

# Bjrn Lssem

## List of Publications by Citations

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137  
papers

9,588  
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41  
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96  
g-index

144  
ext. papers

10,334  
ext. citations

7.4  
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6.2  
L-index

#	Paper	IF	Citations
137	White organic light-emitting diodes with fluorescent tube efficiency. <i>Nature</i> , <b>2009</b> , 459, 234-8	50.4	2874
136	White organic light-emitting diodes: Status and perspective. <i>Reviews of Modern Physics</i> , <b>2013</b> , 85, 1245-1293	49.3	458
135	Doping of organic semiconductors. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2013</b> , 210, 9-43	1.6	425
134	Degradation Mechanisms and Reactions in Organic Light-Emitting Devices. <i>Chemical Reviews</i> , <b>2015</b> , 115, 8449-503	68.1	395
133	Doped Organic Transistors. <i>Chemical Reviews</i> , <b>2016</b> , 116, 13714-13751	68.1	378
132	Quantification of energy loss mechanisms in organic light-emitting diodes. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 253305	3.4	272
131	Color in the corners: ITO-free white OLEDs with angular color stability. <i>Advanced Materials</i> , <b>2013</b> , 25, 4006-13	24	212
130	Efficiency and rate of spontaneous emission in organic electroluminescent devices. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	198
129	Top-emitting organic light-emitting diodes. <i>Optics Express</i> , <b>2011</b> , 19 Suppl 6, A1250-64	3.3	148
128	Doped organic transistors operating in the inversion and depletion regime. <i>Nature Communications</i> , <b>2013</b> , 4, 2775	17.4	146
127	Fermi level shift and doping efficiency in p-doped small molecule organic semiconductors: A photoelectron spectroscopy and theoretical study. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	135
126	Molecular-scale simulation of electroluminescence in a multilayer white organic light-emitting diode. <i>Nature Materials</i> , <b>2013</b> , 12, 652-8	27	129
125	Nano-particle based scattering layers for optical efficiency enhancement of organic light-emitting diodes and organic solar cells. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 204502	2.5	125
124	Doped Organic Semiconductors: Trap-Filling, Impurity Saturation, and Reserve Regimes. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 2701-2707	15.6	123
123	Highly efficient white top-emitting organic light-emitting diodes comprising laminated microlens films. <i>Nano Letters</i> , <b>2012</b> , 12, 424-8	11.5	121
122	Photoelectron spectroscopy study of systematically varied doping concentrations in an organic semiconductor layer using a molecular p-dopant. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 103711	2.5	117
121	Chemical degradation mechanisms of highly efficient blue phosphorescent emitters used for organic light emitting diodes. <i>Organic Electronics</i> , <b>2013</b> , 14, 115-123	3.5	112

