

Ian G Hill

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/565199/publications.pdf>

Version: 2024-02-01

124
papers

10,493
citations

57758

44
h-index

31849

101
g-index

127
all docs

127
docs citations

127
times ranked

12993
citing authors

#	ARTICLE	IF	CITATIONS
1	Perovskite-“fullerene hybrid materials suppress hysteresis in planar diodes. Nature Communications, 2015, 6, 7081.	12.8	948
2	Organic thin-film transistor-driven polymer-dispersed liquid crystal displays on flexible polymeric substrates. Applied Physics Letters, 2002, 80, 1088-1090.	3.3	758
3	Charge-separation energy in films of π-conjugated organic molecules. Chemical Physics Letters, 2000, 327, 181-188.	2.6	718
4	Thin-Film Preparation and Characterization of Cs ₃ Sb ₂ I ₉ : A Lead-Free Layered Perovskite Semiconductor. Chemistry of Materials, 2015, 27, 5622-5632.	6.7	653
5	Long cycle life and dendrite-free lithium morphology in anode-free lithium pouch cells enabled by a dual-salt liquid electrolyte. Nature Energy, 2019, 4, 683-689.	39.5	603
6	Air-stable n-type colloidal quantum dot solids. Nature Materials, 2014, 13, 822-828.	27.5	529
7	Molecular level alignment at organic semiconductor-metal interfaces. Applied Physics Letters, 1998, 73, 662-664.	3.3	436
8	Recent advances of non-fullerene, small molecular acceptors for solution processed bulk heterojunction solar cells. Journal of Materials Chemistry A, 2014, 2, 1201-1213.	10.3	361
9	Thin-Film Deposition and Characterization of a Sn-Deficient Perovskite Derivative Cs ₂ SnI ₆ . Chemistry of Materials, 2016, 28, 2315-2322.	6.7	329
10	Surface oxidation activates indium tin oxide for hole injection. Journal of Applied Physics, 2000, 87, 572-576.	2.5	279
11	Organic semiconductor interfaces: electronic structure and transport properties. Applied Surface Science, 2000, 166, 354-362.	6.1	278
12	Improved organic thin-film transistor performance using novel self-assembled monolayers. Applied Physics Letters, 2006, 88, 073505.	3.3	230
13	Synthesis, Self-Assembly, and Solar Cell Performance of N-Annulated Perylene Diimide Non-Fullerene Acceptors. Chemistry of Materials, 2016, 28, 7098-7109.	6.7	211
14	Key components to the recent performance increases of solution processed non-fullerene small molecule acceptors. Journal of Materials Chemistry A, 2015, 3, 16393-16408.	10.3	157
15	Energy level alignment at interfaces of organic semiconductor heterostructures. Journal of Applied Physics, 1998, 84, 5583-5586.	2.5	153
16	Organic semiconductor heterointerfaces containing bathocuproine. Journal of Applied Physics, 1999, 86, 4515-4519.	2.5	151
17	Combined photoemission/in vacuo transport study of the indium tin oxide/copper phthalocyanine/N,N'-diphenyl-N,N'-bis(l-naphthyl)-1,1'-biphenyl-4,4'-diamine molecular organic semiconductor system. Journal of Applied Physics, 1999, 86, 2116-2122.	2.5	150
18	Metal-dependent charge transfer and chemical interaction at interfaces between 3,4,9,10-perylenetetracarboxylic bisimidazole and gold, silver and magnesium. Organic Electronics, 2000, 1, 5-13.	2.6	149

