Vladimir BuloviÄ

List of Publications by Year
in descending order

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147 papers	24,428 citations	18436 62 h-index	12558 132 g-index
148 all docs	148 docs citations	148 times ranked	24177 citing authors

#	Article	IF	Citations
1	An Ultrathin Flexible Loudspeaker Based on a Piezoelectric Microdome Array. IEEE Transactions on Industrial Electronics, 2023, 70, 985-994.	5.2	6
2	Predicting Low Toxicity and Scalable Solvent Systems for Highâ€Speed Rollâ€toâ€Roll Perovskite Manufacturing. Solar Rrl, 2022, 6, 2100567.	3.1	7
3	Terahertz Field-Induced Reemergence of Quenched Photoluminescence in Quantum Dots. Nano Letters, 2022, , .	4.5	0
4	Predicting Low Toxicity and Scalable Solvent Systems for Highâ€Speed Rollâ€toâ€Roll Perovskite Manufacturing. Solar Rrl, 2022, 6, .	3.1	0
5	Impact of Photon Recycling, Grain Boundaries, and Nonlinear Recombination on Energy Transport in Semiconductors. ACS Photonics, 2022, 9, 110-122.	3.2	13
6	A versatile acoustically active surface based on piezoelectric microstructures. Microsystems and Nanoengineering, 2022, 8, .	3.4	8
7	Voltage-controlled reversible modulation of colloidal quantum dot thin film photoluminescence. Applied Physics Letters, 2022, 120, 211104.	1.5	6
8	Morphology control of perovskite films: a two-step, all solution process for conversion of lead selenide into methylammonium lead iodide. Materials Chemistry Frontiers, 2021, 5, 1410-1417.	3.2	9
9	Silver Nanowire Back Electrode Stabilized with Graphene Oxide Encapsulation for Inverted Semitransparent Organic Solar Cells with Longer Lifetime. ACS Applied Energy Materials, 2021, 4, 1431-1441.	2.5	31
10	Nanocrystal-Sensitized Infrared-to-Visible Upconversion in a Microcavity under Subsolar Flux. Nano Letters, 2021, 21, 1011-1016.	4.5	26
11	Hybrid Approach to Fabricate Uniform and Active Molecular Junctions. Nano Letters, 2021, 21, 1606-1612.	4.5	6
12	Efficient perovskite solar cells via improved carrier management. Nature, 2021, 590, 587-593.	13.7	1,972
13	Monolayer Hexagonal Boron Nitride: An Efficient Electron Blocking Layer in Organic Photovoltaics. Advanced Functional Materials, 2021, 31, 2101238.	7.8	9
14	Molecular Platform for Fast Low-Voltage Nanoelectromechanical Switching. Nano Letters, 2021, 21, 10244-10251.	4.5	4
15	All-vacuum-deposited inorganic cesium lead halide perovskite light-emitting diodes. APL Materials, 2020, 8, .	2.2	28
16	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49.	19.8	797
17	Maximizing the external radiative efficiency of hybrid perovskite solar cells. Pure and Applied Chemistry, 2020, 92, 697-706.	0.9	9
18	High-Speed Vapor Transport Deposition of Perovskite Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 32928-32936.	4.0	24

