

Canek Fuentes-Hernandez

List of Publications by Year in descending order

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136
papers

6,580
citations

81900

39
h-index

64796

79
g-index

138
all docs

138
docs citations

138
times ranked

9067
citing authors

#	ARTICLE	IF	CITATIONS
1	A Universal Method to Produce Low-Work Function Electrodes for Organic Electronics. <i>Science</i> , 2012, 336, 327-332.	12.6	1,878
2	Recyclable organic solar cells on cellulose nanocrystal substrates. <i>Scientific Reports</i> , 2013, 3, 1536.	3.3	270
3	Large-area low-noise flexible organic photodiodes for detecting faint visible light. <i>Science</i> , 2020, 370, 698-701.	12.6	235
4	High performance polymeric charge recombination layer for organic tandem solar cells. <i>Energy and Environmental Science</i> , 2012, 5, 9827.	30.8	183
5	Top-Gate Organic Field-Effect Transistors with High Environmental and Operational Stability. <i>Advanced Materials</i> , 2011, 23, 1293-1298.	21.0	158
6	Indium tin oxide-free and metal-free semitransparent organic solar cells. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	135
7	Low-voltage InGaZnO thin-film transistors with Al ₂ O ₃ gate insulator grown by atomic layer deposition. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	128
8	Efficient Colorful Perovskite Solar Cells Using a Top Polymer Electrode Simultaneously as Spectrally Selective Antireflection Coating. <i>Nano Letters</i> , 2016, 16, 7829-7835.	9.1	123
9	Solution-based electrical doping of semiconducting polymer films over a limited depth. <i>Nature Materials</i> , 2017, 16, 474-480.	27.5	121
10	Electrical and Optical Properties of ZnO Processed by Atomic Layer Deposition in Inverted Polymer Solar Cells. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20713-20718.	3.1	116
11	Solvent and polymer matrix effects on TIPS-pentacene/polymer blend organic field-effect transistors. <i>Journal of Materials Chemistry</i> , 2012, 22, 5531.	6.7	109
12	Efficient recyclable organic solar cells on cellulose nanocrystal substrates with a conducting polymer top electrode deposited by film-transfer lamination. <i>Organic Electronics</i> , 2014, 15, 661-666.	2.6	108
13	Stable organic thin-film transistors. <i>Science Advances</i> , 2018, 4, eaao1705.	10.3	107
14	Direct correlation between work function of indium-tin-oxide electrodes and solar cell performance influenced by ultraviolet irradiation and air exposure. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 12014.	2.8	98
15	All-plastic solar cells with a high photovoltaic dynamic range. <i>Journal of Materials Chemistry A</i> , 2014, 2, 3492.	10.3	97
16	Inverted organic solar cells with ITO electrodes modified with an ultrathin Al ₂ O ₃ buffer layer deposited by atomic layer deposition. <i>Journal of Materials Chemistry</i> , 2010, 20, 6189.	6.7	93
17	Flexible and stable solution-processed organic field-effect transistors. <i>Organic Electronics</i> , 2011, 12, 1108-1113.	2.6	80
18	Molecular Engineering of Nonhalogenated Solution-Processable Bithiazole-Based Electron-Transport Polymeric Semiconductors. <i>Chemistry of Materials</i> , 2015, 27, 2928-2937.	6.7	79