#	ARTICLE	IF	CITATIONS
19	Effect of Sulfate Electrolyte Additives on $\text{LiNi}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3}\text{O}_2$ /Graphite Pouch Cell Lifetime: Correlation between XPS Surface Studies and Electrochemical Test Results. <i>Journal of Physical Chemistry C</i> , 2014, 118, 29608-29622.	3.1	134
20	Occupied and unoccupied electronic levels in organic π -conjugated molecules: comparison between experiment and theory. <i>Chemical Physics Letters</i> , 2000, 317, 444-450.	2.6	130
21	Initial stages of metal/organic semiconductor interface formation. <i>Journal of Applied Physics</i> , 2000, 88, 889-895.	2.5	128
22	Band alignment at organic-inorganic semiconductor interfaces: $\text{I}\pm\text{-NPD}$ and CuPc on $\text{InP}(110)$. <i>Journal of Applied Physics</i> , 1999, 85, 6589-6592.	2.5	113
23	Energy-level alignment at interfaces between metals and the organic semiconductor $4,4'\text{-N,N}'\text{-dicarbazolyl-biphenyl}$. <i>Journal of Applied Physics</i> , 1998, 84, 3236-3241.	2.5	106
24	Hole injection barriers at polymer anode/small molecule interfaces. <i>Applied Physics Letters</i> , 2001, 79, 557-559.	3.3	99
25	Electron deficient diketopyrrolopyrrole dyes for organic electronics: synthesis by direct arylation, optoelectronic characterization, and charge carrier mobility. <i>Journal of Materials Chemistry A</i> , 2014, 2, 4198-4207.	10.3	83
26	Transparent stacked organic light emitting devices. I. Design principles and transparent compound electrodes. <i>Journal of Applied Physics</i> , 1999, 86, 4067-4075.	2.5	82
27	Numerical simulations of contact resistance in organic thin-film transistors. <i>Applied Physics Letters</i> , 2005, 87, 163505.	3.3	80
28	Quantifying, Understanding and Evaluating the Effects of Gas Consumption in Lithium-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3518-A3528.	2.9	76
29	Temperature Dependent EIS Studies Separating Charge Transfer Impedance from Contact Impedance in Lithium-Ion Symmetric Cells. <i>Journal of the Electrochemical Society</i> , 2019, 166, A3272-A3279.	2.9	76
30	Combinatorial study of zinc tin oxide thin-film transistors. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	72
31	Distinguishing between interface dipoles and band bending at metal/tris-(8-hydroxyquinoline) aluminum interfaces. <i>Applied Physics Letters</i> , 2000, 77, 1825.	3.3	70
32	N-Annulated perylene diimide dimers: acetylene linkers as a strategy for controlling structural conformation and the impact on physical, electronic, optical and photovoltaic properties. <i>Journal of Materials Chemistry C</i> , 2017, 5, 2074-2083.	5.5	68
33	Vertically-aligned carbon nanotube counter electrodes for dye-sensitized solar cells. <i>Solar Energy</i> , 2013, 88, 129-136.	6.1	66
34	Phthalimide-based π -conjugated small molecules with tailored electronic energy levels for use as acceptors in organic solar cells. <i>Journal of Materials Chemistry C</i> , 2015, 3, 8904-8915.	5.5	64
35	Dual-source evaporation of silver bismuth iodide films for planar junction solar cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 2095-2105.	10.3	63
36	Organometallic Chemistry at the Magnesium π Tris(8-hydroxyquinolino)aluminum Interface. <i>Journal of the American Chemical Society</i> , 2000, 122, 5391-5392.	13.7	62

