

Tetsuhiko Miyadera

List of Publications by Year in descending order

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80
papers

2,688
citations

236833

25
h-index

182361

51
g-index

81
all docs

81
docs citations

81
times ranked

4025
citing authors

#	ARTICLE	IF	CITATIONS
1	Optical Transitions in Hybrid Perovskite Solar Cells: Ellipsometry, Density Functional Theory, and Quantum Efficiency Analyses for $\text{CH}_3\text{NH}_3\text{PbI}_3$. Physical Review Applied, 2016, 5, .	1.5	322
2	Simple and Scalable Gel-Based Separation of Metallic and Semiconducting Carbon Nanotubes. Nano Letters, 2009, 9, 1497-1500.	4.5	307
3	Degradation mechanism of $\text{CH}_3\text{NH}_3\text{PbI}_3$ perovskite materials upon exposure to humid air. Journal of Applied Physics, 2016, 119, .	1.1	168
4	Charge injection process in organic field-effect transistors. Applied Physics Letters, 2007, 91, .	1.5	140
5	Contact-metal dependent current injection in pentacene thin-film transistors. Applied Physics Letters, 2007, 91, .	1.5	137
6	Surface selective deposition of molecular semiconductors for solution-based integration of organic field-effect transistors. Applied Physics Letters, 2009, 94, .	1.5	96
7	Correlation between grain size and device parameters in pentacene thin film transistors. Applied Physics Letters, 2008, 93, .	1.5	93
8	Glancing Angle Deposition of Copper Iodide Nanocrystals for Efficient Organic Photovoltaics. Nano Letters, 2012, 12, 4146-4152.	4.5	92
9	Universal rules for visible-light absorption in hybrid perovskite materials. Journal of Applied Physics, 2017, 121, .	1.1	91
10	Bias stress instability in pentacene thin film transistors: Contact resistance change and channel threshold voltage shift. Applied Physics Letters, 2008, 92, 063305.	1.5	90
11	Charge trapping induced current instability in pentacene thin film transistors: Trapping barrier and effect of surface treatment. Applied Physics Letters, 2008, 93, .	1.5	78
12	Crystallization Dynamics of Organolead Halide Perovskite by Real-Time X-ray Diffraction. Nano Letters, 2015, 15, 5630-5634.	4.5	77
13	Selective organization of solution-processed organic field-effect transistors. Applied Physics Letters, 2008, 92, .	1.5	74
14	Analysis of charge transport in a polycrystalline pentacene thin film transistor by temperature and gate bias dependent mobility and conductance. Journal of Applied Physics, 2007, 102, .	1.1	64
15	Current transport in short channel top-contact pentacene field-effect transistors investigated with the selective molecular doping technique. Applied Physics Letters, 2007, 90, 193507.	1.5	62
16	Frequency response analysis of pentacene thin-film transistors with low impedance contact by interface molecular doping. Applied Physics Letters, 2007, 91, .	1.5	55
17	Suppression of short channel effect in organic thin film transistors. Applied Physics Letters, 2007, 91, .	1.5	53
18	Phase separation of co-evaporated ZnPc:C60 blend film for highly efficient organic photovoltaics. Applied Physics Letters, 2012, 100, 233302.	1.5	50

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19	Optical Characteristics and Operational Principles of Hybrid Perovskite Solar Cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1700730.	0.8	48
20	Tail state formation in solar cell materials: First principles analyses of zincblende, chalcopyrite, kesterite, and hybrid perovskite crystals. <i>Physical Review Materials</i> , 2018, 2, .	0.9	39
21	Adjustment of Conduction Band Edge of Compact TiO ₂ Layer in Perovskite Solar Cells Through TiCl ₄ Treatment. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 36708-36714.	4.0	35
22	Performance Enhancement of Thin-Film Transistors by Using High-Purity Semiconducting Single-Wall Carbon Nanotubes. <i>Applied Physics Express</i> , 0, 2, 071601.	1.1	33
23	Templating Effects in Molecular Growth of Blended Films for Efficient Small-Molecule Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 6369-6377.	4.0	28
24	In-situ measurement of molecular orientation of the pentacene ultrathin films grown on SiO ₂ substrates. <i>Surface Science</i> , 2006, 600, 2518-2522.	0.8	27
25	Influence of O ₂ plasma treatment on NiO _x layer in perovskite solar cells. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 04FS07.	0.8	26
26	Highly Controlled Codeposition Rate of Organolead Halide Perovskite by Laser Evaporation Method. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 26013-26018.	4.0	25
27	Tuning Methylammonium Iodide Amount in Organolead Halide Perovskite Materials by Post-Treatment for High-Efficiency Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 38683-38688.	4.0	25
28	Determination and interpretation of the optical constants for solar cell materials. <i>Applied Surface Science</i> , 2017, 421, 276-282.	3.1	24
29	Ultraviolet photoelectron spectroscopy of a methyl-terminated Si surface. <i>Surface Science</i> , 2003, 526, 177-183.	0.8	21
30	Controlled growth of dibenzotetraphenylperiflanthene thin films by varying substrate temperature for photovoltaic applications. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 2861-2866.	3.0	20
31	Contact resistance instability in pentacene thin film transistors induced by ambient gases. <i>Applied Physics Letters</i> , 2009, 94, 083309.	1.5	18
32	Epitaxial Growth of C ₆₀ on Rubrene Single Crystals for a Highly Ordered Organic Donor/Acceptor Interface. <i>Crystal Growth and Design</i> , 2017, 17, 4622-4627.	1.4	17
33	Scaling effect on the operation stability of short-channel organic single-crystal transistors. <i>Applied Physics Letters</i> , 2007, 91, 063506.	1.5	16
34	Semiconducting silicon-tin alloy nanocrystals with direct bandgap behavior for photovoltaic devices. <i>Materials Today Energy</i> , 2018, 7, 87-97.	2.5	15
35	Dynamic bias stress current instability caused by charge trapping and detrapping in pentacene thin film transistors. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	13
36	Structural modifications of zinc phthalocyanine thin films for organic photovoltaic applications. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	13