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19	Decreased Synthesis Costs and Waste Product Toxicity for Lead Sulfide Quantum Dot Ink Photovoltaics. Advanced Sustainable Systems, 2019, 3, 1900061.	2.7	14
20	Benefit from Photon Recycling at the Maximum-Power Point of State-of-the-Art Perovskite Solar Cells. Physical Review Applied, 2019, 12, .	1.5	50
21	Terahertz-Driven Stark Spectroscopy of CdSe and CdSeâ€“CdS Coreâ€“Shell Quantum Dots. Nano Letters, 2019, 19, 8125-8131.	4.5	15
22	Charge-Carrier Recombination in Halide Perovskites. Chemical Reviews, 2019, 119, 11007-11019.	23.0	197
23	Lattice strain causes non-radiative losses in halide perovskites. Energy and Environmental Science, 2019, 12, 596-606.	15.6	343
24	An interface stabilized perovskite solar cell with high stabilized efficiency and low voltage loss. Energy and Environmental Science, 2019, 12, 2192-2199.	15.6	542
25	M13 Virusâ€Based Framework for High Fluorescence Enhancement. Small, 2019, 15, e1901233.	5.2	30
26	Triplet-Sensitization by Lead Halide Perovskite Thin Films for Near-Infrared-to-Visible Upconversion. ACS Energy Letters, 2019, 4, 888-895.	8.8	117
27	Micronâ€Scale Patterning of High Quantum Yield Quantum Dot LEDs. Advanced Materials Technologies, 2019, 4, 1800727.	3.0	33
28	Controllable Perovskite Crystallization via Antisolvent Technique Using Chloride Additives for Highly Efficient Planar Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803587.	10.2	221
29	Bulk recrystallization for efficient mixed-cation mixed-halide perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 25511-25520.	5.2	27
30	The Impact of Atmosphere on the Local Luminescence Properties of Metal Halide Perovskite Grains. Advanced Materials, 2018, 30, e1706208.	11.1	149
31	Grapheneâ€“Perovskite Schottky Barrier Solar Cells. Advanced Sustainable Systems, 2018, 2, 1700106.	2.7	12
32	Stable Lightâ€Emitting Diodes Using Phaseâ€Pure Ruddlesdenâ€“Popper Layered Perovskites. Advanced Materials, 2018, 30, 1704217.	11.1	258
33	Luminescence of III-IV-V thin film alloys grown by metalorganic chemical vapor deposition. Journal of Applied Physics, 2018, 123, .	1.1	6
34	An ingestible bacterial-electronic system to monitor gastrointestinal health. Science, 2018, 360, 915-918.	6.0	380
35	Interfacial Effects of Tin Oxide Atomic Layer Deposition in Metal Halide Perovskite Photovoltaics. Advanced Energy Materials, 2018, 8, 1800591.	10.2	62
36	Synthesis cost dictates the commercial viability of lead sulfide and perovskite quantum dot photovoltaics. Energy and Environmental Science, 2018, 11, 2295-2305.	15.6	106

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37	Probing buried recombination pathways in perovskite structures using 3D photoluminescence tomography. Energy and Environmental Science, 2018, 11, 2846-2852.	15.6	42
38	Impact of microstructure on the electronâ€“hole interaction in lead halide perovskites. Energy and Environmental Science, 2017, 10, 1358-1366.	15.6	36
39	Tailoring metal halide perovskites through metal substitution: influence on photovoltaic and material properties. Energy and Environmental Science, 2017, 10, 236-246.	15.6	230
40	Photoluminescent Arrays of Nanopatterned Monolayer MoS₂. Advanced Functional Materials, 2017, 27, 1703688.	7.8	35
41	Metal Halide Perovskite Polycrystalline Films Exhibiting Properties of Single Crystals. Joule, 2017, 1, 155-167.	11.7	264
42	Speed Limit for Triplet-Exciton Transfer in Solid-State PbS Nanocrystal-Sensitized Photon Upconversion. ACS Nano, 2017, 11, 7848-7857.	7.3	130
43	Terahertz-Driven Luminescence and Colossal Stark Effect in CdSeâ€“CdS Colloidal Quantum Dots. Nano Letters, 2017, 17, 5375-5380.	4.5	53
44	Directâ€“indirect character of the bandgap in methylammonium lead iodide perovskite. Nature Materials, 2017, 16, 115-120.	13.3	369
45	Oxidative Chemical Vapor Deposition of Neutral Hole Transporting Polymer for Enhanced Solar Cell Efficiency and Lifetime. Advanced Materials, 2016, 28, 6399-6404.	11.1	23
46	Sub-50 mV NEM relay operation enabled by self-assembled molecular coating. , 2016, , .		25
47	All vapor-deposited lead-free doped CsSnBr3 planar solar cells. Nano Energy, 2016, 28, 469-474.	8.2	139
48	Plexciton Dirac points and topological modes. Nature Communications, 2016, 7, 11783.	5.8	66
49	The Impact of Phase Retention on the Structural and Optoelectronic Properties of Metal Halide Perovskites. Advanced Materials, 2016, 28, 10757-10763.	11.1	65
50	Photo-induced halide redistribution in organicâ€“inorganic perovskite films. Nature Communications, 2016, 7, 11683.	5.8	778
51	In situ vapor-deposited parylene substrates for ultra-thin, lightweight organic solar cells. Organic Electronics, 2016, 31, 120-126.	1.4	63
52	V OC enhancement in polymer solar cells with isobenzofulveneâ€“C 60 adducts. Organic Electronics, 2016, 31, 48-55.	1.4	9
53	Photovoltaic Performance of PbS Quantum Dots Treated with Metal Salts. ACS Nano, 2016, 10, 3382-3388.	7.3	75
54	Tunneling nanoelectromechanical switches. , 2015, , .		0