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19	Enhanced Charge Carrier Injection and Collection Via Lamination of Doped Polymer Layers p Doped with a Solution Processible Molybdenum Complex. <i>Advanced Functional Materials</i> , 2014, 24, 2197-2204.	14.9	77
20	A Study on Reducing Contact Resistance in Solution-Processed Organic Field-Effect Transistors. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 24744-24752.	8.0	77
21	Reduction of the Work Function of Gold by N-Heterocyclic Carbenes. <i>Chemistry of Materials</i> , 2017, 29, 3403-3411.	6.7	76
22	Flexible all-solution-processed all-plastic multijunction solar cells for powering electronic devices. <i>Materials Horizons</i> , 2016, 3, 452-459.	12.2	73
23	Stable Solution Processed Molecular n-Channel Organic Field Effect Transistors. <i>Advanced Materials</i> , 2012, 24, 4445-4450.	21.0	67
24	Bistriarylamine Polymer-Based Composites for Photorefractive Applications. <i>Advanced Materials</i> , 2004, 16, 2032-2036.	21.0	62
25	High-performance InGaZnO thin-film transistors with high-k amorphous Ba _{0.5} Sr _{0.5} TiO ₃ gate insulator. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	62
26	Optimization of a polymer top electrode for inverted semitransparent organic solar cells. <i>Organic Electronics</i> , 2011, 12, 827-831.	2.6	59
27	Highly efficient Organic Light-Emitting Diodes from thermally activated delayed fluorescence using a sulfone carbazole host material. <i>Organic Electronics</i> , 2015, 16, 109-112.	2.6	58
28	Stable Low-Voltage Operation Top-Gate Organic Field-Effect Transistors on Cellulose Nanocrystal Substrates. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 4804-4808.	8.0	55
29	ITO-free large-area flexible organic solar cells with an embedded metal grid. <i>Organic Electronics</i> , 2015, 17, 349-354.	2.6	52
30	Reduction of contact resistance by selective contact doping in fullerene n-channel organic field-effect transistors. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	51
31	Flexible large-area organic tandem solar cells with high defect tolerance and device yield. <i>Journal of Materials Chemistry A</i> , 2017, 5, 3186-3192.	10.3	51
32	High-performance photorefractive polymers sensitized by cadmium selenide nanoparticles. <i>Applied Physics Letters</i> , 2004, 85, 534-536.	3.3	49
33	Oriented Growth of Al ₂ O ₃ :ZnO Nanolaminates for Use as Electron Selective Electrodes in Inverted Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2012, 22, 1531-1538.	14.9	47
34	Systematic Reliability Study of Top-Gate p- and n-Channel Organic Field-Effect Transistors. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 3378-3386.	8.0	45
35	Engineering the mechanical properties of ultrabARRIER films grown by atomic layer deposition for the encapsulation of printed electronics. <i>Journal of Applied Physics</i> , 2015, 118, .	2.5	42
36	Variable splitting ratio 2 Å— 2 MMI couplers using multimode waveguide holograms. <i>Optics Express</i> , 2007, 15, 9015.	3.4	40

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37	ITO-free large-area organic light-emitting diodes with an integrated metal grid. Optics Express, 2011, 19, A793.	3.4	40
38	Polymer solar cells with NiO hole-collecting interlayers processed by atomic layer deposition. Organic Electronics, 2013, 14, 2802-2808.	2.6	40
39	Stabilization of the response time in photorefractive polymers. Applied Physics Letters, 2000, 77, 2292-2294.	3.3	39
40	Flexible hybrid complementary inverters with high gain and balanced noise margins using pentacene and amorphous InGaZnO thin-film transistors. Organic Electronics, 2010, 11, 1074-1078.	2.6	39
41	Metal-oxide complementary inverters with a vertical geometry fabricated on flexible substrates. Applied Physics Letters, 2011, 99, .	3.3	39
42	Organic Photovoltaic Cells with Stable Top Metal Electrodes Modified with Polyethylenimine. ACS Applied Materials & Interfaces, 2014, 6, 6202-6207.	8.0	39
43	Stable Organic Field-Effect Transistors for Continuous and Nondestructive Sensing of Chemical and Biologically Relevant Molecules in Aqueous Environment. ACS Applied Materials & Interfaces, 2014, 6, 1616-1622.	8.0	38
44	Organic light-emitting diodes on shape memory polymer substrates for wearable electronics. Organic Electronics, 2015, 25, 151-155.	2.6	38
45	Effect of Substitution on the Hole Mobility of Bis(diarylamino)biphenyl Derivatives Doped in Poly(Styrene). Chemistry of Materials, 2003, 15, 994-999.	6.7	37
46	Vertically stacked complementary inverters with solution-processed organic semiconductors. Organic Electronics, 2011, 12, 1132-1136.	2.6	35
47	Top-gate organic field-effect transistors fabricated on paper with high operational stability. Organic Electronics, 2017, 41, 340-344.	2.6	35
48	Roles of thermally-induced vertical phase segregation and crystallization on the photovoltaic performance of bulk heterojunction inverted polymer solar cells. Energy and Environmental Science, 2011, 4, 3456.	30.8	34
49	Studies of the optimization of recombination layers for inverted tandem polymer solar cells. Solar Energy Materials and Solar Cells, 2012, 107, 51-55.	6.2	34
50	A comprehensive analysis of the contributions to the nonlinear optical properties of thin Ag films. Journal of Applied Physics, 2010, 107, .	2.5	33
51	Bilayer Structure with Ultrahigh Energy/Power Density Using Hybrid Solâ€“Gel Dielectric and Chargeâ€“Blocking Monolayer. Advanced Energy Materials, 2015, 5, 1500767.	19.5	33
52	Efficient organic light-emitting diodes fabricated on cellulose nanocrystal substrates. Applied Physics Letters, 2014, 105, .	3.3	32
53	Stable solvent for solution-based electrical doping of semiconducting polymer films and its application to organic solar cells. Energy and Environmental Science, 2018, 11, 2216-2224.	30.8	32
54	Photorefractive polymers sensitized by two-photon absorption. Optics Letters, 2002, 27, 19.	3.3	31