120	Comparing the emissive dipole orientation of two similar phosphorescent green emitter molecules in highly efficient organic light-emitting diodes. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 253304	3.4	107
119	Analysis of chemical degradation mechanism within sky blue phosphorescent organic light emitting diodes by laser-desorption/ionization time-of-flight mass spectrometry. <i>Organic Electronics</i> , <b>2011</b> , 12, 341-347	3.5	101
118	. <i>Proceedings of the IEEE</i> , <b>2009</b> , 97, 1606-1626	14.3	98
117	Structural phase transition in pentacene caused by molecular doping and its effect on charge carrier mobility. <i>Organic Electronics</i> , <b>2012</b> , 13, 58-65	3.5	97
116	Top-emitting organic light-emitting diodes: Influence of cavity design. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 253308	3.4	97
115	High mobility N-type transistors based on solution-sheared doped 6,13-bis(triisopropylsilylethynyl)pentacene thin films. <i>Advanced Materials</i> , <b>2013</b> , 25, 4663-7	24	86
114	Storage of charge carriers on emitter molecules in organic light-emitting diodes. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	81
113	Highly efficient white organic light-emitting diodes based on fluorescent blue emitters. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 113113	2.5	76
112	Improved high-brightness efficiency of phosphorescent organic LEDs comprising emitter molecules with small permanent dipole moments. <i>Advanced Materials</i> , <b>2010</b> , 22, 3189-93	24	76
111	Novel Approach for Alternating Current (AC)-Driven Organic Light-Emitting Devices. <i>Advanced Functional Materials</i> , <b>2012</b> , 22, 210-217	15.6	68
110	White top-emitting organic light-emitting diodes with forward directed emission and high color quality. <i>Organic Electronics</i> , <b>2010</b> , 11, 1676-1682	3.5	61
109	High-performance vertical organic transistors. <i>Small</i> , <b>2013</b> , 9, 3670-7	11	60
108	Pentacene Schottky diodes studied by impedance spectroscopy: Doping properties and trap response. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	59
107	Organic Zener diodes: tunneling across the gap in organic semiconductor materials. <i>Nano Letters</i> , <b>2010</b> , 10, 4929-34	11.5	56
106	A new phase of the c(4 x 2) superstructure of alkanethiols grown by vapor phase deposition on gold. <i>Langmuir</i> , <b>2005</b> , 21, 5256-8	4	54
105	The origin of faceting of ultraflat gold films epitaxially grown on mica. <i>Applied Surface Science</i> , <b>2005</b> , 249, 197-202	6.7	54
104	Measurement of triplet exciton diffusion in organic light-emitting diodes. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	51
103	STM study of mixed alkanethiol/biphenylthiol self-assembled monolayers on Au(111). <i>Langmuir</i> , <b>2006</b> , 22, 3021-7	4	51

102	Improvement of voltage and charge balance in inverted top-emitting organic electroluminescent diodes comprising doped transport layers by thermal annealing. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 083304	3.4	50
101	Investigation of C60F36 as low-volatility p-dopant in organic optoelectronic devices. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 103102	2.5	50
100	Vertical organic transistors. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 443003	1.8	47
99	Influence of the hole blocking layer on blue phosphorescent organic light-emitting devices using 3,6-di(9-carbazolyl)-9-(2-ethylhexyl)carbazole as host material. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 093304	3.4	47
98	Resistive switching of rose bengal devices: A molecular effect?. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 094504	2.5	47
97	Singlet exciton diffusion length in organic light-emitting diodes. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	43
96	Organic light-emitting diodes for lighting: High color quality by controlling energy transfer processes in host-guest-systems. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 033102	2.5	41
95	An all C60 vertical transistor for high frequency and high current density applications. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 213303	3.4	41
94	Outcoupling efficiency in small-molecule OLEDs: from theory to experiment <b>2010</b> ,		38
93	Contact Resistance Effects in Highly Doped Organic Electrochemical Transistors. <i>Advanced Materials</i> , <b>2016</b> , 28, 8766-8770	2.4	38
92	Feel the Heat: Nonlinear Electrothermal Feedback in Organic LEDs. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 3367-3374	15.6	37
91	Finding the equilibrium of organic electrochemical transistors. <i>Nature Communications</i> , <b>2020</b> , 11, 2515	17.4	36
90	High brightness alternating current electroluminescence with organic light emitting material. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 103307	3.4	36
89	Self-heating, bistability, and thermal switching in organic semiconductors. <i>Physical Review Letters</i> , <b>2013</b> , 110, 126601	7.4	35
88	Role of oxygen-bonds in the degradation process of phosphorescent organic light emitting diodes. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 053302	3.4	35
87	Passivation of Molecular n-Doping: Exploring the Limits of Air Stability. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 3730-3737	15.6	34
86	Investigation of triplet harvesting and outcoupling efficiency in highly efficient two-color hybrid white organic light-emitting diodes. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2013</b> , 210, 1467-1475	1.6	34
85	Molecular doping for control of gate bias stress in organic thin film transistors. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 013507	3.4	33