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55	Electromechanically actuating molecules. , 2015, , .		0
56	Pathways for solar photovoltaics. Energy and Environmental Science, 2015, 8, 1200-1219.	15.6	385
57	Spin-dependent charge transfer state design rules in organic photovoltaics. Nature Communications, 2015, 6, 6415.	5.8	83
58	Open-Circuit Voltage Deficit, Radiative Sub-Bandgap States, and Prospects in Quantum Dot Solar Cells. Nano Letters, 2015, 15, 3286-3294.	4.5	223
59	Solid-State Solvation and Enhanced Exciton Diffusion in Doped Organic Thin Films under Mechanical Pressure. ACS Nano, 2015, 9, 4412-4418.	7.3	7
60	The Role of Electronâ€“Hole Separation in Thermally Activated Delayed Fluorescence in Donorâ€“Acceptor Blends. Journal of Physical Chemistry C, 2015, 119, 25591-25597.	1.5	45
61	Tunneling Nanoelectromechanical Switches Based on Compressible Molecular Thin Films. ACS Nano, 2015, 9, 7886-7894.	7.3	22
62	pâ€iâ€n Heterojunction Solar Cells with a Colloidal Quantumâ€Dot Absorber Layer. Advanced Materials, 2014, 26, 4845-4850.	11.1	67
63	Improved performance and stability in quantumÂdot solar cells through band alignmentÂengineering. Nature Materials, 2014, 13, 796-801.	13.3	1,511
64	Electrically tunable organic vertical-cavity surface-emitting laser. Applied Physics Letters, 2014, 105, 073303.	1.5	7
65	ZnO Nanowire Arrays for Enhanced Photocurrent in PbS Quantum Dot Solar Cells (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlock 10	11.1	2
66	Cyclobutadieneâ€“C₆₀ Adducts: Nâ€Type Materials for Organic Photovoltaic Cells with High V_{OC}. Advanced Functional Materials, 2013, 23, 3061-3069.	7.8	33
67	Graphene Cathode-Based ZnO Nanowire Hybrid Solar Cells. Nano Letters, 2013, 13, 233-239.	4.5	193
68	Emergence of colloidal quantum-dot light-emitting technologies. Nature Photonics, 2013, 7, 13-23.	15.6	2,155
69	Origin of Efficiency Roll-Off in Colloidal Quantum-Dot Light-Emitting Diodes. Physical Review Letters, 2013, 110, 217403.	2.9	144
70	Electrophoretic Deposition of CdSe/ZnS Quantum Dots for Lightâ€Emitting Devices. Advanced Materials, 2013, 25, 1420-1423.	11.1	79
71	Low-Temperature Solution-Processed Solar Cells Based on PbS Colloidal Quantum Dot/CdS Heterojunctions. Nano Letters, 2013, 13, 994-999.	4.5	129
72	Effect of synthetic accessibility on the commercial viability of organic photovoltaics. Energy and Environmental Science, 2013, 6, 711.	15.6	288

