

# Fong-Yi Cao

## List of Publications by Year in descending order

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56  
papers

6,868  
citations

159585

30  
h-index

155660

55  
g-index

57  
all docs

57  
docs citations

57  
times ranked

7318  
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis of Conjugated Polymers for Organic Solar Cell Applications. Chemical Reviews, 2009, 109, 5868-5923.	47.7	3,739
2	Donor-acceptor conjugated polymers based on multifused ladder-type arenes for organic solar cells. Chemical Society Reviews, 2015, 44, 1113-1154.	38.1	543
3	Combination of Indene-C <sub>60</sub> Bis-Adduct and Cross-Linked Fullerene Interlayer Leading to Highly Efficient Inverted Polymer Solar Cells. Journal of the American Chemical Society, 2010, 132, 17381-17383.	13.7	307
4	Applications of functional fullerene materials in polymer solar cells. Energy and Environmental Science, 2014, 7, 1866.	30.8	174
5	Combination of Molecular, Morphological, and Interfacial Engineering to Achieve Highly Efficient and Stable Plastic Solar Cells. Advanced Materials, 2012, 24, 549-553.	21.0	155
6	Morphological Stabilization by In Situ Polymerization of Fullerene Derivatives Leading to Efficient, Thermally Stable Organic Photovoltaics. Advanced Functional Materials, 2011, 21, 1723-1732.	14.9	153
7	Donor-acceptor polymers based on multi-fused heptacyclic structures: synthesis, characterization and photovoltaic applications. Chemical Communications, 2010, 46, 3259.	4.1	116
8	A Versatile Fluoro-Containing Low-Bandgap Polymer for Efficient Semitransparent and Tandem Polymer Solar Cells. Advanced Functional Materials, 2013, 23, 5084-5090.	14.9	110
9	Synthesis of a New Ladder-Type Benzodi(cyclopentadithiophene) Arene with Forced Planarization Leading to an Enhanced Efficiency of Organic Photovoltaics. Chemistry of Materials, 2012, 24, 3964-3971.	6.7	97
10	Dithienocarbazole-Based Ladder-Type Heptacyclic Arenes with Silicon, Carbon, and Nitrogen Bridges: Synthesis, Molecular Properties, Field-Effect Transistors, and Photovoltaic Applications. Advanced Functional Materials, 2012, 22, 1711-1722.	14.9	92
11	New Angular-Shaped and Isomerically Pure Anthradithiophene with Lateral Aliphatic Side Chains for Conjugated Polymers: Synthesis, Characterization, and Implications for Solution-Processed Organic Field-Effect Transistors and Photovoltaics. Chemistry of Materials, 2012, 24, 2391-2399.	6.7	72
12	Highly Efficient Polymer Tandem Cells and Semitransparent Cells for Solar Energy. Advanced Energy Materials, 2014, 4, 1301645.	19.5	71
13	Continuous blade coating for multi-layer large-area organic light-emitting diode and solar cell. Journal of Applied Physics, 2011, 110, .	2.5	70
14	New Thieno[3,2-b]thiophene-Based Acceptor: Tuning Acceptor Strength of Ladder-Type N-Type Materials to Simultaneously Achieve Enhanced $V_{oc}$ and $J_{sc}$ of Nonfullerene Solar Cells. ACS Energy Letters, 2018, 3, 1722-1729.	17.4	61
15	Synthesis of a 4,9-Didodecyl Angular-Shaped Naphthodiselenophene Building Block To Achieve High-Mobility Transistors. Chemistry of Materials, 2016, 28, 5121-5130.	6.7	60
16	A New Pentacyclic Indacenodiselenophene Arene and Its Donor-Acceptor Copolymers for Solution-Processable Polymer Solar Cells and Transistors: Synthesis, Characterization, and Investigation of Alkyl/Alkoxy Side-Chain Effect. Macromolecules, 2013, 46, 7715-7726.	4.8	59
17	Ladder-Type Nonacyclic Structure Consisting of Alternate Thiophene and Benzene Units for Efficient Conventional and Inverted Organic Photovoltaics. Chemistry of Materials, 2011, 23, 5068-5075.	6.7	58
18	Donor-Acceptor Random Copolymers Based on a Ladder-Type Nonacyclic Unit: Synthesis, Characterization, and Photovoltaic Applications. Macromolecules, 2011, 44, 8415-8424.	4.8	57

