Nicola Gasparini

List of Publications by Year in Descending Order

94 papers	7,199 citations	41 h-index	84 g-index
104 ext. papers	8,531 ext. citations	17 avg, IF	6.13 L-index

#	Paper	IF	Citations
94	Air-Processable and Thermally Stable Hole Transport Layer for Non-Fullerene Organic Solar Cells. *ACS Applied Energy Materials*, **2022**, 5, 1023-1030	6.1	2
93	N-type polymer semiconductors incorporating para, meta, and ortho-carborane in the conjugated backbone. *Polymer*, **2022**, 240, 124481	3.9	2
92	Infrared Organic Photodetectors Employing Ultralow Bandgap Polymer and Non-Fullerene Acceptors for Biometric Monitoring.. *Small*, **2022**, e2200580	11	3
91	Synthetic Nuances to Maximize n-Type Organic Electrochemical Transistor and Thermoelectric Performance in Fused Lactam Polymers.. *Journal of the American Chemical Society*, **2022**,	16.4	9
90	Propylene and butylene glycol: new alternatives to ethylene glycol in conjugated polymers for bioelectronic applications.. *Materials Horizons*, **2021**,	14.4	4
89	Challenges to the Success of Commercial Organic Photovoltaic Products. *Advanced Energy Materials* , **2021**, 11, 2100056	21.8	26
88	Adjusting the energy of interfacial states in organic photovoltaics for maximum efficiency. *Nature Communications*, **2021**, 12, 1772	17.4	12
87	Controlling Electrochemically Induced Volume Changes in Conjugated Polymers by Chemical Design: from Theory to Devices. *Advanced Functional Materials*, **2021**, 31, 2100723	15.6	13
86	Efficient Hybrid Amorphous Silicon/Organic Tandem Solar Cells Enabled by Near-Infrared Absorbing Nonfullerene Acceptors. *Advanced Energy Materials*, **2021**, 11, 2100166	21.8	3
85	Inkjet Printed Circuits with 2D Semiconductor Inks for High-Performance Electronics. *Advanced Electronic Materials*, **2021**, 7, 2100112	6.4	15
84	Concurrent cationic and anionic perovskite defect passivation enables 27.4% perovskite/silicon tandems with suppression of halide segregation. *Joule*, **2021**, 5, 1566-1586	27.8	43
83	Ternary organic photodetectors based on pseudo-binaries nonfullerene-based acceptors. *JPhys Materials*, **2021**, 4, 045001	4.2	2
82	Polaron Delocalization in Donor-Acceptor Polymers and its Impact on Organic Electrochemical Transistor Performance. *Angewandte Chemie - International Edition*, **2021**, 60, 7777-7785	16.4	41
81	Polaron Delocalization in Donor–Acceptor Polymers and its Impact on Organic Electrochemical Transistor Performance. *Angewandte Chemie*, **2021**, 133, 7856-7864	3.6	12
80	Acene Ring Size Optimization in Fused Lactam Polymers Enabling High n-Type Organic Thermoelectric Performance. *Journal of the American Chemical Society*, **2021**, 143, 260-268	16.4	30
79	Non-fullerene-based organic photodetectors for infrared communication. *Journal of Materials Chemistry C*, **2021**, 9, 2375-2380	7.1	12
78	All Slot-Die Coated Non-Fullerene Organic Solar Cells with PCE 11%. *Advanced Functional Materials*, **2021**, 31, 2009996	15.6	19

