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List of Publications by Year
in descending order

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Version: 2024-02-01

82 papers	4,922 citations	126858 33 h-index	91828 69 g-index
83 all docs	83 docs citations	83 times ranked	8557 citing authors

#	Article	IF	Citations
1	Conductivity in organic semiconductors hybridized with the vacuum field. Nature Materials, 2015, 14, 1123-1129.	13.3	433
2	Charge transport and mobility engineering in two-dimensional transition metal chalcogenide semiconductors. Chemical Society Reviews, 2016, 45, 118-151.	18.7	423
3	Flexible non-volatile optical memory thin-film transistor device with over 256 distinct levels based on an organic bicomponent blend. Nature Nanotechnology, 2016, 11, 769-775.	15.6	300
4	25th Anniversary Article: Organic Electronics Marries Photochromism: Generation of Multifunctional Interfaces, Materials, and Devices. Advanced Materials, 2014, 26, 1827-1845.	11.1	259
5	Coherent Coupling of WS₂ Monolayers with Metallic Photonic Nanostructures at Room Temperature. Nano Letters, 2016, 16, 4368-4374.	4.5	256
6	Degradation of Methylammonium Lead Iodide Perovskite Structures through Light and Electron Beam Driven Ion Migration. Journal of Physical Chemistry Letters, 2016, 7, 561-566.	2.1	234
7	Optically switchable transistor via energy-level phototuning in a bicomponent organic semiconductor. Nature Chemistry, 2012, 4, 675-679.	6.6	217
8	When 2D Materials Meet Molecules: Opportunities and Challenges of Hybrid Organic/Inorganic van der Waals Heterostructures. Advanced Materials, 2018, 30, e1706103.	11.1	194
9	Optically switchable transistors by simple incorporation of photochromic systems into small-molecule semiconducting matrices. Nature Communications, 2015, 6, 6330.	5.8	162
10	Local Current Mapping and Patterning of Reduced Graphene Oxide. Journal of the American Chemical Society, 2010, 132, 14130-14136.	6.6	140
11	Optical Modulation of the Charge Injection in an Organic Fieldâ€Effect Transistor Based on Photochromic Selfâ€Assembledâ€Monolayerâ€Functionalized Electrodes. Advanced Materials, 2011, 23, 1447-1452.	11.1	140
12	Electrochemical Functionalization of Graphene at the Nanoscale with Self-Assembling Diazonium Salts. ACS Nano, 2016, 10, 7125-7134.	7.3	132
13	Reversible, Fast, and Wideâ€Range Oxygen Sensor Based on Nanostructured Organometal Halide Perovskite. Advanced Materials, 2017, 29, 1702469.	11.1	127
14	Towards the textile transistor: Assembly and characterization of an organic field effect transistor with a cylindrical geometry. Applied Physics Letters, 2006, 89, 143515.	1.5	113
15	Harnessing the Liquidâ€Phase Exfoliation of Graphene Using Aliphatic Compounds: A Supramolecular Approach. Angewandte Chemie - International Edition, 2014, 53, 10355-10361.	7.2	92
16	Graphene nanoribbon blends with P3HT for organic electronics. Nanoscale, 2014, 6, 6301-6314.	2.8	85
17	Nonâ€conventional Processing and Postâ€processing Methods for the Nanostructuring of Conjugated Materials for Organic Electronics. Advanced Functional Materials, 2011, 21, 1279-1295.	7.8	81
18	A nanomesh scaffold for supramolecular nanowire optoelectronic devices. Nature Nanotechnology, 2016, 11, 900-906.	15.6	72

