crystals, 1985, 121, 153-156.	0.9	1
673	Photoexcitations in Poly(2,5-Thienylene Vinylene). Materials Research Society Symposia Proceedings, 1989, 173, 637.	0.1	1
674	Transport evidence for new phase changes in 1T-TaS2after intercalation with hydrazine. Journal of Physics Condensed Matter, 1994, 6, 3533-3538.	0.7	1
675	New family of polyfluorene copolymers for light-emitting devices. , 2002, , .		1
676	Singlet and triplet emission from polymers for OLED application. , 2004, , .		1
677	Spatial control of the recombination zone in ambipolar light-emitting polymer transistors. , 2006, , .		1
678	Publisher's Note: Probing the Morphology and Energy Landscape of Blends of Conjugated Polymers with Sub-10Ânm Resolution [Phys. Rev. Lett.101, 016102 (2008)]. Physical Review Letters, 2008, 101, .	2.9	1
679	Preface. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20130130.	1.6	1
680	Energy Harvesting: Optically Switchable Smart Windows with Integrated Photovoltaic Devices (Adv.) Tj ETQq0 0	0 rgBT /O	verlock 10 Tf
681	Nanoscale investigation of organic – inorganic halide perovskites. Journal of Physics: Conference Series, 2015, 644, 012024.	0.3	1
682	Scan Strategies for Electron Energy Loss Spectroscopy at Optical and Vibrational Energies in Perylene Diimide Nanobelts. Microscopy and Microanalysis, 2019, 25, 1738-1739.	0.2	1
683	Singlet exciton fission in solution. Photochemistry, 2015, , 270-285.	0.2	1

684 Stable Light-Emitting Diodes Using Phase-Pure Ruddlesden-Popper Layered Perovskites. , 0, , .

#	Article	IF	CITATIONS
685	Ultrafast Long-Range Charge Separation in Organic Semiconductor Photovoltaic Diodes. , 2014, , .		1
686	Properties of low-Dimensional metals at high pressure. High Pressure Research, 1992, 8, 391-395.	0.4	0
687	Versatile Syntheses of Various Homo- and Copolymers of Poly(1,4-Arylene Vinylene)S. Materials Research Society Symposia Proceedings, 1999, 598, 118.	0.1	0
688	Synthesis of New Building Blocks for Light Emitting Polymers. Materials Research Society Symposia Proceedings, 2000, 660, .	0.1	0
689	Design of Luminescent Polymers for Leds. Materials Research Society Symposia Proceedings, 2001, 708, 521.	0.1	0
690	New Light Emitting Polymers and High Energy Hosts for Triplet Emission. Materials Research Society Symposia Proceedings, 2004, 846, DD7.7.1.	0.1	0
691	Charge transport and efficiency in photovoltaic devices based on polyfluorene blends. , 2004, 5520, 26.		0
692	Synthesis of triplet emitters and hosts for electrophosphorescence. , 2005, 5937, 47.		0
693	<title>Two-photon excited transient absorption in poly(9,9'-dioctylfluorene-<emph) Tj ETQq1 1 0.784314 rgBT /4</td><td>Overlock 1</td><td>0 Tf 50 422</td></tr><tr><td>694</td><td>Crystal Structure and Magnetism of (-)<sub>2</sub><sub>4</sub>, (BEDT-TTF =) Tj ETQq0 0 0 rgBT /Overlock 1</td><td>0 Tf 50 38</td><td>2 Td (Bis(eth</td></tr><tr><td>695</td><td>Electro-optical Devices using Organic Semiconductors. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .</td><td>0.0</td><td>0</td></tr><tr><td>696</td><td>Organic semiconductor LEDs and photovoltaic diodes. , 2013, , .</td><td></td><td>0</td></tr><tr><td>697</td><td>Sub-Bandgap States in Lead-Halide Perovskites Revealed by two-Dimensional Electronic Spectroscopy. , 2019, , .</td><td></td><td>0</td></tr><tr><td>698</td><td>Long-Range Electrostatics Supercharge Exciton Transport. , 0, , .</td><td></td><td>0</td></tr><tr><td>699</td><td>Ultrafast spin relaxation mechanisms in layered hybrid perovskites. , 2021, , .</td><td></td><td>0</td></tr><tr><td>700</td><td>Synthesis of New Building Blocks for Light Emitting Polymers. Materials Research Society Symposia
Proceedings, 2000, 660, 1.</td><td>0.1</td><td>0</td></tr><tr><td>701</td><td>Ultrafast investigation of exciton dissociation processes in polymeric semiconductors at high pump fluence. Springer Series in Chemical Physics, 2003, , 377-379.</td><td>0.2</td><td>0</td></tr><tr><td>702</td><td>Crystal and electronic structures and electrical, magnetic, and optical properties of two copper tetrahalide salts of bis(ethylenedithio)-tetrathiafulvalene. , 2007, , 523-532.</td><td></td><td>0</td></tr></tbody></table></title>		

#	Article	IF	CITATIONS
703	Crystal Structures and Physical Properties of Bis(ethylenedithio)-tetrathiafulvalene Charge-transfer Salts with ₄ ^{â~`} (= or) Anions. , 2007, , 578-584.		0
704	Ultrafast Optical Control of Charge Dynamics in Organic and Hybrid Electronic Nanodevices. , 2014, , .		0
705	Periodic Lattice Distortions and Charge Density Waves in One- and Two-Dimensional Systems. Springer Series in Solid-state Sciences, 1978, , 199-215.	0.3	0
706	Characterisation of Poly(P-Phenylene Vinylene) [PPV] Prepared by Different Precursor Routes. NATO ASI Series Series B: Physics, 1990, , 393-399.	0.2	0
707	Enhanced optoelectronic quality of metal halide perovskite via additive engineering. , 0, , .		0
708	New materials for singlet exciton fission to triplet pairs. , 0, , .		0
709	New materials for singlet exciton fission to triplet pairs. , 0, , .		0