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37	Analytical model for the design principle of large-area solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2012, 97, 127-131.	3.0	13
38	Methyl-terminated Si(111) surface as the ultra thin protection layer to fabricate position-controlled alkyl SAMs by using atomic force microscope anodic oxidation. <i>Surface Science</i> , 2004, 552, 46-52.	0.8	11
39	Analysis of transient phenomena of C60 field effect transistors. <i>Applied Physics Letters</i> , 2006, 89, 172117.	1.5	11
40	Stable ultrathin surfactant-free surface-engineered silicon nanocrystal solar cells deposited at room temperature. <i>Energy Science and Engineering</i> , 2017, 5, 184-193.	1.9	11
41	Epitaxial growth of CH ₃ NH ₃ PbI ₃ on rubrene single crystal. <i>APL Materials</i> , 2020, 8, .	2.2	11
42	Investigation of complex channel capacitance in C60 field effect transistor and evaluation of the effect of grain boundaries. <i>Current Applied Physics</i> , 2007, 7, 87-91.	1.1	10
43	Fabrication of carbon nanotube hybrid films as transparent electrodes for small-molecule photovoltaic cells. <i>RSC Advances</i> , 2016, 6, 25062-25069.	1.7	10
44	Thickness Dependent Characteristics of a Copper Phthalocyanine Thin-Film Transistor Investigated by in situ FET Measurement System. <i>Molecular Crystals and Liquid Crystals</i> , 2006, 455, 347-351.	0.4	9
45	Accelerated photopolymerization and increased mobility in C60 field-effect transistors studied by ultraviolet photoelectron spectroscopy. <i>Applied Physics Letters</i> , 2004, 84, 2439-2441.	1.5	7
46	Anisotropic Polymerization of a Long-Chain Diacetylene Derivative Langmuir-Blodgett Film on a Step-Bunched SiO ₂ /Si Surface. <i>Langmuir</i> , 2006, 22, 5742-5747.	1.6	7
47	Relationship between photostability and nanostructures in DTS(FBTTh ₂):fullerene bulk-heterojunction films. <i>Solar Energy Materials and Solar Cells</i> , 2016, 151, 96-101.	3.0	7
48	Heteroepitaxial growth of C ₆₀ on tetracene single crystal. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1501, 1.	0.1	6
49	Efficiency limit analysis of organic solar cells: model simulation based on vanadyl phthalocyanine/C60 planar junction cell. <i>Japanese Journal of Applied Physics</i> , 2014, 53, 01AB12.	0.8	6
50	Structural influences on charge carrier dynamics for small-molecule organic photovoltaics. <i>Journal of Applied Physics</i> , 2014, 116, 013105.	1.1	6
51	In Situ Grown Nanocrystalline Si Recombination Junction Layers for Efficient Perovskite-Si Monolithic Tandem Solar Cells: Toward a Simpler Multijunction Architecture. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 33505-33514.	4.0	6
52	Extended Exciton Diffusion in Rubrene Single-Crystalline Organic Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1390, 89.	0.1	5
53	Synthesis of Novel Push-Pull Chromophores based on N-Ethylcarbazole for Vacuum Deposition Processed Organic Photovoltaics. <i>Chemistry Letters</i> , 2015, 44, 958-960.	0.7	5
54	Effects of solvent vapor annealing on organic photovoltaics with a new type of solution-processable oligothiophene-based electronic donor material. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 08RE09.	0.8	5