#	ARTICLE	IF	CITATIONS
19	Angular-Shaped 4,9-Dialkyl- and 1,2-Naphthodithiophene-Based Donor-Acceptor Copolymers: Investigation of Isomeric Structural Effects on Molecular Properties and Performance of Field-Effect Transistors and Photovoltaics. <i>Advanced Functional Materials</i> , 2015, 25, 6131-6143.	14.9	49
20	Diindenothieno[2,3-b]thiophene arene for efficient organic photovoltaics with an extra high open-circuit voltage of 1.14 eV. <i>Chemical Communications</i> , 2012, 48, 3203.	4.1	47
21	Morphological Stabilization by Supramolecular Perfluorophenyl- $<sub>60</sub>$ Interactions Leading to Efficient and Thermally Stable Organic Photovoltaics. <i>Advanced Functional Materials</i> , 2014, 24, 1418-1429.	14.9	47
22	Side-chain modulation of dithienofluorene-based copolymers to achieve high field-effect mobilities. <i>Chemical Science</i> , 2017, 8, 2942-2951.	7.4	46
23	Haptacyclic Carbazole-Based Ladder-Type Nonfullerene Acceptor with Side-Chain Optimization for Efficient Organic Photovoltaics. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 42035-42042.	8.0	43
24	Synthesis, Molecular and Photovoltaic Properties of an Indolo[3,2- <i>b</i> ]indole-Based Acceptor-Donor-Acceptor Small Molecule. <i>European Journal of Organic Chemistry</i> , 2013, 2013, 5076-5084.	2.4	41
25	Angular-Shaped 4,9-Dialkyl-naphthodithiophene-Based Octacyclic Ladder-Type Non-Fullerene Acceptors for High Efficiency Ternary-Blend Organic Photovoltaics. <i>Chemistry of Materials</i> , 2018, 30, 4968-4977.	6.7	39
26	Highly Efficient Inverted D:A1:A2 Ternary Blend Organic Photovoltaics Combining a Ladder-type Non-Fullerene Acceptor and a Fullerene Acceptor. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 24797-24803.	8.0	36
27	Isomerically Pure Benzothiophene-Incorporated Acceptor: Achieving Improved $V_{oc}$ and $J_{sc}$ of Nonfullerene Organic Solar Cells via End Group Manipulation. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 33179-33187.	8.0	36
28	A crosslinked fullerene matrix doped with an ionic fullerene as a cathodic buffer layer toward high-performance and thermally stable polymer and organic metalhalide perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2015, 3, 20382-20388.	10.3	35
29	Alternating copolymers incorporating cyclopenta[2,1- <i>b</i> :3,4- <i>b'</i> ]dithiophene unit and organic dyes for photovoltaic applications. <i>Journal of Polymer Science Part A</i> , 2011, 49, 1791-1801.	2.3	33
30	Isomeric effect of fluorene-based fused-ring electron acceptors to achieve high-efficiency organic solar cells. <i>Journal of Materials Chemistry A</i> , 2020, 8, 5315-5322.	10.3	33
31	Non-Volatile Perfluorophenyl-Based Additive for Enhanced Efficiency and Thermal Stability of Nonfullerene Organic Solar Cells via Supramolecular Fluorinated Interactions. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	33
32	A new ladder-type benzodi(cyclopentadithiophene)-based donor-acceptor polymer and a modified hole-collecting PEDOT:PSS layer to achieve tandem solar cells with an open-circuit voltage of 1.62 V. <i>Chemical Communications</i> , 2013, 49, 7702.	4.1	26
33	Triarylamine-based crosslinked hole-transporting material with an ionic dopant for high-performance PEDOT:PSS-free polymer solar cells. <i>Journal of Materials Chemistry C</i> , 2015, 3, 6158-6165.	5.5	24
34	Bis(pentafluorophenyl)-Containing Additive: Enhancing Efficiency and Morphological Stability of Polymer Solar Cells via Hand-Grabbing-Like Supramolecular Pentafluorophenyl-Fullerene Interactions. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 43861-43870.	8.0	24
35	Thiophene-Vinylene-Thiophene-Based Donor-Acceptor Copolymers with Acetylene-Inserted Branched Alkyl Side Chains To Achieve High Field-Effect Mobilities. <i>Chemistry of Materials</i> , 2018, 30, 7611-7622.	6.7	24
36	Mg Doped CuCrO <sub>2</sub> as Efficient Hole Transport Layers for Organic and Perovskite Solar Cells. <i>Nanomaterials</i> , 2019, 9, 1311.	4.1	24