#	ARTICLE	IF	CITATIONS
37	The Silicon:Colloidal Quantum Dot Heterojunction. <i>Advanced Materials</i> , 2015, 27, 7445-7450.	21.0	55
38	Strongly Anisotropic Band Dispersion of an Image State Located above Metallic Nanowires. <i>Physical Review Letters</i> , 1999, 82, 2155-2158.	7.8	53
39	Designed Organophosphonate Self-Assembled Monolayers Enhance Device Performance of Pentacene-Based Organic Thin-Film Transistors. <i>Advanced Materials</i> , 2010, 22, 3081-3085.	21.0	53
40	A Versatile Thin-Film Deposition Method for Multidimensional Semiconducting Bismuth Halides. <i>Chemistry of Materials</i> , 2018, 30, 3538-3544.	6.7	52
41	Perylene diimide based all small-molecule organic solar cells: Impact of branched-alkyl side chains on solubility, photophysics, self-assembly, and photovoltaic parameters. <i>Organic Electronics</i> , 2016, 35, 151-157.	2.6	50
42	Organophosphonate Self-Assembled Monolayers for Gate Dielectric Surface Modification of Pentacene-Based Organic Thin-Film Transistors: A Comparative Study. <i>Journal of Physical Chemistry A</i> , 2007, 111, 12333-12338.	2.5	49
43	Metallicity of In chains on Si(111). <i>Physical Review B</i> , 1997, 56, 15725-15728.	3.2	47
44	Detection of Rashba spin splitting in 2D organic-inorganic perovskite via precessional carrier spin relaxation. <i>APL Materials</i> , 2019, 7, 081116.	5.1	46
45	Mechanism of action of ethylene sulfite and vinylene carbonate electrolyte additives in LiNi _{1/3} Mn _{1/3} Co _{1/3} O ₂ /graphite pouch cells: electrochemical, GC-MS and XPS analysis. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 27062-27076.	2.8	45
46	Passivation of GaAs(111)A surface by Cl termination. <i>Applied Physics Letters</i> , 1995, 67, 670-672.	3.3	44
47	Understanding the Role of Prop-1-ene-1,3-Sultone and Vinylene Carbonate in LiNi _{1/3} Mn _{1/3} Co _{1/3} O ₂ /Graphite Pouch Cells: Electrochemical, GC-MS and XPS Analysis. <i>Journal of the Electrochemical Society</i> , 2015, 162, A2635-A2645.	2.9	44
48	An Electron-Deficient Small Molecule Accessible from Sustainable Synthesis and Building Blocks for Use as a Fullerene Alternative in Organic Photovoltaics. <i>ChemPhysChem</i> , 2015, 16, 1190-1202.	2.1	43
49	The structural evolution of an isoindigo-based non-fullerene acceptor for use in organic photovoltaics. <i>RSC Advances</i> , 2015, 5, 80098-80109.	3.6	42
50	The Effects of a Ternary Electrolyte Additive System on the Electrode/Electrolyte Interfaces in High Voltage Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2016, 163, A1001-A1009.	2.9	42
51	Influence of chemical doping on the performance of organic photovoltaic cells. <i>Applied Physics Letters</i> , 2009, 94, 203306.	3.3	41
52	Fluorinated alkyl phosphonic acid SAMs replace PEDOT:PSS in polymer semiconductor devices. <i>Organic Electronics</i> , 2012, 13, 498-505.	2.6	41
53	Photoemission study of frontier orbital alignment at a metal-organic interface as a function of conjugation length of oligothiophene derivatives. <i>Applied Physics Letters</i> , 2001, 78, 670-672.	3.3	37
54	Vacuum level alignment in organic guest-host systems. <i>Journal of Applied Physics</i> , 2002, 92, 1598-1603.	2.5	37