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55	Substrate-driven switchable molecular orientation in bulk heterojunction films identified using infrared reflection absorption spectroscopy. <i>Molecular Systems Design and Engineering</i> , 2020, 5, 559-564.	1.7	5
56	Constructing Nanostructured Donor/Acceptor Bulk Heterojunctions via Interfacial Templates for Efficient Organic Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 43893-43901.	4.0	5
57	Organic Photovoltaic Devices Based on Oriented <i>n</i> -Type Molecular Films Deposited on Oriented Polythiophene Films. <i>Journal of Nanoscience and Nanotechnology</i> , 2018, 18, 2702-2710.	0.9	4
58	Thin-film transistors fabricated from semiconductor-enriched single-wall carbon nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2009, 246, 2849-2852.	0.7	3
59	Controlled growth of ZnPc thin films for photovoltaic applications. <i>Physics Procedia</i> , 2011, 14, 221-225.	1.2	3
60	Oriented Thin Films of the Low-Band-Gap Polymer PTB7 by Friction Transfer Method. <i>Molecular Crystals and Liquid Crystals</i> , 2015, 621, 118-123.	0.4	3
61	Thermal stabilization of organic photovoltaic cells using [6,6]-phenyl C61-butyric acid methyl ester analogs: Effects of alkyl substituents on the nanostructures of bulk heterojunction films and their stabilities. <i>Synthetic Metals</i> , 2016, 221, 61-66.	2.1	3
62	Hysteresis Analysis of Organolead Halide Perovskite Solar Cells by Transient Current Measurement. <i>Electrochemistry</i> , 2017, 85, 276-279.	0.6	3
63	Insights into Microscopic Crystal Growth Dynamics of $\text{CH}_3\text{NH}_3\text{PbI}_3$ under a Laser Deposition Process Revealed by <i>In Situ</i> X-ray Diffraction. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 22559-22566.	4.0	3
64	Band Structure and Molecular Orientation of Ultrathin Epitaxial Films of Squaric Acid. <i>Journal of Physical Chemistry B</i> , 2004, 108, 5329-5332.	1.2	2
65	Pulsed Bias Stress in Pentacene Thin Film Transistors and Effect of Contact Material. <i>Japanese Journal of Applied Physics</i> , 2010, 49, 01AB03.	0.8	2
66	Mg_xC_{60} Fabricated by Using Mg:C_{60} Co-Evaporation Method for Carrier Doping. <i>Molecular Crystals and Liquid Crystals</i> , 2011, 538, 193-198.	0.4	2
67	Understanding Device-Structure-Induced Variations in Open-Circuit Voltage for Organic Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 10814-10822.	4.0	2
68	Oriented thin films of mixture of a low-bandgap polymer and a fullerene derivative prepared by friction-transfer method. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 02CA06.	0.8	2
69	Organic-Inorganic Hybrid Perovskite Solar Cells. <i>Springer Series in Optical Sciences</i> , 2018, , 463-507.	0.5	2
70	Domain structure and electronic state in P3HT:PCBM blend thin films by soft X-ray resonant scattering. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	1
71	Organic-Inorganic Hybrid Perovskites. <i>Springer Series in Optical Sciences</i> , 2018, , 471-493.	0.5	1
72	Transparent Conductive Oxides. <i>Springer Series in Optical Sciences</i> , 2018, , 495-541.	0.5	1

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73	Organic Semiconductors. Springer Series in Optical Sciences, 2018, , 427-469.	0.5	1
74	Evaluation of exciton diffusion length in highly oriented fullerene films of fullerene/p-Si(100) hybrid solar cells. Japanese Journal of Applied Physics, 2019, 58, 121004.	0.8	1
75	Molecular arrangement in diphenylanthracene derivative films deposited under vacuum on in-plane oriented polythiophene films. Japanese Journal of Applied Physics, 2021, 60, 085504.	0.8	1
76	Control of neural signal propagation in neuron by three terminal electrodes method. Electronics Letters, 2012, 48, 1093-1095.	0.5	0
77	Laser deposition for the controlled co-deposition of organolead halide perovskite. , 2016, , .		0
78	Effects of optical interference and optimized crystallinity in organic photovoltaic cells with a low-bandgap small molecule fabricated by dry process. Japanese Journal of Applied Physics, 2019, 58, SBBG12.	0.8	0
79	Vacuum deposition and crystal growth dynamics of metal halide perovskite. , 2020, , .		0
80	(Invited) Vacuum Deposition and Crystal Growth of Organolead Halide Perovskite. ECS Meeting Abstracts, 2021, MA2021-02, 640-640.	0.0	0