Binghao Wang

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7004193/publications.pdf

Version: 2024-02-01

71 papers	4,244 citations	126907 33 h-index	110387 64 g-index
73 all docs	73 docs citations	73 times ranked	6538 citing authors

#	Article	IF	Citations
1	High-k Gate Dielectrics for Emerging Flexible and Stretchable Electronics. Chemical Reviews, 2018, 118, 5690-5754.	47.7	530
2	New Type of 2D Perovskites with Alternating Cations in the Interlayer Space, (C(NH₂)₃)(CH₃NH₃)_nPb_nI_{3n} Structure, Properties, and Photovoltaic Performance. Journal of the American Chemical Society, 2017, 139, 16297-16309.	13.7	374
3	Mechanically Flexible Conductors for Stretchable and Wearable Eâ€Skin and Eâ€Textile Devices. Advanced Materials, 2019, 31, e1901408.	21.0	313
4	Enhanced Efficiency of Hotâ€Cast Largeâ€Area Planar Perovskite Solar Cells/Modules Having Controlled Chloride Incorporation. Advanced Energy Materials, 2017, 7, 1601660.	19.5	191
5	Flexible and stretchable metalÂoxide nanofiber networks for multimodal and monolithically integrated wearable electronics. Nature Communications, 2020, 11, 2405.	12.8	174
6	Dopantâ€Free Hole Transporting Polymers for High Efficiency, Environmentally Stable Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1600502.	19.5	156
7	Processing Strategies for an Organic Photovoltaic Module with over 10% Efficiency. Joule, 2020, 4, 189-206.	24.0	154
8	Lowâ€Temperature Atomic Layer Deposition of MoS₂ Films. Angewandte Chemie - International Edition, 2017, 56, 4991-4995.	13.8	127
9	Combustion Synthesized Zinc Oxide Electronâ€Transport Layers for Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1900265.	14.9	121
10	Two-layer materials of polyethylene and a carbon nanotube/cyanate ester composite with high dielectric constant and extremely low dielectric loss. Carbon, 2013, 54, 224-233.	10.3	118
11	Aggregation control in natural brush-printed conjugated polymer films and implications for enhancing charge transport. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10066-E10073.	7.1	110
12	UVâ€“Ozone Interfacial Modification in Organic Transistors for Highâ€Sensitivity NO₂ Detection. Advanced Materials, 2017, 29, 1701706.	21.0	106
13	Solutionâ€Processed Allâ€Oxide Transparent Highâ€Performance Transistors Fabricated by Sprayâ€Combustion Synthesis. Advanced Electronic Materials, 2016, 2, 1500427.	5.1	101
14	Simultaneous Bottomâ€Up Interfacial and Bulk Defect Passivation in Highly Efficient Planar Perovskite Solar Cells using Nonconjugated Smallâ€Molecule Electrolytes. Advanced Materials, 2019, 31, e1903239.	21.0	89
15	Fabrication and origin of high-k carbon nanotube/epoxy composites with low dielectric loss through layer-by-layer casting technique. Carbon, 2015, 85, 28-37.	10.3	82
16	Breath figureâ€“derived porous semiconducting films for organic electronics. Science Advances, 2020, 6, eaaz1042.	10.3	81
17	Metal Oxide Transistors via Polyethylenimine Doping of the Channel Layer: Interplay of Doping, Microstructure, and Charge Transport. Advanced Functional Materials, 2016, 26, 6179-6187.	14.9	77
18	Scandiumâ€Catalyzed Selfâ€Assisted Polar Coâ€monomer Enchainment in Ethylene Polymerization. Angewandte Chemie - International Edition, 2017, 56, 15964-15968.	13.8	63