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73	ZnO Nanowire Arrays for Enhanced Photocurrent in PbS Quantum Dot Solar Cells. Advanced Materials, 2013, 25, 2790-2796.	11.1	251
74	Coarsening and solidification via solvent-annealing in thin liquid films. Journal of Fluid Mechanics, 2013, 723, 69-90.	1.4	3
75	High-efficiency quantum-dot light-emitting devices with enhanced charge injection. Nature Photonics, 2013, 7, 407-412.	15.6	1,025
76	The application of oxidative chemical vapor deposited (oCVD) PEDOT to textured and non-planar photovoltaic device geometries for enhanced light trapping. Organic Electronics, 2013, 14, 2257-2268.	1.4	29
77	Lasing through a strongly-coupled mode by intra-cavity pumping. Optics Express, 2013, 21, 12122.	1.7	32
78	QLEDs for displays and solid-state lighting. MRS Bulletin, 2013, 38, 703-711.	1.7	184
79	Colloidal quantum dot light emitting devices. , 2013, , 148-172.		4
80	Cathode buffer layers based on vacuum and solution deposited poly(3,4-ethylenedioxythiophene) for efficient inverted organic solar cells. Applied Physics Letters, 2012, 100, .	1.5	25
81	Near-infrared photodetector consisting of J-aggregating cyanine dye and metal oxide thin films. Applied Physics Letters, 2012, 101, 113303.	1.5	41
82	Improving the Performance of P3HTâ€"Fullerene Solar Cells with Side-Chain-Functionalized Poly(thiophene) Additives: A New Paradigm for Polymer Design. ACS Nano, 2012, 6, 3044-3056.	7.3	123
83	Study of field driven electroluminescence in colloidal quantum dot solids. Journal of Applied Physics, 2012, 111, .	1.1	38
84	Micron-Scale Molecular Organic Microcavity Arrays Patterned With Thin-Film Contact-Patterning. IEEE Photonics Technology Letters, 2012, 24, 104-106.	1.3	2
85	Multijunction organic photovoltaics with a broad spectral response. Physical Chemistry Chemical Physics, 2012, 14, 14548.	1.3	14
86	Triplet Exciton Dissociation in Singlet Exciton Fission Photovoltaics. Advanced Materials, 2012, 24, 6169-6174.	11.1	108
87	Contact printing of colloidal nanocrystal thin films for hybrid organic/quantum dot optoelectronic devices. Nano Reviews, 2012, 3, 16144.	3.7	13
88	Twenty-Fold Enhancement of Molecular Fluorescence by Coupling to a J-Aggregate Critically Coupled Resonator. ACS Nano, 2012, 6, 467-471.	7.3	28
89	Printed MEMS membranes on silicon. , 2012, , .		3
90	Organic Solar Cells with Graphene Electrodes and Vapor Printed Poly(3,4-ethylenedioxythiophene) as the Hole Transporting Layers. ACS Nano, 2012, 6, 6370-6377.	7.3	81

