Vladimir BuloviÄ

List of Publications by Year
in descending order

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	Electroluminescence from single monolayers of nanocrystals in molecular organic devices. Nature, 2002, 420, 800-803.	13.7	2,420
2	Emergence of colloidal quantum-dot light-emitting technologies. Nature Photonics, 2013, 7, 13-23.	15.6	2,155
3	Efficient perovskite solar cells via improved carrier management. Nature, 2021, 590, 587-593.	13.7	1,972
4	Improved performance and stability in quantumÂdot solar cells through band alignmentÂengineering. Nature Materials, 2014, 13, 796-801.	13.3	1,511
5	High-efficiency quantum-dot light-emitting devices with enhanced charge injection. Nature Photonics, 2013, 7, 407-412.	15.6	1,025
6	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49.	19.8	797
7	Quantum Dot Light-Emitting Devices with Electroluminescence Tunable over the Entire Visible Spectrum. Nano Letters, 2009, 9, 2532-2536.	4.5	796
8	Photo-induced halide redistribution in organicâ€“inorganic perovskite films. Nature Communications, 2016, 7, 11683.	5.8	778
9	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
10	Colloidal PbS Quantum Dot Solar Cells with High Fill Factor. ACS Nano, 2010, 4, 3743-3752.	7.3	416
11	Electroluminescence from a Mixed Redâˆ’Greenâˆ’Blue Colloidal Quantum Dot Monolayer. Nano Letters, 2007, 7, 2196-2200.	4.5	399
12	Pathways for solar photovoltaics. Energy and Environmental Science, 2015, 8, 1200-1219.	15.6	385
13	Blue Luminescence from (CdS)ZnS Coreâ€“Shell Nanocrystals. Angewandte Chemie - International Edition, 2004, 43, 2154-2158.	7.2	382
14	An ingestible bacterial-electronic system to monitor gastrointestinal health. Science, 2018, 360, 915-918.	6.0	380
15	Directâ€“indirect character of the bandgap in methylammonium lead iodide perovskite. Nature Materials, 2017, 16, 115-120.	13.3	369
16	Inkjetâ€Printed Quantum Dotâ€“Polymer Composites for Fullâ€Color ACâ€Driven Displays. Advanced Materials, 2009, 21, 2151-2155.	11.1	367
17	Colloidal quantum dot light-emitting devices. Nano Reviews, 2010, 1, 5202.	3.7	350
18	Lattice strain causes non-radiative losses in halide perovskites. Energy and Environmental Science, 2019, 12, 596-606.	15.6	343

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19	Contact Printing of Quantum Dot Light-Emitting Devices. Nano Letters, 2008, 8, 4513-4517.	4.5	294
20	Transparent, near-infrared organic photovoltaic solar cells for window and energy-scavenging applications. Applied Physics Letters, 2011, 98, .	1.5	291
21	Effect of synthetic accessibility on the commercial viability of organic photovoltaics. Energy and Environmental Science, 2013, 6, 711.	15.6	288
22	Improved Current Extraction from ZnO/PbS Quantum Dot Heterojunction Photovoltaics Using a MoO₃ Interfacial Layer. Nano Letters, 2011, 11, 2955-2961.	4.5	265
23	Metal Halide Perovskite Polycrystalline Films Exhibiting Properties of Single Crystals. Joule, 2017, 1, 155-167.	11.7	264
24	Large-Area Ordered Quantum-Dot Monolayers via Phase Separation During Spin-Casting. Advanced Functional Materials, 2005, 15, 1117-1124.	7.8	263
25	Stable Lightâ€Emitting Diodes Using Phaseâ€Pure Ruddlesdenâ€“Popper Layered Perovskites. Advanced Materials, 2018, 30, 1704217.	11.1	258
26	ZnO Nanowire Arrays for Enhanced Photocurrent in PbS Quantum Dot Solar Cells. Advanced Materials, 2013, 25, 2790-2796.	11.1	251
27	Color-Saturated Green-Emitting QD-LEDs. Angewandte Chemie - International Edition, 2006, 45, 5796-5799.	7.2	250
28	Direct Monolithic Integration of Organic Photovoltaic Circuits on Unmodified Paper. Advanced Materials, 2011, 23, 3500-3505.	11.1	243
29	NiO as an Inorganic Hole-Transporting Layer in Quantum-Dot Light-Emitting Devices. Nano Letters, 2006, 6, 2991-2994.	4.5	234
30	Tailoring metal halide perovskites through metal substitution: influence on photovoltaic and material properties. Energy and Environmental Science, 2017, 10, 236-246.	15.6	230
31	Photodetectors based on treated CdSe quantum-dot films. Applied Physics Letters, 2005, 87, 213505.	1.5	229
32	Open-Circuit Voltage Deficit, Radiative Sub-Bandgap States, and Prospects in Quantum Dot Solar Cells. Nano Letters, 2015, 15, 3286-3294.	4.5	223
33	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
34	Tuning the performance of hybrid organic/inorganic quantum dot light-emitting devices. Organic Electronics, 2003, 4, 123-130.	1.4	218
35	Strong Coupling in a Microcavity LED. Physical Review Letters, 2005, 95, 036401.	2.9	214
36	Charge-Carrier Recombination in Halide Perovskites. Chemical Reviews, 2019, 119, 11007-11019.	23.0	197