#	Article	IF	Citations
19	Carbohydrate-Assisted Combustion Synthesis To Realize High-Performance Oxide Transistors. Journal of the American Chemical Society, 2016, 138, 7067-7074.	13.7	61
20	Porous Semiconducting Polymers Enable Highâ€Performance Electrochemical Transistors. Advanced Materials, 2021, 33, e2007041.	21.0	61
21	On-skin paintable biogel for long-term high-fidelity electroencephalogram recording. Science Advances, 2022, 8, .	10.3	58
22	Chitosan fibers enhanced gellan gum hydrogels with superior mechanical properties and water-holding capacity. Carbohydrate Polymers, 2013, 97, 152-158.	10.2	57
23	Robust, self-adhesive, reinforced polymeric nanofilms enabling gas-permeable dry electrodes for long-term application. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	57
24	Controllable growth of LiMn2O4 by carbohydrate-assisted combustion synthesis for high performance Li-ion batteries. Nano Energy, 2019, 64, 103936.	16.0	47
25	Synergistic Boron Doping of Semiconductor and Dielectric Layers for High-Performance Metal Oxide Transistors: Interplay of Experiment and Theory. Journal of the American Chemical Society, 2018, 140, 12501-12510.	13.7	43
26	Polymer Doping Enables a Twoâ€Dimensional Electron Gas for Highâ€Performance Homojunction Oxide Thinâ€Film Transistors. Advanced Materials, 2019, 31, e1805082.	21.0	43
27	Dielectric properties and mechanism of composites by superposing expanded graphite/cyanate ester layer with carbon nanotube/cyanate ester layer. Composites Science and Technology, 2014, 91, 8-15.	7.8	39
28	Metal Composition and Polyethylenimine Doping Capacity Effects on Semiconducting Metal Oxideâ€“Polymer Blend Charge Transport. Journal of the American Chemical Society, 2018, 140, 5457-5473.	13.7	39
29	Gradient structure based dual-robust superhydrophobic surfaces with high-adhesive force. Applied Surface Science, 2019, 463, 427-434.	6.1	38
30	Significant Polar Comonomer Enchainment in Zirconiumâ€Catalyzed, Masking Reagentâ€Free, Ethylene Copolymerizations. Angewandte Chemie - International Edition, 2019, 58, 7030-7034.	13.8	37
31	Nitroacetylacetone as a Cofuel for the Combustion Synthesis of High-Performance Indiumâ€“Galliumâ€“Zinc Oxide Transistors. Chemistry of Materials, 2018, 30, 3323-3329.	6.7	35
32	Expeditious, scalable solution growth of metal oxide films by combustion blade coating for flexible electronics. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 9230-9238.	7.1	35
33	Percolative polymer composites for dielectric capacitors: a brief history, materials, and multilayer interface design. Journal of Materials Chemistry A, 2020, 8, 18515-18537.	10.3	35
34	High-k Materials with Low Dielectric Loss Based on Two Superposed Gradient Carbon Nanotube/Cyanate Ester Composites. Journal of Physical Chemistry C, 2013, 117, 15487-15495.	3.1	33
35	Addressable growth of oriented organic semiconductor ultra-thin films on hydrophobic surface by direct dip-coating. Organic Electronics, 2015, 24, 170-175.	2.6	33
36	Experimental and theoretical evidence for hydrogen doping in polymer solution-processed indium gallium oxide. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18231-18239.	7.1	31

#	Article	IF	Citations
37	Engineering Intrinsic Flexibility in Polycrystalline Molecular Semiconductor Films by Grain Boundary Plasticization. Journal of the American Chemical Society, 2020, 142, 5487-5492.	13.7	30
38	Boost up dielectric constant and push down dielectric loss of carbon nanotube/cyanate ester composites via gradient and layered structure design. Journal of Materials Chemistry A, 2015, 3, 23162-23169.	10.3	29
39	Frequency-Agile Low-Temperature Solution-Processed Alumina Dielectrics for Inorganic and Organic Electronics Enhanced by Fluoride Doping. Journal of the American Chemical Society, 2020, 142, 12440-12452.	13.7	27
40	Waterproof Mechanically Robust Multifunctional Conformal Sensors for Underwater Interactive Humanâ€“Machine Interfaces. Advanced Intelligent Systems, 2021, 3, 2100056.	6.1	27
41	Polar Isotactic and Syndiotactic Polypropylenes by Organozirconiumâ€Catalyzed Maskingâ€Reagentâ€Free Propylene and Aminoâ€“Olefin Copolymerization. Angewandte Chemie - International Edition, 2020, 59, 20522-20528.	13.8	25
42	Mixed-flow design for microfluidic printing of two-component polymer semiconductor systems. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17551-17557.	7.1	24
43	Self-Assembled Nanodielectrics for Solution-Processed Top-Gate Amorphous IGZO Thin-Film Transistors. ACS Applied Materials & Interfaces, 2021, 13, 15399-15408.	8.0	24
44	Fast patterning of oriented organic microstripes for field-effect ammonia gas sensors. Nanoscale, 2016, 8, 3954-3961.	5.6	23
45	Cinnamate-Functionalized Natural Carbohydrates as Photopatternable Gate Dielectrics for Organic Transistors. Chemistry of Materials, 2019, 31, 7608-7617.	6.7	23
46	Scandiumâ€Catalyzed Selfâ€Assisted Polar Coâ€monomer Enchainment in Ethylene Polymerization. Angewandte Chemie, 2017, 129, 16180-16184.	2.0	21
47	Foundry-compatible high-resolution patterning of vertically phase-separated semiconducting films for ultraflexible organic electronics. Nature Communications, 2021, 12, 4937.	12.8	19
48	The Dipole Moment Inversion Effects in Self-Assembled Nanodielectrics for Organic Transistors. Chemistry of Materials, 2017, 29, 9974-9980.	6.7	18
49	Selfâ€Powered and Interfaceâ€Independent Tactile Sensors Based on Bilayer Singleâ€Electrode Triboelectric Nanogenerators for Robotic Electronic Skin. Advanced Intelligent Systems, 2023, 5, 2100120.	6.1	17
50	Structureâ€“Charge Transport Relationships in Fluoride-Doped Amorphous Semiconducting Indium Oxide: Combined Experimental and Theoretical Analysis. Chemistry of Materials, 2020, 32, 805-820.	6.7	16
51	Processable High Electron Mobility Ï€â€Copolymers via Mesoscale Backbone Conformational Ordering. Advanced Functional Materials, 2021, 31, 2009359.	14.9	16
52	Lowâ€Temperature Atomic Layer Deposition of MoS₂ Films. Angewandte Chemie, 2017, 129, 5073-5077.	2.0	15
53	Processing, Structure, and Transistor Performance: Combustion versus Pulsed Laser Growth of Amorphous Oxides. ACS Applied Electronic Materials, 2019, 1, 548-557.	4.3	15
54	Significant Polar Comonomer Enchainment in Zirconiumâ€Catalyzed, Masking Reagentâ€Free, Ethylene Copolymerizations. Angewandte Chemie, 2019, 131, 7104-7108.	2.0	15