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91	Topâ€illuminated Organic Photovoltaics on a Variety of Opaque Substrates with Vaporâ€printed Poly(3,4â€ethylenedioxythiophene) Top Electrodes and MoO₃ Buffer Layer. Advanced Energy Materials, 2012, 2, 1404-1409.	10.2	36
92	Bilayer heterojunction polymer solar cells using unsubstituted polythiophene via oxidative chemical vapor deposition. Solar Energy Materials and Solar Cells, 2012, 99, 190-196.	3.0	55
93	Performance Comparison of Different Organic Molecular Floating-Gate Memories. IEEE Nanotechnology Magazine, 2011, 10, 594-599.	1.1	25
94	Transparent, near-infrared organic photovoltaic solar cells for window and energy-scavenging applications. Applied Physics Letters, 2011, 98, .	1.5	291
95	Photo-assisted water oxidation with cobalt-based catalyst formed from thin-film cobalt metal on silicon photoanodes. Energy and Environmental Science, 2011, 4, 2058.	15.6	106
96	Electroluminescence from Nanoscale Materials via Field-Driven Ionization. Nano Letters, 2011, 11, 2927-2932.	4.5	51
97	Improved Current Extraction from ZnO/PbS Quantum Dot Heterojunction Photovoltaics Using a MoO₃ Interfacial Layer. Nano Letters, 2011, 11, 2955-2961.	4.5	265
98	Morphology of contact printed colloidal quantum dots in organic semiconductor films: Implications for QD-LEDs. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 120-123.	0.8	1
99	Direct Monolithic Integration of Organic Photovoltaic Circuits on Unmodified Paper. Advanced Materials, 2011, 23, 3500-3505.	11.1	243
100	Practical Roadmap and Limits to Nanostructured Photovoltaics. Advanced Materials, 2011, 23, 5712-5727.	11.1	160
101	Paper Electronics: Direct Monolithic Integration of Organic Photovoltaic Circuits on Unmodified Paper (Adv. Mater. 31/2011). Advanced Materials, 2011, 23, 3499-3499.	11.1	36
102	Colloidal PbS Quantum Dot Solar Cells with High Fill Factor. ACS Nano, 2010, 4, 3743-3752.	7.3	416
103	Direct formation of a water oxidation catalyst from thin-film cobalt. Energy and Environmental Science, 2010, 3, 1726.	15.6	59
104	Contactâ€Printed Microelectromechanical Systems. Advanced Materials, 2010, 22, 1840-1844.	11.1	29
105	Interfacial Recombination for Fast Operation of a Planar Organic/QD Infrared Photodetector. Advanced Materials, 2010, 22, 5250-5254.	11.1	66
106	Intracavity optical pumping of J-aggregate microcavity exciton polaritons. Physical Review B, 2010, 82, .	1.1	22
107	Colloidal quantum dot light-emitting devices. Nano Reviews, 2010, 1, 5202.	3.7	350
108	Quantum Dot/J-Aggregate Blended Films for Light Harvesting and Energy Transfer. Nano Letters, 2010, 10, 3995-3999.	4.5	69

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109	Nanoscale Morphology Revealed at the Interface Between Colloidal Quantum Dots and Organic Semiconductor Films. Nano Letters, 2010, 10, 2421-2426.	4.5	26
110	Tunable Infrared Emission From Printed Colloidal Quantum Dot/Polymer Composite Films on Flexible Substrates. Journal of Display Technology, 2010, 6, 90-93.	1.3	22
111	Air-Stable Operation of Transparent, Colloidal Quantum Dot Based LEDs with a Unipolar Device Architecture. Nano Letters, 2010, 10, 24-29.	4.5	149
112	Inkjetâ€Printed Quantum Dotâ€“Polymer Composites for Fullâ€Color ACâ€Driven Displays. Advanced Materials, 2009, 21, 2151-2155.	11.1	367
113	Quantum Dot-Polymer Composites for Displays: Inkjet-Printed Quantum Dot-Polymer Composites for Full-Color AC-Driven Displays (Adv. Mater. 21/2009). Advanced Materials, 2009, 21, NA-NA.	11.1	2
114	Heterojunction Photovoltaics Using Printed Colloidal Quantum Dots as a Photosensitive Layer. Nano Letters, 2009, 9, 860-863.	4.5	69
115	Photoluminescence quenching of tris-(8-hydroxyquinoline) aluminum thin films at interfaces with metal oxide films of different conductivities. Physical Review B, 2009, 79, .	1.1	35
116	Quantum Dot Light-Emitting Devices with Electroluminescence Tunable over the Entire Visible Spectrum. Nano Letters, 2009, 9, 2532-2536.	4.5	796
117	Synthesis of J-Aggregating Dibenz[<i>a</i>,<i>j</i>]anthracene-Based Macrocycles. Journal of the American Chemical Society, 2009, 131, 5659-5666.	6.6	79
118	Lateral heterojunction photodetector consisting of molecular organic and colloidal quantum dot thin films. Applied Physics Letters, 2009, 94, 043307.	1.5	33
119	An Organic Active-Matrix Imager. IEEE Transactions on Electron Devices, 2008, 55, 527-532.	1.6	56
120	Contact Printing of Quantum Dot Light-Emitting Devices. Nano Letters, 2008, 8, 4513-4517.	4.5	294
121	Using Integrated Optical Feedback to Counter Pixel Aging and Stabilize Light Output of Organic LED Display Technology. Journal of Display Technology, 2008, 4, 308-313.	1.3	3
122	Predicting the linear optical response of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>J</mml:mi></mml:math>-aggregate microcavity exciton-polariton devices. Physical Review B, 2008, 78, .	1.1	7
123	Planarization in Electrochemically Fabricated Nanodimensional Films. Journal of Physical Chemistry C, 2008, 112, 7318-7325.	1.5	0
124	Lateral organic bilayer heterojunction photoconductors. Applied Physics Letters, 2008, 93, 063305.	1.5	21
125	Superradiance and motional narrowing of exciton-polaritons in J-aggregate thin films. , 2007, , .		0
126	Exciton-polaritons at room temperature in dielectric microcavities exhibiting rabi-splitting Ω_R ≫ 100 meV. , 2007, , .		0