84	Color-stable, ITO-free white organic light-emitting diodes with enhanced efficiency using solution-processed transparent electrodes and optical outcoupling layers. <i>Organic Electronics</i> , <b>2014</b> , 15, 1028-1034	3.5	33
83	Quantitative allocation of Bragg scattering effects in highly efficient OLEDs fabricated on periodically corrugated substrates. <i>Optics Express</i> , <b>2013</b> , 21, 16319-30	3.3	33
82	Quantitative description of charge-carrier transport in a white organic light-emitting diode. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	33
81	Quantification of deep hole-trap filling by molecular p-doping: Dependence on the host material purity. <i>Organic Electronics</i> , <b>2013</b> , 14, 2348-2352	3.5	30
80	Reduced contact resistance in top-contact organic field-effect transistors by interface contact doping. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 103303	3.4	30
79	Hydrofluoroethers as heat-transfer fluids for OLEDs: Operational range, stability, and efficiency improvement. <i>Organic Electronics</i> , <b>2012</b> , 13, 356-360	3.5	29
78	Electroresponsive Ionic Liquid Crystal Elastomers. <i>Macromolecular Rapid Communications</i> , <b>2019</b> , 40, e1900299	3.5	28
77	Influence of organic capping layers on the performance of transparent organic light-emitting diodes. <i>Optics Letters</i> , <b>2011</b> , 36, 1443-5	3	28
76	Enhancing the efficiency of alternating current driven organic light-emitting devices by optimizing the operation frequency. <i>Organic Electronics</i> , <b>2013</b> , 14, 809-813	3.5	27
75	White top-emitting organic light-emitting diodes employing a heterostructure of down-conversion layers. <i>Organic Electronics</i> , <b>2011</b> , 12, 2126-2130	3.5	27
74	Laser desorption/ionization time-of-flight mass spectrometry: A predictive tool for the lifetime of organic light emitting devices. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 043314	3.4	27
73	Effect of trap states on the electrical doping of organic semiconductors. <i>Organic Electronics</i> , <b>2014</b> , 15, 16-21	3.5	26
72	Ultra-bright alternating current organic electroluminescence. <i>Organic Electronics</i> , <b>2012</b> , 13, 1589-1593	3.5	26
71	Systematic investigation of transparent organic light-emitting diodes depending on top metal electrode thickness. <i>Organic Electronics</i> , <b>2011</b> , 12, 1383-1388	3.5	26
70	Chemical degradation processes of highly stable red phosphorescent organic light emitting diodes. <i>Organic Electronics</i> , <b>2012</b> , 13, 1900-1907	3.5	25
69	Reaching saturation in patterned source vertical organic field effect transistors. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 204503	2.5	24
68	Organic pin-diodes approaching ultra-high-frequencies. <i>Organic Electronics</i> , <b>2012</b> , 13, 1114-1120	3.5	24
67	Advanced Organic Permeable-Base Transistor with Superior Performance. <i>Advanced Materials</i> , <b>2015</b> , 27, 7734-9	2.4	24

66	Direct structuring of C60 thin film transistors by photo-lithography under ambient conditions. <i>Organic Electronics</i> , <b>2012</b> , 13, 506-513	3.5	23
65	Tuning charge carrier transport and optical birefringence in liquid-crystalline thin films: A new design space for organic light-emitting diodes. <i>Scientific Reports</i> , <b>2018</b> , 8, 699	4.9	22
64	Controlled formation of charge depletion zones by molecular doping in organic pin-diodes and its description by the Mott-Schottky relation. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 123722	2.5	22
63	Chemical changes on the green emitter tris(8-hydroxy-quinolinato)aluminum during device aging of p-i-n-structured organic light emitting diodes. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 183309	3.4	22
62	Analysis of the external and internal quantum efficiency of multi-emitter, white organic light emitting diodes. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 143304	3.4	20
61	Lambertian white top-emitting organic light emitting device with carbon nanotube cathode. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 114505	2.5	20
60	p-Channel field-effect transistors based on C60 doped with molybdenum trioxide. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 2337-41	9.5	19
59	Comparison of ultraviolet- and charge-induced degradation phenomena in blue fluorescent organic light emitting diodes. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 013308	3.4	19
58	Bidirectional operation of vertical organic triodes. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 044507	2.5	19
57	Functionalized p-dopants as self-assembled monolayers for enhanced charge carrier injection in organic electronic devices. <i>Organic Electronics</i> , <b>2014</b> , 15, 654-660	3.5	18
56	Electrical and Structural Characterization of Biphenylethanethiol SAMs. <i>Journal of Physical Chemistry C</i> , <b>2007</b> , 111, 6392-6397	3.8	18
55	Molecular structure of ferrocenethiol islands embedded into alkanethiol self-assembled monolayers by UHV-STM. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2006</b> , 203, 1448-1452 <sup>16</sup>		18
54	Rectangular (3 x 2 square root of 3) superlattice of a dodecanethiol self-assembled monolayer on Au(111) observed by ultra-high-vacuum scanning tunneling microscopy. <i>Journal of Physical Chemistry B</i> , <b>2005</b> , 109, 11424-6	3.4	17
53	Engineering Blue Fluorescent Bulk Emitters for OLEDs: Triplet Harvesting by Green Phosphors. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 2414-2426	9.6	16
52	Highly efficient bi-directional organic light-emitting diodes by strong micro-cavity effects. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 073303	3.4	16
51	Self-passivation of molecular n-type doping during air exposure using a highly efficient air-instable dopant. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2013</b> , 210, 2188-2198	1.6	15
50	Bi-directional organic light-emitting diodes with nanoparticle-enhanced light outcoupling. <i>Laser and Photonics Reviews</i> , <b>2013</b> , 7, 1079-1087	8.3	15
49	Single carrier devices with electrical doped layers for the characterization of charge-carrier transport in organic thin-films. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 013303	3.4	15