77	Fiber-Shaped Electronic Devices. *Advanced Energy Materials*, **2021**, 11, 2101443	21.8	15
76	High efficiency blue organic light-emitting diodes with below-bandgap electroluminescence. *Nature Communications*, **2021**, 12, 4868	17.4	13
75	Exploiting Ternary Blends for Improved Photostability in High-Efficiency Organic Solar Cells. *ACS Energy Letters*, **2020**, 5, 1371-1379	20.1	83
74	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. *Nature Energy*, **2020**, 5, 131-140	62.3	552
73	Unraveling the Complex Nanomorphology of Ternary Organic Solar Cells with Multimodal Analytical Transmission Electron Microscopy. *Solar Rrl*, **2020**, 4, 2000114	7.1	4
72	A universal solution processed interfacial bilayer enabling ohmic contact in organic and hybrid optoelectronic devices. *Energy and Environmental Science*, **2020**, 13, 268-276	35.4	26
71	Nonfullerene-Based Organic Photodetectors for Ultrahigh Sensitivity Visible Light Detection. *ACS Applied Materials & Interfaces*, **2020**, 12, 48836-48844	9.5	15
70	Side Chain Redistribution as a Strategy to Boost Organic Electrochemical Transistor Performance and Stability. *Advanced Materials*, **2020**, 32, e2002748	24	88
69	The Bulk Heterojunction in Organic Photovoltaic, Photodetector, and Photocatalytic Applications. *Advanced Materials*, **2020**, 32, e2001763	24	68
68	A Multilayered Electron Extracting System for Efficient Perovskite Solar Cells. *Advanced Functional Materials*, **2020**, 30, 2004273	15.6	8
67	High performance conjugated terpolymers as electron donors in nonfullerene organic solar cells. *Journal of Materials Chemistry C*, **2020**, 8, 13422-13429	7.1	3
66	Efficient DPP Donor and Nonfullerene Acceptor Organic Solar Cells with High Photon-to-Current Ratio and Low Energetic Loss. *Advanced Functional Materials*, **2019**, 29, 1902441	15.6	32
65	End Group Tuning in Acceptor□Donor□Acceptor Nonfullerene Small Molecules for High Fill Factor Organic Solar Cells. *Advanced Functional Materials*, **2019**, 29, 1808429	15.6	33
64	Instantaneous charge separation in non-fullerene acceptor bulk-heterojunction of highly efficient solar cells. *EPJ Web of Conferences*, **2019**, 205, 05010	0.3	0
63	The role of the third component in ternary organic solar cells. *Nature Reviews Materials*, **2019**, 4, 229-242	73.3	244
62	Digital Inkjet Printing of High-Efficiency Large-Area Nonfullerene Organic Solar Cells. *Advanced Materials Technologies*, **2019**, 4, 1900040	6.8	47
61	Favorable Mixing Thermodynamics in Ternary Polymer Blends for Realizing High Efficiency Plastic Solar Cells. *Advanced Energy Materials*, **2019**, 9, 1803394	21.8	33
60	Dual Sensitizer and Processing-Aid Behavior of Donor Enables Efficient Ternary Organic Solar Cells. *Joule*, **2019**, 3, 846-857	27.8	68

59	Nonfullerene Acceptor for Organic Solar Cells with Chlorination on Dithieno[3,2-b:2?,3?-d]pyrrol Fused-Ring. *ACS Energy Letters*, **2019**, 4, 763-770	20.1	87
58	Interface Molecular Engineering for Laminated Monolithic Perovskite/Silicon Tandem Solar Cells with 80.4% Fill Factor. *Advanced Functional Materials*, **2019**, 29, 1901476	15.6	27
57	Quantum Dots Supply Bulk- and Surface-Passivation Agents for Efficient and Stable Perovskite Solar Cells. *Joule*, **2019**, 3, 1963-1976	27.8	154
56	Enhancing the Charge Extraction and Stability of Perovskite Solar Cells Using Strontium Titanate (SrTiO3) Electron Transport Layer. *ACS Applied Energy Materials*, **2019**, 2, 8090-8097	6.1	26
55	Excitation Wavelength-Dependent Internal Quantum Efficiencies in a P3HT/Nonfullerene Acceptor Solar Cell. *Journal of Physical Chemistry C*, **2019**, 123, 5826-5832	3.8	5
54	Interfacial Dynamics and Contact Passivation in Perovskite Solar Cells. *Advanced Electronic Materials*, **2019**, 5, 1800500	6.4	22
53	Critical review of the molecular design progress in non-fullerene electron acceptors towards commercially viable organic solar cells. *Chemical Society Reviews*, **2019**, 48, 1596-1625	58.5	617
52	The Physics of Small Molecule Acceptors for Efficient and Stable Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1703298	21.8	96
51	Controlling Blend Morphology for Ultrahigh Current Density in Nonfullerene Acceptor-Based Organic Solar Cells. *ACS Energy Letters*, **2018**, 3, 669-676	20.1	187
50	Fluorination Triggered New Small Molecule Donor Materials for Efficient As-Cast Organic Solar Cells. *Small*, **2018**, 14, e1801542	11	20
49	Suppressing the Surface Recombination and Tuning the Open-Circuit Voltage of Polymer/Fullerene Solar Cells by Implementing an Aggregative Ternary Compound. *ACS Applied Materials & Interfaces*, **2018**, 10, 28803-28811	9.5	13
48	A Highly Crystalline Fused-Ring n-Type Small Molecule for Non-Fullerene Acceptor Based Organic Solar Cells and Field-Effect Transistors. *Advanced Functional Materials*, **2018**, 28, 1802895	15.6	63
47	Cs0.15FA0.85PbI3 perovskite solar cells for concentrator photovoltaic applications. *Journal of Materials Chemistry A*, **2018**, 6, 21913-21917	13	20
46	P3HT: non-fullerene acceptor based large area, semi-transparent PV modules with power conversion efficiencies of 5%, processed by industrially scalable methods. *Energy and Environmental Science*, **2018**, 11, 2225-2234	35.4	108
45	Visible and Near-Infrared Imaging with Nonfullerene-Based Photodetectors. *Advanced Materials Technologies*, **2018**, 3, 1800104	6.8	60
44	Improved charge carrier dynamics in polymer/perovskite nanocrystal based hybrid ternary solar cells. *Physical Chemistry Chemical Physics*, **2018**, 20, 23674-23683	3.6	8
43	Solar Cells: Overcoming the Ambient Manufacturability-Scalability-Performance Bottleneck in Colloidal Quantum Dot Photovoltaics (Adv. Mater. 35/2018). *Advanced Materials*, **2018**, 30, 1870260	24	3
42	Robust nonfullerene solar cells approaching unity external quantum efficiency enabled by suppression of geminate recombination. *Nature Communications*, **2018**, 9, 2059	17.4	141