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127	Micropatterning metal electrode of organic light emitting devices using rapid polydimethylsiloxane lift-off. Applied Physics Letters, 2007, 91, 043102.	1.5	33
128	Electroluminescence from a Mixed Redâˆ’Greenâˆ’Blue Colloidal Quantum Dot Monolayer. Nano Letters, 2007, 7, 2196-2200.	4.5	399
129	Highly Efficient Resonance Energy Transfer in Ultrathin Organic-Inorganic Semiconductor Hybrid Films. , 2007, , .		0
130	Superradiance and Motional Narrowing of Exciton-Polaritons in J-Aggregate Thin Films. , 2007, , .		0
131	Bias-Induced Photoluminescence Quenching of Single Colloidal Quantum Dots Embedded in Organic Semiconductors. Nano Letters, 2007, 7, 3781-3786.	4.5	60
132	Solid state cavity QED: Strong coupling in organic thin films. Organic Electronics, 2007, 8, 94-113.	1.4	104
133	Organic Electronic Device Modeling at the Nanoscale. IEEE/ACM International Conference on Computer-Aided Design, Digest of Technical Papers, 2006, , .	0.0	0
134	NiO as an Inorganic Hole-Transporting Layer in Quantum-Dot Light-Emitting Devices. Nano Letters, 2006, 6, 2991-2994.	4.5	234
135	35.1: Invited Paper: Quantum Dot Light Emitting Devices for Pixelated Full Color Displays. Digest of Technical Papers SID International Symposium, 2006, 37, 1368.	0.1	1
136	Color-Saturated Green-Emitting QD-LEDs. Angewandte Chemie - International Edition, 2006, 45, 5796-5799.	7.2	250
137	Ultrafast exciton response of high optical density J-aggregates from ultrathin films of cyanine dyes. , 2006, , .		0
138	Critically coupling a 5.1 nm thick J-aggregate layer to a single dielectric mirror, resulting in an effective peak absorption constant of 6.9 x 10⁶ cm^{−1}. , 2006, , .		0
139	Method for fabrication of saturated RGB quantum dot light-emitting devices. , 2005, , .		15
140	Forming oriented organic crystals from amorphous thin films on patterned substrates via solvent-vapor annealing. Organic Electronics, 2005, 6, 211-220.	1.4	52
141	Large-Area Ordered Quantum-Dot Monolayers via Phase Separation During Spin-Casting. Advanced Functional Materials, 2005, 15, 1117-1124.	7.8	263
142	Strong Coupling in a Microcavity LED. Physical Review Letters, 2005, 95, 036401.	2.9	214
143	Photodetectors based on treated CdSe quantum-dot films. Applied Physics Letters, 2005, 87, 213505.	1.5	229
144	Blue Luminescence from (CdS)ZnS Coreâ€“Shell Nanocrystals. Angewandte Chemie - International Edition, 2004, 43, 2154-2158.	7.2	382

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145	Tuning the performance of hybrid organic/inorganic quantum dot light-emitting devices. Organic Electronics, 2003, 4, 123-130.	1.4	218
146	Polymer-on-Polymer Stamping on Micro- and Nano-Scales. Materials Research Society Symposia Proceedings, 2002, 736, 1.	0.1	1
147	Electroluminescence from single monolayers of nanocrystals in molecular organic devices. Nature, 2002, 420, 800-803.	13.7	2,420