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55	Third-harmonic generation and its applications in optical image processing. <i>Journal of Materials Chemistry</i> , 2009, 19, 7394.	6.7	31
56	Skin-like low-noise elastomeric organic photodiodes. <i>Science Advances</i> , 2021, 7, eabj6565.	10.3	30
57	Stacked inverted top-emitting green electrophosphorescent organic light-emitting diodes on glass and flexible glass substrates. <i>Organic Electronics</i> , 2013, 14, 2418-2423.	2.6	29
58	Vertically stacked hybrid organic-inorganic complementary inverters with low operating voltage on flexible substrates. <i>Organic Electronics</i> , 2011, 12, 45-50.	2.6	26
59	Polyvinylpyrrolidone-modified indium tin oxide as an electron-collecting electrode for inverted polymer solar cells. <i>Applied Physics Letters</i> , 2012, 101, 073303.	3.3	26
60	Highly efficient inverted top-emitting green phosphorescent organic light-emitting diodes on glass and flexible substrates. <i>Applied Physics Letters</i> , 2012, 101, 023304.	3.3	25
61	Organometallic Dimers: Application to Work-Function Reduction of Conducting Oxides. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 4320-4326.	8.0	25
62	High performance blue-emitting organic light-emitting diodes from thermally activated delayed fluorescence: A guest/host ratio study. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	25
63	Thermally Activated Delayed Fluorescence Sensitization for Highly Efficient Blue Fluorescent Emitters. <i>Advanced Functional Materials</i> , 2020, 30, 2005898.	14.9	25
64	Host-Free Yellow-Green Organic Light-Emitting Diodes with External Quantum Efficiency over 20% Based on a Compound Exhibiting Thermally Activated Delayed Fluorescence. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 12693-12698.	8.0	24
65	Synthesis and optical properties of a series of chromophore functionalized polysilanes. <i>Journal of Materials Chemistry</i> , 2005, 15, 778.	6.7	23
66	Organic Field-Effect Transistors with a Bilayer Gate Dielectric Comprising an Oxide Nanolaminate Grown by Atomic Layer Deposition. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 29872-29876.	8.0	23
67	Linear and nonlinear optical properties of Ag/Au bilayer thin films. <i>Optics Express</i> , 2012, 20, 8629.	3.4	21
68	Inverted Tandem Polymer Solar Cells with Polyethylenimine-Modified MoO _X /Al ₂ O ₃ :ZnO Nanolaminate as the Charge Recombination Layers. <i>Advanced Energy Materials</i> , 2014, 4, 1400048.	19.5	21
69	Inverted polymer solar cells with amorphous indium zinc oxide as the electron-collecting electrode. <i>Optics Express</i> , 2010, 18, A506.	3.4	19
70	Video-rate compatible photorefractive polymers with stable dynamic properties under continuous operation. <i>Applied Physics Letters</i> , 2004, 85, 1877-1879.	3.3	18
71	Thick Optical-Quality Films of Substituted Polyacetylenes with Large, Ultrafast Third-Order Nonlinearities and Application to Image Correlation. <i>Advanced Materials</i> , 2008, 20, 3199-3203.	21.0	18
72	Photorefractive Polymers with Non-Destructive Readout. <i>Advanced Functional Materials</i> , 2002, 12, 615-620.	14.9	17