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37	Graphene Cathode-Based ZnO Nanowire Hybrid Solar Cells. Nano Letters, 2013, 13, 233-239.	4.5	193
38	QLEDs for displays and solid-state lighting. MRS Bulletin, 2013, 38, 703-711.	1.7	184
39	Practical Roadmap and Limits to Nanostructured Photovoltaics. Advanced Materials, 2011, 23, 5712-5727.	11.1	160
40	Air-Stable Operation of Transparent, Colloidal Quantum Dot Based LEDs with a Unipolar Device Architecture. Nano Letters, 2010, 10, 24-29.	4.5	149
41	The Impact of Atmosphere on the Local Luminescence Properties of Metal Halide Perovskite Grains. Advanced Materials, 2018, 30, e1706208.	11.1	149
42	Origin of Efficiency Roll-Off in Colloidal Quantum-Dot Light-Emitting Diodes. Physical Review Letters, 2013, 110, 217403.	2.9	144
43	All vapor-deposited lead-free doped CsSnBr3 planar solar cells. Nano Energy, 2016, 28, 469-474.	8.2	139
44	Speed Limit for Triplet-Exciton Transfer in Solid-State PbS Nanocrystal-Sensitized Photon Upconversion. ACS Nano, 2017, 11, 7848-7857.	7.3	130
45	Low-Temperature Solution-Processed Solar Cells Based on PbS Colloidal Quantum Dot/CdS Heterojunctions. Nano Letters, 2013, 13, 994-999.	4.5	129
46	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
47	Triplet-Sensitization by Lead Halide Perovskite Thin Films for Near-Infrared-to-Visible Upconversion. ACS Energy Letters, 2019, 4, 888-895.	8.8	117
48	Triplet Exciton Dissociation in Singlet Exciton Fission Photovoltaics. Advanced Materials, 2012, 24, 6169-6174.	11.1	108
49	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
50	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
51	Solid state cavity QED: Strong coupling in organic thin films. Organic Electronics, 2007, 8, 94-113.	1.4	104
52	Spin-dependent charge transfer state design rules in organic photovoltaics. Nature Communications, 2015, 6, 6415.	5.8	83
53	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
54	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

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55	Electrophoretic Deposition of CdSe/ZnS Quantum Dots for Lightâ€Emitting Devices. Advanced Materials, 2013, 25, 1420-1423.	11.1	79
56	Photovoltaic Performance of PbS Quantum Dots Treated with Metal Salts. ACS Nano, 2016, 10, 3382-3388.	7.3	75
57	Heterojunction Photovoltaics Using Printed Colloidal Quantum Dots as a Photosensitive Layer. Nano Letters, 2009, 9, 860-863.	4.5	69
58	Quantum Dot/J-Aggregate Blended Films for Light Harvesting and Energy Transfer. Nano Letters, 2010, 10, 3995-3999.	4.5	69
59	pâ€iâ€n Heterojunction Solar Cells with a Colloidal Quantumâ€Dot Absorber Layer. Advanced Materials, 2014, 26, 4845-4850.	11.1	67
60	Interfacial Recombination for Fast Operation of a Planar Organic/QD Infrared Photodetector. Advanced Materials, 2010, 22, 5250-5254.	11.1	66
61	Plexciton Dirac points and topological modes. Nature Communications, 2016, 7, 11783.	5.8	66
62	The Impact of Phase Retention on the Structural and Optoelectronic Properties of Metal Halide Perovskites. Advanced Materials, 2016, 28, 10757-10763.	11.1	65
63	In situ vapor-deposited parylene substrates for ultra-thin, lightweight organic solar cells. Organic Electronics, 2016, 31, 120-126.	1.4	63
64	Interfacial Effects of Tin Oxide Atomic Layer Deposition in Metal Halide Perovskite Photovoltaics. Advanced Energy Materials, 2018, 8, 1800591.	10.2	62
65	Bias-Induced Photoluminescence Quenching of Single Colloidal Quantum Dots Embedded in Organic Semiconductors. Nano Letters, 2007, 7, 3781-3786.	4.5	60
66	Direct formation of a water oxidation catalyst from thin-film cobalt. Energy and Environmental Science, 2010, 3, 1726.	15.6	59
67	An Organic Active-Matrix Imager. IEEE Transactions on Electron Devices, 2008, 55, 527-532.	1.6	56
68	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
69	Terahertz-Driven Luminescence and Colossal Stark Effect in CdSeâ€“CdS Colloidal Quantum Dots. Nano Letters, 2017, 17, 5375-5380.	4.5	53
70	Forming oriented organic crystals from amorphous thin films on patterned substrates via solvent-vapor annealing. Organic Electronics, 2005, 6, 211-220.	1.4	52
71	Electroluminescence from Nanoscale Materials via Field-Driven Ionization. Nano Letters, 2011, 11, 2927-2932.	4.5	51
72	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