#	ARTICLE	IF	CITATIONS
55	Measuring Oxygen Release from Delithiated $\text{LiNi}_x\text{Mn}_y\text{Co}_{1-x-y}\text{O}_2$ and Its Effects on the Performance of High Voltage Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3025-A3037.	2.9	34
56	Synergistic Effect of LiPF_6 and LiBF_4 as Electrolyte Salts in Lithium-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, A2426-A2433.	2.9	34
57	Simultaneous observation of free and defect-bound excitons in $\text{CH}_3\text{NH}_3\text{PbI}_3$ using four-wave mixing spectroscopy. <i>Scientific Reports</i> , 2016, 6, 39139.	3.3	33
58	Impact of a Titanium-Based Surface Coating Applied to $\text{Li}[\text{Ni}_{0.5}\text{Mn}_{0.3}\text{Co}_{0.2}]\text{O}_2$ on Lithium-Ion Cell Performance. <i>ACS Applied Energy Materials</i> , 2018, 1, 7052-7064.	5.1	33
59	Role of Electrode Contamination in Electron Injection at Mg:Ag/Alq_3 Interfaces. <i>Advanced Materials</i> , 1999, 11, 1523-1527.	21.0	32
60	Influence of self-assembled monolayer chain length on modified gate dielectric pentacene thin-film transistors. <i>Applied Physics A: Materials Science and Processing</i> , 2009, 95, 81-87.	2.3	31
61	The Solid-Electrolyte Interphase Formation Reactions of Ethylene Sulfate and Its Synergistic Chemistry with Prop-1-ene-1,3-Sultone in Lithium-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3445-A3453.	2.9	30
62	Energy level alignment between 9-phosphonoanthracene self-assembled monolayers and pentacene. <i>Applied Physics Letters</i> , 2007, 90, 012109.	3.3	29
63	Understanding the morphology of solution processed fullerene-free small molecule bulk heterojunction blends. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 12476-12485.	2.8	29
64	Systematic study on the impact of water on the performance and stability of perovskite solar cells. <i>RSC Advances</i> , 2016, 6, 52448-52458.	3.6	29
65	Four-Wave Mixing in Perovskite Photovoltaic Materials Reveals Long Dephasing Times and Weaker Many-Body Interactions than GaAs. <i>ACS Photonics</i> , 2017, 4, 1515-1521.	6.6	29
66	Carrier diffusion in thin-film $\text{CH}_3\text{NH}_3\text{PbI}_3$ perovskite measured using four-wave mixing. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	29
67	High-Precision Coulometry Studies of the Impact of Temperature and Time on SEI Formation in Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2018, 165, A1529-A1536.	2.9	29
68	Fluorinated Thiophene-Based Synthons: Polymerization of 1,4-Dialkoxybenzene and Fluorinated Dithieno-2,1,3-benzothiadiazole by Direct Heteroarylation. <i>Macromolecules</i> , 2017, 50, 4658-4667.	4.8	28
69	Contact Engineering Using Manganese, Chromium, and Bathocuproine in Group 14 Phthalocyanine Organic Thin-Film Transistors. <i>ACS Applied Electronic Materials</i> , 2020, 2, 1313-1322.	4.3	28
70	Phthalimide- π -thiophene-based conjugated organic small molecules with high electron mobility. <i>Journal of Materials Chemistry C</i> , 2014, 2, 2612-2621.	5.5	26
71	Molecular engineering versus energy level alignment: Interface formation between oligothiophene derivatives and a metal substrate studied with photoemission spectroscopy. <i>Journal of Applied Physics</i> , 2002, 91, 5456-5461.	2.5	25
72	Influence of Channel Stoichiometry on Zinc Indium Oxide Thin-Film Transistor Performance. <i>IEEE Transactions on Electron Devices</i> , 2009, 56, 343-347.	3.0	25