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73	Tetracyano isindigo small molecules and their use in n-channel organic field-effect transistors. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 19345-19350.	2.8	17
74	Semiconductor Polymer/Top Electrode Interface Generated by Two Deposition Methods and Its Influence on Organic Solar Cell Performance. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 28763-28770.	8.0	17
75	Simultaneous cross-linking and p-doping of a polymeric semiconductor film by immersion into a phosphomolybdic acid solution for use in organic solar cells. <i>Chemical Communications</i> , 2016, 52, 3825-3827.	4.1	17
76	Langmuir-Blodgett Thin Films of Diketopyrrolopyrrole-Based Amphiphiles. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 11995-12004.	8.0	17
77	Effect of the Number and Substitution Pattern of Carbazole Donors on the Singlet and Triplet State Energies in a Series of Carbazole-Oxadiazole Derivatives Exhibiting Thermally Activated Delayed Fluorescence. <i>Chemistry of Materials</i> , 2018, 30, 6389-6399.	6.7	17
78	Measurements of the field-effect electron mobility of the acceptor ITIC. <i>Organic Electronics</i> , 2018, 58, 290-293.	2.6	16
79	Optimizing Crack Onset Strain for Silicon Nitride/Fluoropolymer Nanolaminate Barrier Films. <i>ACS Applied Nano Materials</i> , 2019, 2, 2525-2532.	5.0	16
80	Organic Thin-Film Transistors with a Bottom Bilayer Gate Dielectric Having a Low Operating Voltage and High Operational Stability. <i>ACS Applied Electronic Materials</i> , 2020, 2, 2813-2818.	4.3	15
81	OptoSense. , 2020, 4, 1-27.		15
82	Self-forming electrode modification in organic field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2016, 4, 8297-8303.	5.5	14
83	Flexible computational photodetectors for self-powered activity sensing. <i>Npj Flexible Electronics</i> , 2022, 6, .	10.7	14
84	Optical properties of one-dimensional metal-dielectric photonic band-gap structures with low index dielectrics. <i>Thin Solid Films</i> , 2009, 517, 2736-2741.	1.8	13
85	Experimental investigation of defect-assisted and intrinsic water vapor permeation through ultrabARRIER films. <i>Review of Scientific Instruments</i> , 2016, 87, 033902.	1.3	13
86	Near room-temperature direct encapsulation of organic photovoltaics by plasma-based deposition techniques. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 024003.	2.8	12
87	Nonlinear optical properties of induced transmission filters. <i>Optics Express</i> , 2010, 18, 19101.	3.4	11
88	Inverted organic solar cells with polymer-modified fluorine-doped tin oxide as the electron-collecting electrode. <i>Thin Solid Films</i> , 2014, 554, 54-57.	1.8	11
89	Efficient Electrical Doping of Organic Semiconductors Via an Orthogonal Liquid-Liquid Contact. <i>Advanced Functional Materials</i> , 2021, 31, 2009660.	14.9	10
90	Ultrafast optical image processing based on third-harmonic generation in organic thin films. <i>Applied Physics Letters</i> , 2007, 91, 131110.	3.3	8

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91	Photorefractive polymer composites fabricated by injection molding. <i>Applied Physics Letters</i> , 2002, 80, 1156-1158.	3.3	7
92	Ultrafast nonlinear mirrors with broad spectral and angular bandwidths in the visible spectral range. <i>Optics Express</i> , 2013, 21, 3573.	3.4	7
93	Stacked inverted top-emitting white organic light-emitting diodes composed of orange and blue light-emitting units. <i>Applied Physics Letters</i> , 2013, 103, 193303.	3.3	6
94	Benzocyclobutene polymer as an additive for a benzocyclobutene-fullerene: application in stable perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 9347-9353.	10.3	6
95	Compact and self-aligned all-optical image correlator based on third-harmonic generation. <i>Optics Letters</i> , 2007, 32, 2599.	3.3	5
96	Organic field-effect transistor circuits using atomic layer deposited gate dielectrics patterned by reverse stamping. <i>Organic Electronics</i> , 2014, 15, 3780-3786.	2.6	5
97	Control of Singlet Emission Energy in a Diphenyloxadiazaole Containing Fluorophore Leading To Thermally Activated Delayed Fluorescence. <i>ACS Omega</i> , 2018, 3, 14918-14923.	3.5	5
98	Increasing Volume in Conjugated Polymers to Facilitate Electrical Doping with Phosphomolybdic Acid. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 23260-23267.	8.0	5
99	Ambipolar thin-film transistors with a co-planar channel geometry. <i>Organic Electronics</i> , 2010, 11, 1351-1356.	2.6	4
100	Indium tin oxide modified by titanium dioxide nanoparticles dispersed in poly(N-vinylpyrrolidone) for use as an electron-collecting layer in organic solar cells with an inverted structure. <i>Journal of Materials Research</i> , 2013, 28, 535-540.	2.6	4
101	Morphology of Organic Semiconductors Electrically Doped from Solution Using Phosphomolybdic Acid. <i>Chemistry of Materials</i> , 2019, 31, 6677-6683.	6.7	4
102	Effects of particle inclusions on cracking in ultrathin barrier films. <i>Thin Solid Films</i> , 2020, 714, 138387.	1.8	4
103	Organic photodetector with built-in amplification for the detection of visible light with low optical power. <i>Organic Electronics</i> , 2021, 90, 106064.	2.6	4
104	Charge Transport and Photogeneration in Organic Semiconductors: Photorefractives and Beyond. <i>Springer Series in Materials Science</i> , 2016, , 65-127.	0.6	4
105	Photorefractive polymers based on bis-triarylamine side-chain polymers. , 2003, 5216, 83.		2
106	Efficient photorefractive polymers sensitized by CdSe nanoparticles. , 2003, , .		2
107	Linear and nonlinear optical properties of highly transmissive one-dimensional metal-organic photonic bandgap structures. , 2008, , .		2
108	Top-gate organic field-effect transistors fabricated on shape-memory polymer substrates. , 2015, , .		2