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73	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
74	Probing buried recombination pathways in perovskite structures using 3D photoluminescence tomography. Energy and Environmental Science, 2018, 11, 2846-2852.	15.6	42
75	Near-infrared photodetector consisting of J-aggregating cyanine dye and metal oxide thin films. Applied Physics Letters, 2012, 101, 113303.	1.5	41
76	Study of field driven electroluminescence in colloidal quantum dot solids. Journal of Applied Physics, 2012, 111, .	1.1	38
77	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
78	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
79	Impact of microstructure on the electronâ€“hole interaction in lead halide perovskites. Energy and Environmental Science, 2017, 10, 1358-1366.	15.6	36
80	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
81	Photoluminescent Arrays of Nanopatterned Monolayer MoS₂. Advanced Functional Materials, 2017, 27, 1703688.	7.8	35
82	Micropatterning metal electrode of organic light emitting devices using rapid polydimethylsiloxane lift-off. Applied Physics Letters, 2007, 91, 043102.	1.5	33
83	Lateral heterojunction photodetector consisting of molecular organic and colloidal quantum dot thin films. Applied Physics Letters, 2009, 94, 043307.	1.5	33
84	Cyclobutadieneâ€“C₆₀ Adducts: Nâ€Type Materials for Organic Photovoltaic Cells with High V_{OC}. Advanced Functional Materials, 2013, 23, 3061-3069.	7.8	33
85	Micronâ€Scale Patterning of High Quantum Yield Quantum Dot LEDs. Advanced Materials Technologies, 2019, 4, 1800727.	3.0	33
86	Lasing through a strongly-coupled mode by intra-cavity pumping. Optics Express, 2013, 21, 12122.	1.7	32
87	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
88	M13 Virusâ€Based Framework for High Fluorescence Enhancement. Small, 2019, 15, e1901233.	5.2	30
89	Contactâ€Printed Microelectromechanical Systems. Advanced Materials, 2010, 22, 1840-1844.	11.1	29
90	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

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91	Twenty-Fold Enhancement of Molecular Fluorescence by Coupling to a J-Aggregate Critically Coupled Resonator. ACS Nano, 2012, 6, 467-471.	7.3	28
92	All-vacuum-deposited inorganic cesium lead halide perovskite light-emitting diodes. APL Materials, 2020, 8, .	2.2	28
93	Bulk recrystallization for efficient mixed-cation mixed-halide perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 25511-25520.	5.2	27
94	Nanoscale Morphology Revealed at the Interface Between Colloidal Quantum Dots and Organic Semiconductor Films. Nano Letters, 2010, 10, 2421-2426.	4.5	26
95	Nanocrystal-Sensitized Infrared-to-Visible Upconversion in a Microcavity under Subsolar Flux. Nano Letters, 2021, 21, 1011-1016.	4.5	26
96	Performance Comparison of Different Organic Molecular Floating-Gate Memories. IEEE Nanotechnology Magazine, 2011, 10, 594-599.	1.1	25
97	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
98	Sub-50 mV NEM relay operation enabled by self-assembled molecular coating. , 2016, , .		25
99	High-Speed Vapor Transport Deposition of Perovskite Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 32928-32936.	4.0	24
100	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
101	Intracavity optical pumping of J-aggregate microcavity exciton polaritons. Physical Review B, 2010, 82, .	1.1	22
102	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
103	Tunneling Nanoelectromechanical Switches Based on Compressible Molecular Thin Films. ACS Nano, 2015, 9, 7886-7894.	7.3	22
104	Lateral organic bilayer heterojunction photoconductors. Applied Physics Letters, 2008, 93, 063305.	1.5	21
105	Method for fabrication of saturated RGB quantum dot light-emitting devices. , 2005, , .		15
106	Terahertz-Driven Stark Spectroscopy of CdSe and CdSeâ€“CdS Coreâ€“Shell Quantum Dots. Nano Letters, 2019, 19, 8125-8131.	4.5	15
107	Multijunction organic photovoltaics with a broad spectral response. Physical Chemistry Chemical Physics, 2012, 14, 14548.	1.3	14
108	Decreased Synthesis Costs and Waste Product Toxicity for Lead Sulfide Quantum Dot Ink Photovoltaics. Advanced Sustainable Systems, 2019, 3, 1900061.	2.7	14