#	ARTICLE	IF	CITATIONS
73	Detection of a Fermi level crossing in three-domain Si(111)-In(4Å ⁻¹). Physical Review B, 1999, 59, 9791-9793.	3.2	22
74	Influence of SiO ₂ dielectric preparation on interfacial trap density in pentacene-based organic thin-film transistors. Journal of Applied Physics, 2007, 101, 044503.	2.5	22
75	Surface-Electrolyte Interphase Formation in Lithium-Ion Cells Containing Pyridine Adduct Additives. Journal of the Electrochemical Society, 2016, 163, A773-A780.	2.9	22
76	Stability of n-channel organic thin-film transistors using oxide, SAM-modified oxide and polymeric gate dielectrics. Organic Electronics, 2011, 12, 1033-1042.	2.6	21
77	Unusual loss of electron mobility upon furan for thiophene substitution in a molecular semiconductor. Organic Electronics, 2015, 18, 118-125.	2.6	21
78	First-principles calculations and experimental studies of <i>XYZ</i> ₂ thermoelectric compounds: detailed analysis of van der Waals interactions. Journal of Materials Chemistry A, 2018, 6, 19502-19519.	10.3	20
79	Role of Si adatoms in the Si(111)-Au(5Å ⁻²) quasi-one-dimensional system. Physical Review B, 1997, 55, 15664-15668.	3.2	18
80	Water Compatible Direct (Hetero)arylation Polymerization of PPDT2FBT: A Pathway Towards Large-scale Production of Organic Solar Cells. Asian Journal of Organic Chemistry, 2020, 9, 1318-1325.	2.7	17
81	Studies of the SEI layers in Li(Ni _{0.5} Mn _{0.3} Co _{0.2})O ₂ /Artificial Graphite Cells after Formation and after Cycling. Journal of the Electrochemical Society, 2020, 167, 120507.	2.9	17
82	Comparative Interface Metrics for Metal-Free Monolayer-Based Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2012, 4, 6735-6746.	8.0	16
83	Structural and electronic properties of sulfur passivated InP(100). Progress in Surface Science, 1995, 50, 325-334.	8.3	15
84	Determination of the energy levels of a phosphorescent guest in organic light emitting devices. Applied Physics Letters, 2000, 77, 2003-2005.	3.3	15
85	A comparison of two high performance inverse photoemission bandpass detectors. Review of Scientific Instruments, 1998, 69, 261-264.	1.3	14
86	Interface electronic properties of organic molecular semiconductors. , 1998, 3476, 168.		14
87	Derivation of the open-circuit voltage of organic solar cells. Physical Review B, 2014, 89, .	3.2	14
88	Sulfur passivated InP(100): surface gaps and electron counting. Applied Surface Science, 1996, 104-105, 434-440.	6.1	13
89	Photovoltaic Effect in Indium(I) Iodide Thin Films. Chemistry of Materials, 2018, 30, 8226-8232.	6.7	13
90	The influence of molecular interface modification on the charge dynamics of polymeric semiconductor: ZnO heterostructure. Journal of Applied Physics, 2014, 116, 074502.	2.5	11

#	ARTICLE	IF	CITATIONS
91	Pivotal factors in solution-processed, non-fullerene, all small-molecule organic solar cell device optimization. <i>Organic Electronics</i> , 2015, 27, 197-201.	2.6	11
92	Evidence of mobile charged impurities in organic heterojunction photovoltaic devices. <i>Journal of Applied Physics</i> , 2006, 100, 104505.	2.5	10
93	Ultrafast acoustic phonon scattering in CH ₃ NH ₃ PbI ₃ revealed by femtosecond four-wave mixing. <i>Journal of Chemical Physics</i> , 2019, 151, 144702.	3.0	10
94	Optoelectronic property comparison for isostructural Cu ₂ BaGeSe ₄ and Cu ₂ BaSnS ₄ solar absorbers. <i>Journal of Materials Chemistry A</i> , 2021, 9, 23619-23630.	10.3	10
95	Nanolines on silicon surfaces. <i>International Journal of Nanotechnology</i> , 2008, 5, 1018.	0.2	9
96	Optimizing the photovoltage of polymer/zinc oxide hybrid solar cells by calcium doping. <i>Journal of Applied Physics</i> , 2012, 112, 044511.	2.5	9
97	Preliminary characterization of the response of an organic field effect transistor to ionizing radiation. <i>Radiation Measurements</i> , 2018, 118, 31-35.	1.4	9
98	Stable Efficient Methylammonium Lead Iodide Thin Film Photodetectors with Highly Oriented Millimeter-Sized Crystal Grains. <i>ACS Photonics</i> , 2020, 7, 57-67.	6.6	9
99	Applications of ice-templated ceramics. <i>International Journal of Applied Ceramic Technology</i> , 2018, 15, 1075-1083.	2.1	8
100	Electronic Properties of Metal-Organic Interfaces with Application to Electroluminescent Devices. <i>Molecular Crystals and Liquid Crystals</i> , 1998, 322, 245-252.	0.3	7
101	Rapid thermal conductivity measurements for combinatorial thin films. <i>Review of Scientific Instruments</i> , 2013, 84, 053906.	1.3	7
102	Photovoltaic device performance of highly regioregular fluorinated poly(3-hexylthiophene). <i>Organic Electronics</i> , 2017, 50, 115-120.	2.6	7
103	Radiation induced photocurrent in the active volume of P3HT/PCBM BHJ photodiodes. <i>Organic Electronics</i> , 2020, 85, 105890.	2.6	7
104	Poly(3-hexylthiophene-2,5-diyl) based diodes for ionizing radiation dosimetry applications. <i>Organic Electronics</i> , 2021, 88, 105981.	2.6	7
105	Development of simple hole-transporting materials for perovskite solar cells. <i>Canadian Journal of Chemistry</i> , 2016, 94, 352-359.	1.1	6
106	Theoretical Insights into Optoelectronic Properties of Non-Fullerene Acceptors for the Design of Organic Photovoltaics. <i>ACS Applied Energy Materials</i> , 2021, 4, 11090-11100.	5.1	6
107	High open circuit voltage organic solar cells based upon fullerene free bulk heterojunction active layers. <i>Canadian Journal of Chemistry</i> , 2014, 92, 932-939.	1.1	5
108	Probing the internal structure of nanowires. <i>Applied Surface Science</i> , 2000, 162-163, 620-624.	6.1	4