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19	Periodic potentials in hybrid van der Waals heterostructures formed by supramolecular lattices on graphene. Nature Communications, 2017, 8, 14767.	5.8	68
20	Photoinduced work function changes by isomerization of a densely packed azobenzene-based SAM on Au: a joint experimental and theoretical study. Physical Chemistry Chemical Physics, 2011, 13, 14302.	1.3	61
21	Analysis of the hysteresis in organic thin-film transistors with polymeric gate dielectric. Organic Electronics, 2011, 12, 477-485.	1.4	59
22	Lightâ€Modulation of the Charge Injection in a Polymer Thinâ€Film Transistor by Functionalizing the Electrodes with Bistable Photochromic Selfâ€Assembled Monolayers. Advanced Materials, 2016, 28, 6606-6611.	11.1	57
23	Optically switchable transistors comprising a hybrid photochromic molecule/n-type organic active layer. Journal of Materials Chemistry C, 2015, 3, 4156-4161.	2.7	56
24	Graphene Transistors via in Situ Voltage-Induced Reduction of Graphene-Oxide under Ambient Conditions. Journal of the American Chemical Society, 2011, 133, 14320-14326.	6.6	55
25	Collective molecular switching in hybrid superlattices for light-modulated two-dimensional electronics. Nature Communications, 2018, 9, 2661.	5.8	53
26	Multiresponsive Nonvolatile Memories Based on Optically Switchable Ferroelectric Organic Fieldâ€Effect Transistors. Advanced Materials, 2021, 33, e2007965.	11.1	52
27	Organic-based inverters: basic concepts, materials, novel architectures and applications. Chemical Society Reviews, 2020, 49, 7627-7670.	18.7	48
28	Flexible Organic Thin-Film Transistors for pH Monitoring. IEEE Sensors Journal, 2009, 9, 1963-1970.	2.4	41
29	The rise of organic magnetoresistance: materials and challenges. Journal of Materials Chemistry C, 2017, 5, 5572-5580.	2.7	37
30	Engineering Optically Switchable Transistors with Improved Performance by Controlling Interactions of Diarylethenes in Polymer Matrices. Journal of the American Chemical Society, 2020, 142, 11050-11059.	6.6	37
31	Charge transport in fibre-based perylene-diimide transistors: effect of the alkyl substitution and processing technique. Nanoscale, 2012, 4, 2387.	2.8	36
32	Nanoscale Electrical Investigation of Layerâ€byâ€Layer Grown Molecular Wires. Advanced Materials, 2014, 26, 1688-1693.	11.1	36
33	Boosting and Balancing Electron and Hole Mobility in Single- and Bilayer WSe₂ Devices via Tailored Molecular Functionalization. ACS Nano, 2019, 13, 11613-11622.	7.3	34
34	High-Performance Phototransistors Based on PDIF-CN₂ Solution-Processed Single Fiber and Multifiber Assembly. ACS Applied Materials & Interfaces, 2016, 8, 9829-9838.	4.0	33
35	Supramolecular Self-Assembly in a Sub-micrometer Electrodic Cavity: Fabrication of Heat-Reversible Ï€-Gel Memristor. Journal of the American Chemical Society, 2017, 139, 14406-14411.	6.6	32
36	Modeling of Short-Channel Effects in Organic Thin-Film Transistors. IEEE Transactions on Electron Devices, 2008, 55, 2561-2567.	1.6	31