48	Tuning the Transconductance of Organic Electrochemical Transistors. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2004939	15.6	15
47	Reverse breakdown behavior in organic pin-diodes comprising C60 and pentacene: Experiment and theory. <i>Organic Electronics</i> , <b>2013</b> , 14, 193-199	3.5	14
46	Investigation on the origin of the memory effect in metal/organic semiconductor/metal structures. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 084508	2.5	14
45	Non-volatile organic memory devices comprising SiO <sub>2</sub> and C60 showing 10 <sup>4</sup> switching cycles. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 193301	3.4	14
44	Patterning organic transistors by dry-etching: The double layer lithography. <i>Organic Electronics</i> , <b>2017</b> , 45, 124-130	3.5	13
43	Influence of phosphorescent dopants in organic light-emitting diodes with an organic homojunction. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 243303	3.4	13
42	Organic Electrochemical Transistors Based on Room Temperature Ionic Liquids: Performance and Stability. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2018</b> , 215, 1800631	1.6	13
41	Minority Currents in n-Doped Organic Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 32432-32439	3.2	12
40	Controlling morphology: A vertical organic transistor with a self-structured permeable base using the bottom electrode as seed layer. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 033301	3.4	12
39	Performance and lifetime of vacuum deposited organic light-emitting diodes: Influence of residual gases present during device fabrication. <i>Organic Electronics</i> , <b>2014</b> , 15, 3251-3258	3.5	11
38	Coupled plasmonic modes in organic planar microcavities. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 253301	3.4	11
37	Increased and balanced light emission of transparent organic light-emitting diodes by enhanced microcavity effects. <i>Optics Letters</i> , <b>2011</b> , 36, 2931-3	3	11
36	Efficiency enhancement of top-emitting organic light-emitting diodes using conversion dyes. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 083118	2.5	11
35	Organic electrochemical transistors [From device models to a targeted design of materials. <i>Journal of Materials Chemistry C</i> ,	7.1	11
34	Enhanced and balanced efficiency of white bi-directional organic light-emitting diodes. <i>Optics Express</i> , <b>2013</b> , 21, 28040-7	3.3	10
33	Photoelectron spectroscopy investigation of thin metal films employed as top contacts in transparent organic solar cells. <i>Thin Solid Films</i> , <b>2011</b> , 519, 1872-1875	2.2	10
32	Self Assembly of Mixed Monolayers of Mercaptoundecylferrocene and Undecanethiol studied by STM. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 61, 852-855	0.3	10
31	Scaling of High-Performance Organic Permeable Base Transistors. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800728	6.4	10