#	ARTICLE	IF	CITATIONS
109	Fabrication and characterization of a stemless plastic scintillation detector. <i>Medical Physics</i> , 2020, 47, 5882-5889.	3.0	4
110	<i>Organic Molecular Interfaces</i> . , 2001, , .		4
111	Lifetime broadening in angle-resolved photoemission. <i>Surface Science</i> , 1994, 314, L925-L930.	1.9	3
112	Static and dynamic modeling of organic thin-film transistors for circuit design. <i>Microelectronics Journal</i> , 2016, 53, 1-7.	2.0	3
113	Modification of organic interfaces: from molecular level measurements to injection characteristics. , 1999, , .		2
114	Hole injection energetics at highly conducting polymer anode: small molecule interfaces studied with photoemission spectroscopy. , 2002, 4464, 172.		2
115	Electric Field Induced Assembly of Vimentin Microscaffolds around Metallic Electrodes. <i>Biomacromolecules</i> , 2009, 10, 1986-1991.	5.4	2
116	The influence of molecular geometry on photophysical properties and self-assembly of phthalimide end-capped thiophene-based organic molecules. <i>Materials Letters</i> , 2015, 157, 252-255.	2.6	2
117	Characterizing Degradation in Non-aqueous Vanadium(III) Acetylacetonate Redox Flow Batteries. <i>Journal of the Electrochemical Society</i> , 2020, 167, 120510.	2.9	2
118	Preliminary Evaluation of Pentacene Field Effect Transistors with Polymer Gate Electret as Ionizing Radiation Dosimeters. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 11368.	2.5	2
119	Method for the differentiation of radiation-induced photocurrent from total measured current in P3HT/PCBM BHJ photodiodes. <i>MethodsX</i> , 2020, 7, 101125.	1.6	1
120	Measuring small field profiles and output factors with a stemless plastic scintillator array. <i>Medical Physics</i> , 2021, , .	3.0	1
121	Evaluation of the absolute photoluminescence quantum yields of molecularly doped organic composite films and the electroluminescence efficiencies of molecular light-emitting devices containing oligoheterocycles as efficient emission centers. , 2001, 4105, 464.		0
122	Photoemission studies of organic phosphors doped in electron and hole transport hosts. , 2002, , .		0
123	Patterning of Nanocrystalline Cellulose Gel Phase by Electrodeposition of a Metallic Electrode. <i>PLoS ONE</i> , 2014, 9, e99202.	2.5	0
124	Four-wave mixing response of solution-processed CH ₃ NH ₃ PbI ₃ thin films. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0