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37	A Multifunctional Polymer-Graphene Thin-Film Transistor with Tunable Transport Regimes. ACS Nano, 2015, 9, 2357-2367.	7.3	31
38	Multiscale Charge Injection and Transport Properties in Selfâ€Assembled Monolayers of Biphenyl Thiols with Varying Torsion Angles. Chemistry - A European Journal, 2012, 18, 10335-10347.	1.7	30
39	Charge Transport Over Multiple Length Scales in Supramolecular Fiber Transistors: Single Fiber Versus Ensemble Performance. Advanced Materials, 2014, 26, 430-435.	11.1	29
40	Bottomâ€Up Fabricated Asymmetric Electrodes for Organic Electronics. Advanced Materials, 2010, 22, 5018-5023.	11.1	27
41	Tuning the charge injection of P3HT-based organic thin-film transistors through electrode functionalization with oligophenylene SAMs. Journal of Materials Chemistry, 2010, 20, 10798.	6.7	27
42	Enhancing the Charge Transport in Solutionâ€Processed Perylene Diâ€imide Transistors via Thermal Annealing of Metastable Disordered Films. Advanced Functional Materials, 2014, 24, 5503-5510.	7.8	27
43	Phototuning Selectively Hole and Electron Transport in Optically Switchable Ambipolar Transistors. Advanced Functional Materials, 2020, 30, 1908944.	7.8	27
44	Transparent dielectric films for organic thin-film transistors: A perspective for low cost, low size technologies. Thin Solid Films, 2008, 516, 1533-1537.	0.8	25
45	Optical Input/Electrical Output Memory Elements based on a Liquid Crystalline Azobenzene Polymer. ACS Applied Materials & Interfaces, 2016, 8, 6563-6569.	4.0	25
46	Selfâ€Assembled Conjugated Thiopheneâ€Based Rotaxane Architectures: Structural, Computational, and Spectroscopic Insights into Molecular Aggregation. Advanced Functional Materials, 2011, 21, 834-844.	7.8	24
47	Analysis of External and Internal Disorder to Understand Bandâ€Like Transport in nâ€Type Organic Semiconductors. Advanced Materials, 2021, 33, 2007870.	11.1	24
48	Integration of self-assembled discotic-based fibres into field-effect transistors: a comparison of preparation approaches. Journal of Materials Chemistry, 2011, 21, 206-213.	6.7	23
49	Croconaines as molecular materials for organic electronics: synthesis, solid state structure and use in transistor devices. Journal of Materials Chemistry C, 2016, 4, 3138-3142.	2.7	23
50	Fastâ€Response Photonic Device Based on Organicâ€Crystal Heterojunctions Assembled into a Verticalâ€Yetâ€Open Asymmetric Architecture. Advanced Materials, 2017, 29, 1605760.	11.1	21
51	The Role of Morphology in Optically Switchable Transistors Based on a Photochromic Molecule/pâ€Type Polymer Semiconductor Blend. Advanced Functional Materials, 2020, 30, 1907507.	7.8	20
52	Photocurrent studies of stress and aging in pentacene thin film transistors. Applied Physics Letters, 2006, 89, 222112.	1.5	18
53	An Analytical Model for Cylindrical Thin-Film Transistors. IEEE Transactions on Electron Devices, 2007, 54, 2362-2368.	1.6	18
54	Exfoliation of Fewâ€Layer Graphene in Volatile Solvents Using Aromatic Perylene Diimide Derivatives as Surfactants. ChemPlusChem, 2017, 82, 358-367.	1.3	18