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37	Dithienocyclopentathieno[3,2- <i>b</i> ]thiophene Hexacyclic Arene for Solution-Processed Organic Field-Effect Transistors and Photovoltaic Applications. Chemistry - an Asian Journal, 2012, 7, 818-825.	3.3	22
38	A New $\text{sp}^2\text{-sp}^2$ Dialkylethylene-Bridged Heptacyclic Ladder-Type Arene for High Efficiency Polymer Solar Cells. Advanced Energy Materials, 2013, 3, 457-465.	19.5	22
39	Flat-on ambipolar triphenylamine/ $\text{C}_{60}$ nano-stacks formed from the self-organization of a pyramid-sphere-shaped amphiphile. Chemical Science, 2016, 7, 2768-2774.	7.4	22
40	Synthesis and side-chain isomeric effect of 4,9-/5,10-dialkylated- $\beta^2$ -angular-shaped naphthodithiophenes-based donor-acceptor copolymers for polymer solar cells and field-effect transistors. Polymer Chemistry, 2017, 8, 2334-2345.	3.9	20
41	Synthesis and Isomeric Effects of Ladder-Type Alkylated Terbenzodithiophene Derivatives. Journal of Organic Chemistry, 2016, 81, 2534-2542.	3.2	17
42	Forced coplanarity of dithienofluorene-based non-fullerene acceptors to achieve high-efficiency organic solar cells. Journal of Materials Chemistry A, 2019, 7, 17947-17953.	10.3	16
43	Self-assembled tri-, tetra- and penta-ethylene glycols as easy, expedited and universal interfacial cathode-modifiers for inverted polymer solar cells. Journal of Materials Chemistry A, 2016, 4, 8707-8715.	10.3	15
44	Synthesis and Molecular Properties of Two Isomeric Dialkylated Tetrathienonaphthalenes. Organic Letters, 2016, 18, 368-371.	4.6	15
45	2-Dimensional cross-shaped tetrathienonaphthalene-based ladder-type acceptor for high-efficiency organic solar cells. Journal of Materials Chemistry A, 2020, 8, 12141-12148.	10.3	14
46	Alcohol-Soluble Zwitterionic 4-(Dimethyl(pyridin-2-yl)ammonio)butane-1-sulfonate Small Molecule as a Cathode Modifier for Nonfullerene Acceptor-Based Organic Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 10222-10230.	8.0	13
47	Synthesis, molecular and photovoltaic/transistor properties of heptacyclic ladder-type di(thienobenzo)fluorene-based copolymers. Journal of Materials Chemistry C, 2016, 4, 11427-11435.	5.5	11
48	Synthesis and field-effect transistor properties of a diseleno[3,2- <i>b</i> :2',3'-d]silole-based donor-acceptor copolymer: investigation of chalcogen effect. Polymer Chemistry, 2016, 7, 4654-4660.	3.9	10
49	Synthesis, photophysical and photovoltaic properties of a new class of two-dimensional conjugated polymers containing donor-acceptor chromophores as pendant groups. Polymer Chemistry, 2013, 4, 3333.	3.9	6
50	Probing Defect States in Organic Polymers and Bulk Heterojunctions Using Surface Photovoltage Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 10795-10801.	3.1	5
51	Synthesis of Ring-Locked Tetracyclic Dithienocyclopentapyrans and Dibenzocyclopentapyran via 1,5-Hydride Shift and Copper-Catalyzed C=O Bond Formation for Nonfullerene Acceptors. Organic Letters, 2021, 23, 1692-1697.	4.6	4
52	Color-temperature dependence of indoor organic photovoltaic performance. Organic Electronics, 2022, 104, 106477.	2.6	2
53	Synthesis of Two-Dimensional Terbenzodithiophene-Based Derivative by Palladium-Catalyzed C-H Benzannulation and Its Donor-Acceptor Copolymers for Organic Photovoltaics. Journal of the Chinese Chemical Society, 2018, 65, 133-140.	1.4	1
54	Non-Volatile Perfluorophenyl-Based Additive for Enhanced Efficiency and Thermal Stability of Nonfullerene Organic Solar Cells via Supramolecular Fluorinated Interactions (Adv. Energy Mater.) Tj ETQq0 0 0 rgBT%Overlock 10 Tf 50		

#	ARTICLE	IF	CITATIONS
55	Solar Cells: Morphological Stabilization by Supramolecular Perfluorophenyl-C60Interactions Leading to Efficient and Thermally Stable Organic Photovoltaics (Adv. Funct. Mater. 10/2014). Advanced Functional Materials, 2014, 24, 1492-1492.	14.9	0
56	Palladiumâ€Catalyzed Direct Crossâ€Dehydrogenative Alkynylation of Selenophenes. Advanced Synthesis and Catalysis, 2021, 363, 4526.	4.3	0