41	Overcoming the Ambient Manufacturability-Scalability-Performance Bottleneck in Colloidal Quantum Dot Photovoltaics. *Advanced Materials*, **2018**, 30, e1801661	24	58
40	Progress in Poly (3-Hexylthiophene) Organic Solar Cells and the Influence of Its Molecular Weight on Device Performance. *Advanced Energy Materials*, **2018**, 8, 1801001	21.8	72
39	The Influence of Solvent Additive on Polymer Solar Cells Employing Fullerene and Non-Fullerene Acceptors. *Advanced Electronic Materials*, **2018**, 4, 1700358	6.4	46
38	High-performance ternary organic solar cells with thick active layer exceeding 11% efficiency. *Energy and Environmental Science*, **2017**, 10, 885-892	35.4	172
37	Suppression of Thermally Induced Fullerene Aggregation in Polyfullerene-Based Multiacceptor Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 10971-10982	9.5	23
36	Beyond Donor-Acceptor (D-A) Approach: Structure-Optoelectronic Properties-Organic Photovoltaic Performance Correlation in New D-A -D-A Low-Bandgap Conjugated Polymers. *Macromolecular Rapid Communications*, **2017**, 38, 1600720	4.8	15
35	Panchromatic ternary/quaternary polymer/fullerene BHJ solar cells based on novel silicon naphthalocyanine and silicon phthalocyanine dye sensitizers. *Journal of Materials Chemistry A*, **2017**, 5, 2550-2562	13	27
34	Suppression of Hysteresis Effects in Organohalide Perovskite Solar Cells. *Advanced Materials Interfaces*, **2017**, 4, 1700007	4.6	44
33	Rational Design of High-Performance Wide-Bandgap (□ eV) Polymer Semiconductors as Electron Donors in Organic Photovoltaics Exhibiting High Open Circuit Voltages (□ V). *Macromolecular Rapid Communications*, **2017**, 38, 1600614	4.8	16
32	Light harvesting enhancement upon incorporating alloy structured CdSeXTe1□ quantum dots in DPP:PC61BM bulk heterojunction solar cells. *Journal of Materials Chemistry C*, **2017**, 5, 654-662	7.1	14
31	Polymer:Nonfullerene Bulk Heterojunction Solar Cells with Exceptionally Low Recombination Rates. *Advanced Energy Materials*, **2017**, 7, 1701561	21.8	69
30	Suppressing photooxidation of conjugated polymers and their blends with fullerenes through nickel chelates. *Energy and Environmental Science*, **2017**, 10, 2005-2016	35.4	44
29	Burn-in Free Nonfullerene-Based Organic Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1700770	21.8	156
28	The role of chemical structure in indacenodithienothiophene-alt-benzothiadiazole copolymers for high performance organic solar cells with improved photo-stability through minimization of burn-in loss. *Journal of Materials Chemistry A*, **2017**, 5, 25064-25076	13	20
27	Reducing the efficiency-stability-cost gap of organic photovoltaics with highly efficient and stable small molecule acceptor ternary solar cells. *Nature Materials*, **2017**, 16, 363-369	27	807
26	Revealing Minor Electrical Losses in the Interconnecting Layers of Organic Tandem Solar Cells. *Advanced Materials Interfaces*, **2017**, 4, 1700776	4.6	13
25	Indacenodithienothiophene-Based Ternary Organic Solar Cells. *Frontiers in Energy Research*, **2017**, 4,	3.8	6
24	Designing ternary blend bulk heterojunction solar cells with reduced carrier recombination and a fill factor of 77%. *Nature Energy*, **2016**, 1,	62.3	274