#	Article	IF	Citations
55	Thermal behavior and properties of chitosan fibers enhanced polysaccharide hydrogels. Thermochimica Acta, 2014, 583, 8-14.	2.7	14
56	Low-Loss Near-Infrared Hyperbolic Metamaterials with Epitaxial ITO-In₂O₃ Multilayers. ACS Photonics, 2018, 5, 2000-2007.	6.6	14
57	Marked Cofuel Tuning of Combustion Synthesis Pathways for Metal Oxide Semiconductor Films. Advanced Electronic Materials, 2019, 5, 1900540.	5.1	13
58	Growth of Highly Oriented Ultrathin Crystalline Organic Microstripes: Effect of Alkyl Chain Length. Langmuir, 2016, 32, 9109-9117.	3.5	11
59	Doping Indium Oxide Films with Aminoâ€Polymers of Varying Nitrogen Content Markedly Affects Charge Transport and Mechanical Flexibility. Advanced Functional Materials, 2021, 31, 2100451.	14.9	10
60	Oxideâ€“Polymer Heterojunction Diodes with a Nanoscopic Phase-Separated Insulating Layer. Nano Letters, 2019, 19, 471-476.	9.1	9
61	Ultraviolet Light-Densified Oxide-Organic Self-Assembled Dielectrics: Processing Thin-Film Transistors at Room Temperature. ACS Applied Materials & Interfaces, 2021, 13, 3445-3453.	8.0	9
62	Highly Transparent and Conductive W-Doped ZnO/Cu/W-Doped ZnO Multilayer Source/Drain Electrodes for Metal-Oxide Thin-Film Transistors. IEEE Electron Device Letters, 2018, 39, 967-970.	3.9	7
63	Molecular doping of near-infrared organic photodetectors for photoplethysmogram sensors. Journal of Materials Chemistry C, 2021, 9, 3129-3135.	5.5	6
64	Combustion Synthesis and Polymer Doping of Metal Oxides for High-Performance Electronic Circuitry. Accounts of Chemical Research, 2022, 55, 429-441.	15.6	6
65	Polar Isotactic and Syndiotactic Polypropylenes by Organozirconiumâ€Catalyzed Maskingâ€Reagentâ€Free Propylene and Aminoâ€“Olefin Copolymerization. Angewandte Chemie, 2020, 132, 20703-20709.	2.0	4
66	Cross-Plane Thermal Conductance of Phosphonate-Based Self-Assembled Monolayers and Self-Assembled Nanodielectrics. ACS Applied Materials & Interfaces, 2020, 12, 34901-34909.	8.0	3
67	Systematic Analysis of Self-Assembled Nanodielectric Architecture and Organization Effects on Organic Transistor Switching. ACS Applied Electronic Materials, 2022, 4, 2015-2025.	4.3	2
68	Oxide Transistors: Metal Oxide Transistors via Polyethylenimine Doping of the Channel Layer: Interplay of Doping, Microstructure, and Charge Transport (Adv. Funct. Mater. 34/2016). Advanced Functional Materials, 2016, 26, 6320-6320.	14.9	0
69	Organic Thinâ€Film Transistors: UVâ€“Ozone Interfacial Modification in Organic Transistors for Highâ€Sensitivity NO₂ Detection (Adv. Mater. 31/2017). Advanced Materials, 2017, 29, .	21.0	0
70	Cross-Plane Thermal Conductivity Measurements in Self-Assembled Nanodielectric Heterostructures. , 2018, , .		0
71	Perovskite Solar Cells: Simultaneous Bottomâ€Up Interfacial and Bulk Defect Passivation in Highly Efficient Planar Perovskite Solar Cells using Nonconjugated Smallâ€Molecule Electrolytes (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Over	21.0	0