30	Organic Junction Field-Effect Transistor. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 1011-1016	15.6	9
29	Straight-forward control of the degree of micro-cavity effects in organic light-emitting diodes based on a thin striped metal layer. <i>Organic Electronics</i> , <b>2013</b> , 14, 2444-2450	3.5	9
28	Doped N-Type Organic Field-Effect Transistors Based on Faux-Hawk Fullerene. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900109	6.4	8
27	Removing the current-limit of vertical organic field effect transistors. <i>Journal of Applied Physics</i> , <b>2017</b> , 122, 195502	2.5	7
26	Beyond 100% doping efficiency. <i>Nature Materials</i> , <b>2019</b> , 18, 93-94	27	7
25	Doped bottom-contact organic field-effect transistors. <i>Nanotechnology</i> , <b>2018</b> , 29, 284001	3.4	6
24	46.1: Invited Paper: Exciton Induced Chemical Reactions in Organic Light Emitting Devices. <i>Digest of Technical Papers SID International Symposium</i> , <b>2009</b> , 40, 681	0.5	6
23	Device Engineering in Organic Electrochemical Transistors toward Multifunctional Applications. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 2434-2448	4	6
22	Modeling tunnel currents in organic permeable-base transistors. <i>Synthetic Metals</i> , <b>2019</b> , 252, 82-90	3.6	5
21	Highly efficient inverted top-emitting organic electroluminescent devices with doped charge transport layers <b>2010</b> ,		5
20	Novel concepts for OLED lighting <b>2010</b> ,		5
19	A high performance liquid chromatography method to determine phenanthroline derivatives used in OLEDs and OSCs. <i>Synthetic Metals</i> , <b>2012</b> , 162, 1834-1838	3.6	4
18	Combined effects of microcavity and dielectric capping layer on bidirectional organic light-emitting diodes. <i>Optics Letters</i> , <b>2012</b> , 37, 2007-9	3	4
17	The Transient Response of Organic Electrochemical Transistors. <i>Advanced Theory and Simulations</i> , <b>2100563</b>	3.5	4
16	Suppressing Base Currents in Organic Permeable-Base Transistors by Anodization of the Base Electrode. <i>ACS Applied Electronic Materials</i> , <b>2019</b> , 1, 1756-1761	4	3
15	Organic light-emitting diodes (OLEDs) <b>2013</b> , 508-534		3
14	Principle of topography-directed inkjet printing for functional micro-tracks in flexible substrates. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 244902	2.5	3
13	Beyond conventional organic transistors: novel approaches with improved performance and stability <b>2014</b> ,		3



12	A novel printing technique for highly integrated organic devices. <i>Microelectronic Engineering</i> , <b>2010</b> , 87, 614-619	2.5	3
11	Ionic liquid crystal elastomers-based flexible organic electrochemical transistors: Effect of director alignment of the solid electrolyte. <i>Applied Physics Reviews</i> , <b>2022</b> , 9, 011415	17.3	3
10	Charge trapping in doped organic Zener diodes. <i>Organic Electronics</i> , <b>2016</b> , 39, 77-84	3.5	3
9	Stability of organic permeable base transistors. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 193301	3.4	3
8	Analytic Device Model of Organic Field-Effect Transistors with Doped Channels. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 49857-49865	9.5	2
7	Vertical Organic Tunnel Field-Effect Transistors. <i>ACS Applied Electronic Materials</i> , <b>2019</b> , 1, 1506-1516	4	1
6	Highly efficient pin-type OLEDs <b>2013</b> , 173-191		1
5	Built-in Potential of a Pentacene Pin Homojunction Studied by Ultraviolet Photoemission Spectroscopy. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1270, 1		1
4	Organic Doping at Ultralow Concentrations. <i>Advanced Optical Materials</i> , <b>2021</b> , 9, 2100089	8.1	1
3	Organic Electronics and Beyond. <i>Advanced Optical Materials</i> , <b>2021</b> , 9, 2101108	8.1	1
2	Top-contact organic electrochemical transistors. <i>AIP Advances</i> , <b>2022</b> , 12, 045310	1.5	0
1	The influence of contact material and flat-band voltage on threshold voltage of organic field-effect transistors. <i>Organic Electronics</i> , <b>2022</b> , 105, 106483	3.5	