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109	Impact of interface materials on side permeation in indirect encapsulation of organic electronics. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 033203.	2.1	2
110	Top-gate hybrid complementary inverters using pentacene and amorphous InGaZnO thin-film transistors with high operational stability. AIP Advances, 2012, 2, 012134.	1.3	2
111	Trapping mechanisms and dynamics in bis-triarylamine-based photorefractive polymer composites. , 2004, , .		1
112	The Ultrafast Nonlinear Optical Properties of Induced Transmission Filters. , 2011, , .		1
113	Nonlinear refraction measurements of thin films by the dual-arm Z-scan method. , 2013, , .		1
114	Energy Storage: Bilayer Structure with Ultrahigh Energy/Power Density Using Hybrid Solâ€“Gel Dielectric and Chargeâ€“Blocking Monolayer (Adv. Energy Mater. 19/2015). Advanced Energy Materials, 2015, 5, .	19.5	1
115	Enhanced Nonlinear Absorption in Low-Finesse Metal-Dielectric Fabry-Perot Resonators. , 2009, , .		1
116	Low-noise large-area organic photodiodes. , 2020, , .		1
117	Extraction of intrinsic contact resistance in organic thin-film transistors with single channel length and high capacitance density. Applied Physics Letters, 2021, 119, 263301.	3.3	1
118	Optimization of photorefractive polymers doped with styrene-based chromophores. , 2001, , .		0
119	Photorefractive properties of polymer composites fabricated by injection molding. , 2001, , .		0
120	Effect of aryl substitution on the hole mobility of bis-diarylamino-biphenyl-doped polymer composites. , 2002, , .		0
121	Ultrafast optical image processing through non-collinear third-harmonic generation in thin organic films. , 2007, , PDP_A6.		0
122	Aperiodic metal-dielectric optical filters. Proceedings of SPIE, 2007, , .	0.8	0
123	Third-harmonic generation in organic thin films as an alternative to degenerate four-wave mixing ultrafast optical image processing. , 2008, , .		0
124	Nonlinear refraction and absorption in highly transmissive one-dimensional metal-organic photonic bandgap structures. , 2008, , .		0
125	The nonlinear optical response of transparent metal-dielectric multilayer structures. , 2009, , .		0
126	The nonlinear optical response of transparent silver/gold multi-metal layers. , 2010, , .		0

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127	A comprehensive study of the contributions to the nonlinear optical properties of thin Ag films. , 2010, , .		0
128	Recent advances in printable OLED materials and devices. , 2012, , .		0
129	Noble metal nonlinear optical mirrors with adjustable spectral and angular bandwidths for all-optical controls at visible wavelengths. , 2013, , .		0
130	Organic field-effect transistor circuits with electrode interconnections using reverse stamping. Proceedings of SPIE, 2014, , .	0.8	0
131	Recent advances in the science and engineering of organic light-emitting diodes (Conference) Tj ETQq1 1 0.784314 rgBT /Ovrlock 10 T		0
132	On the Characterization and Modeling of the Current Characteristics of Organic Photodiodes. , 2019, , .		0
133	A New Assessment of the Performance of Low-noise Organic Photodetectors. , 2021, , .		0
134	Nonlinear Optical Properties of Layered Multi-Metal Nanostructures. , 2010, , .		0
135	Efficient green and blue electrophosphorescent light-emitting diodes using a combination of solution- and vacuum-processed materials. , 2011, , .		0
136	Balancing aging mechanisms in organic field-effect transistors. , 2019, , .		0