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109	Contact printing of colloidal nanocrystal thin films for hybrid organic/quantum dot optoelectronic devices. Nano Reviews, 2012, 3, 16144.	3.7	13
110	Impact of Photon Recycling, Grain Boundaries, and Nonlinear Recombination on Energy Transport in Semiconductors. ACS Photonics, 2022, 9, 110-122.	3.2	13
111	Grapheneâ€“Perovskite Schottky Barrier Solar Cells. Advanced Sustainable Systems, 2018, 2, 1700106.	2.7	12
112	V OC enhancement in polymer solar cells with isobenzofulveneâ€“C 60 adducts. Organic Electronics, 2016, 31, 48-55.	1.4	9
113	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
114	Monolayer Hexagonal Boron Nitride: An Efficient Electron Blocking Layer in Organic Photovoltaics. Advanced Functional Materials, 2021, 31, 2101238.	7.8	9
115	Maximizing the external radiative efficiency of hybrid perovskite solar cells. Pure and Applied Chemistry, 2020, 92, 697-706.	0.9	9
116	A versatile acoustically active surface based on piezoelectric microstructures. Microsystems and Nanoengineering, 2022, 8, .	3.4	8
117	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
118	Electrically tunable organic vertical-cavity surface-emitting laser. Applied Physics Letters, 2014, 105, 073303.	1.5	7
119	Solid-State Solvation and Enhanced Exciton Diffusion in Doped Organic Thin Films under Mechanical Pressure. ACS Nano, 2015, 9, 4412-4418.	7.3	7
120	Predicting Low Toxicity and Scalable Solvent Systems for Highâ€Speed Rollâ€toâ€Roll Perovskite Manufacturing. Solar Rrl, 2022, 6, 2100567.	3.1	7
121	Luminescence of III-IV-V thin film alloys grown by metalorganic chemical vapor deposition. Journal of Applied Physics, 2018, 123, .	1.1	6
122	Hybrid Approach to Fabricate Uniform and Active Molecular Junctions. Nano Letters, 2021, 21, 1606-1612.	4.5	6
123	An Ultrathin Flexible Loudspeaker Based on a Piezoelectric Microdome Array. IEEE Transactions on Industrial Electronics, 2023, 70, 985-994.	5.2	6
124	Voltage-controlled reversible modulation of colloidal quantum dot thin film photoluminescence. Applied Physics Letters, 2022, 120, 211104.	1.5	6
125	Colloidal quantum dot light emitting devices. , 2013, , 148-172.		4
126	Molecular Platform for Fast Low-Voltage Nanoelectromechanical Switching. Nano Letters, 2021, 21, 10244-10251.	4.5	4

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127	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
128	Printed MEMS membranes on silicon. , 2012, , .		3
129	Coarsening and solidification via solvent-annealing in thin liquid films. Journal of Fluid Mechanics, 2013, 723, 69-90.	1.4	3
130	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
131	Micron-Scale Molecular Organic Microcavity Arrays Patterned With Thin-Film Contact-Patterning. IEEE Photonics Technology Letters, 2012, 24, 104-106.	1.3	2
132	ZnO Nanowire Arrays for Enhanced Photocurrent in PbS Quantum Dot Solar Cells (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 54	11.1	2
133	Polymer-on-Polymer Stamping on Micro- and Nano-Scales. Materials Research Society Symposia Proceedings, 2002, 736, 1.	0.1	1
134	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
135	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
136	Organic Electronic Device Modeling at the Nanoscale. IEEE/ACM International Conference on Computer-Aided Design, Digest of Technical Papers, 2006, , .	0.0	0
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	Superradiance and motional narrowing of exciton-polaritons in J-aggregate thin films. , 2007, , .		0
140	Exciton-polaritons at room temperature in dielectric microcavities exhibiting rabi-splitting Ω_R ≫ 100 meV. , 2007, , .		0
141	Highly Efficient Resonance Energy Transfer in Ultrathin Organic-Inorganic Semiconductor Hybrid Films. , 2007, , .		0
142	Superradiance and Motional Narrowing of Exciton-Polaritons in J-Aggregate Thin Films. , 2007, , .		0
143	Planarization in Electrochemically Fabricated Nanodimensional Films. Journal of Physical Chemistry C, 2008, 112, 7318-7325.	1.5	0
144	Tunneling nanoelectromechanical switches. , 2015, , .		0

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145	Electromechanically actuating molecules. , 2015, , .		0
146	Terahertz Field-Induced Reemergence of Quenched Photoluminescence in Quantum Dots. Nano Letters, 2022, , .	4.5	0
147	Predicting Low Toxicity and Scalable Solvent Systems for Highâ€Speed Rollâ€toâ€Roll Perovskite Manufacturing. Solar Rrl, 2022, 6, .	3.1	0