23	Reduced voltage losses yield 10% efficient fullerene free organic solar cells with >1 V open circuit voltages. *Energy and Environmental Science*, **2016**, 9, 3783-3793	35.4	425
22	High-efficiency and air-stable P3HT-based polymer solar cells with a new non-fullerene acceptor. *Nature Communications*, **2016**, 7, 11585	17.4	903
21	Organic and perovskite solar modules innovated by adhesive top electrode and depth-resolved laser patterning. *Energy and Environmental Science*, **2016**, 9, 2302-2313	35.4	57
20	Pyrene□ullerene Interaction and Its Effect on the Behavior of Photovoltaic Blends. *Journal of Physical Chemistry C*, **2016**, 120, 6909-6919	3.8	15
19	Extending the environmental lifetime of unpackaged perovskite solar cells through interfacial design. *Journal of Materials Chemistry A*, **2016**, 4, 11604-11610	13	43
18	Enhancement of the Power Conversion Efficiency in Organic Photovoltaics by Unveiling the Appropriate Polymer Backbone Enlargement Approach. *Advanced Functional Materials*, **2016**, 26, 1840-1848	15.6	25
17	A Series of Pyrene-Substituted Silicon Phthalocyanines as Near-IR Sensitizers in Organic Ternary Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1502355	21.8	52
16	Guideline for Efficiency Enhancement in Semi-Transparent Thin-Film Organic Photovoltaics with Dielectric Mirrors. *Advanced Optical Materials*, **2016**, 4, 1098-1105	8.1	7
15	Exploring the Limiting Open-Circuit Voltage and the Voltage Loss Mechanism in Planar CH3NH3PbBr3 Perovskite Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1600132	21.8	59
14	Ultra low band gap □unsubstituted BODIPY-based copolymer synthesized by palladium catalyzed cross-coupling polymerization for near infrared organic photovoltaics. *Journal of Materials Chemistry A*, **2015**, 3, 16279-16286	13	41
13	A generic concept to overcome bandgap limitations for designing highly efficient multi-junction photovoltaic cells. *Nature Communications*, **2015**, 6, 7730	17.4	50
12	Integrated molecular, morphological and interfacial engineering towards highly efficient and stable solution-processed small molecule solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 22695-22707	13	23
11	Role of Polymer Fractionation in Energetic Losses and Charge Carrier Lifetimes of Polymer: Fullerene Solar Cells. *Journal of Physical Chemistry C*, **2015**, 119, 19668-19673	3.8	21
10	Low-Temperature Solution-Processed Kesterite Solar Cell Based on in Situ Deposition of Ultrathin Absorber Layer. *ACS Applied Materials & Interfaces*, **2015**, 7, 21100-6	9.5	21
9	Organic Solar Cells: An Alternative Strategy to Adjust the Recombination Mechanism of Organic Photovoltaics by Implementing Ternary Compounds (Adv. Energy Mater. 24/2015). *Advanced Energy Materials*, **2015**, 5,	21.8	1
8	Photophysics of Molecular-Weight-Induced Losses in Indacenodithienothiophene-Based Solar Cells. *Advanced Functional Materials*, **2015**, 25, 4898-4907	15.6	51
7	Systematic Analysis of Polymer Molecular Weight Influence on the Organic Photovoltaic Performance. *Macromolecular Rapid Communications*, **2015**, 36, 1778-97	4.8	46
6	An Alternative Strategy to Adjust the Recombination Mechanism of Organic Photovoltaics by Implementing Ternary Compounds. *Advanced Energy Materials*, **2015**, 5, 1501527	21.8	48

5	Printable Dielectric Mirrors with Easily Adjustable and Well-Defined Reflection Maxima for Semitransparent Organic Solar Cells. *Advanced Optical Materials*, **2015**, 3, 1424-1430	8.1	19
4	Effects of Alkyl Terminal Chains on Morphology, Charge Generation, Transport, and Recombination Mechanisms in Solution-Processed Small Molecule Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2015**, 5, 1500386	21.8	98
3	Neat C based bulk-heterojunction polymer solar cells with excellent acceptor dispersion. *ACS Applied Materials & Interfaces*, **2014**, 6, 21416-25	9.5	26
2	On the Cl N halogen bond: a rotational study of CF3Cl NH3. *Chemistry - A European Journal*, **2012**, 18, 1364-8	4.8	41
1	Organic Electrochemical Transistors: An Emerging Technology for Biosensing. *Advanced Materials Interfaces*,2102039	4.6	7