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55	Controlling Ambipolar Transport and Voltage Inversion in Solution-Processed Thin-Film Devices through Polymer Blending. Chemistry of Materials, 2019, 31, 6491-6498.	3.2	17
56	H-Bonding Tuned Self-Assembly of Phenyleneâ€“Thiopheneâ€“Thiopheneâ€“Phenylene Derivatives at Surfaces: Structural and Electrical Studies. Journal of Physical Chemistry C, 2011, 115, 9753-9759.	1.5	14
57	Nano-Subsidence-Assisted Precise Integration of Patterned Two-Dimensional Materials for High-Performance Photodetector Arrays. ACS Nano, 2019, 13, 2654-2662.	7.3	14
58	Solidâ€“solid transfer of organic semiconductors for field-effect transistor fabrication. Journal of Materials Chemistry, 2010, 20, 9018.	6.7	13
59	Effect of the molecular weight of the polymer gate dielectric on the performances of solution-processed ambipolar OTFTs. Journal of Materials Chemistry C, 2013, 1, 7725.	2.7	13
60	Doping-related broadening of the density of states governs integer-charge transfer in P3HT. Applied Physics Letters, 2021, 118, .	1.5	13
61	Solution-Processed Field-Effect Transistors Based on Dihexylquaterthiophene Films with Performances Exceeding Those of Vacuum-Sublimed Films. ACS Applied Materials & Interfaces, 2014, 6, 21248-21255.	4.0	12
62	Ambipolar organic field-effect transistors on unconventional substrates. Applied Physics A: Materials Science and Processing, 2009, 95, 49-54.	1.1	9
63	Face-on vs. edge-on: tuning the structure of tetrathiafulvalene monolayers with solvent. Journal of Materials Chemistry C, 2018, 6, 3787-3791.	2.7	8
64	Surface-Confined Macrocyclization via Dynamic Covalent Chemistry. ACS Nano, 2020, 14, 2956-2965.	7.3	8
65	Non-invasive digital etching of van der Waals semiconductors. Nature Communications, 2022, 13, 1844.	5.8	8
66	Titanium Dioxide Mesoporous Electrodes for Solidâ€State Dyeâ€Sensitized Solar Cells: Crossâ€Analysis of the Critical Parameters. Advanced Energy Materials, 2014, 4, 1301362.	10.2	7
67	Dynamic covalent conjugated polymer epitaxy on graphene. Journal of Materials Chemistry C, 2019, 7, 12240-12247.	2.7	7
68	Improving charge transport in poly(3â€hexylthiophene) transistors via blending with an alkylâ€substituted phenyleneâ€“thiopheneâ€“thiopheneâ€“phenylene molecule. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 642-649.	2.4	6
69	High, Anisotropic, and Substrate-Independent Mobility in Polymer Field-Effect Transistors Based on Preassembled Semiconducting Nanofibrils. ACS Nano, 2017, 11, 2000-2007.	7.3	6
70	Generation of Low-Dimensional Architectures through the Self-Assembly of Pyromellitic Diimide Derivatives. ACS Omega, 2017, 2, 1672-1678.	1.6	6
71	Effect of Extrinsic Disorder on the Magnetoresistance Response of Gated Single-Layer Graphene Devices. ACS Applied Materials & Interfaces, 2021, 13, 26152-26160.	4.0	5
72	The role of size and coating in Au nanoparticles incorporated into bi-component polymeric thin-film transistors. Nanoscale, 2014, 6, 5075-5080.	2.8	4

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73	Carbonâ€Passivated Ni Electrodes for Charge Injection in Organic Semiconductors. Advanced Materials Interfaces, 2016, 3, 1500501.	1.9	4
74	Charge Transport in Halide Perovskite Single Crystals: Experimental and Theoretical Perspectives. ChemNanoMat, 2019, 5, 290-299.	1.5	4
75	Non-conventional charge transport in organic semiconductors: magnetoresistance and thermoelectricity. Molecular Systems Design and Engineering, 2017, 2, 47-56.	1.7	3
76	Low activation energy field-effect transistors fabricated by bar-assisted meniscus shearing. Applied Physics Letters, 2021, 119, .	1.5	3
77	Air stable conductivity of black phosphorous/graphitic carbon nitride blends. Journal of Materials Chemistry C, 2021, 9, 6404-6408.	2.7	2
78	Phonon Analysis of 2D Organicâ€Halide Perovskites in the Lowâ€•and Midâ€IR Region. Advanced Optical Materials, 0, , 2100439.	3.6	2
79	Organic Electronics: Non-conventional Processing and Post-processing Methods for the Nanostructuring of Conjugated Materials for Organic Electronics (Adv. Funct. Mater. 7/2011). Advanced Functional Materials, 2011, 21, 1206-1206.	7.8	1
80	Improving the electrical performance of solution processed oligothiophene thin-film transistors via structural similarity blending. Journal of Materials Chemistry C, 2017, 5, 5048-5054.	2.7	1
81	Current crowding issues on nanoscale planar organic transistors for spintronic applications. Nanotechnology, 2018, 29, 365201.	1.3	1
82	(Invited) Hybrid Van Der Waals Heterostructures: From Fundamentals to Applications. ECS Meeting Abstracts, 2020, MA2020-01, 741-741.	0.0	0