Toshihiro Okamoto

List of Publications by Year
in descending order

112	4,790	94269 37	102304 66
papers	citations	h-index	g-index

117	117	117	5110
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Scattering mechanism of hole carriers in organic molecular semiconductors deduced from analyses of terahertz absorption spectra using Drudeâ€“Anderson model. Applied Physics Letters, 2022, 120, .	1.5	3
2	Nitrogen-Containing Perylene Diimides: Molecular Design, Robust Aggregated Structures, and Advances in n-Type Organic Semiconductors. Accounts of Chemical Research, 2022, 55, 660-672.	7.6	38
3	Naphthobispyrazine Bisimide: A Strong Acceptor Unit for Conjugated Polymers Enabling Highly Coplanar Backbone, Short Ï€â€“Ï€ Stacking, and High Electron Transport. Chemistry of Materials, 2022, 34, 2717-2729.	3.2	15
4	Regioselective Functionalization of Nitrogen-Embedded Perylene Diimides for High-Performance Organic Electron-Transporting Materials. Bulletin of the Chemical Society of Japan, 2022, 95, 953-960.	2.0	2
5	Mixed-Orbital Charge Transport in N-Shaped Benzene- and Pyrazine-Fused Organic Semiconductors. Journal of the American Chemical Society, 2022, 144, 11159-11167.	6.6	14
6	Role of Perfluorophenyl Group in the Side Chain of Small-Molecule n-Type Organic Semiconductors in Stress Stability of Single-Crystal Transistors. Journal of Physical Chemistry Letters, 2021, 12, 2095-2101.	2.1	10
7	Nanoâ€Ground Glass as a Superhydrophilic Template for Printing Highâ€Performance Organic Singleâ€Crystal Thin Films. Advanced Materials Interfaces, 2021, 8, 2100033.	1.9	5
8	Chrysenodithiophene-Based Conjugated Polymer: An Elongated Fused Ï€-Electronic Backbone with a Unique Orbital Structure Toward Efficient Intermolecular Carrier Transport. Macromolecules, 2021, 54, 2113-2123.	2.2	2
9	Supramolecular cocrystals built through redox-triggered ion intercalation in Ï€-conjugated polymers. Communications Materials, 2021, 2, .	2.9	16
10	Electronic excitation spectra of organic semiconductor/ionic liquid interface by electrochemical attenuated total reflectance spectroscopy. Communications Chemistry, 2021, 4, .	2.0	7
11	Manipulations of Chiroptical Properties in Beltâ€Persistent Cycloarylenes via Desymmetrization with Heteroatom Doping. Angewandte Chemie - International Edition, 2021, 60, 19097-19101.	7.2	22
12	Manipulations of Chiroptical Properties in Beltâ€Persistent Cycloarylenes via Desymmetrization with Heteroatom Doping. Angewandte Chemie, 2021, 133, 19245-19249.	1.6	9
13	Two-dimensional hole gas in organic semiconductors. Nature Materials, 2021, 20, 1401-1406.	13.3	25
14	Surface Doping of Organic Singleâ€Crystal Semiconductors to Produce Strainâ€Sensitive Conductive Nanosheets. Advanced Science, 2021, 8, 2002065.	5.6	10
15	Strong and Atmospherically Stable Dicationic Oxidative Dopant. Advanced Science, 2021, 8, e2101998.	5.6	10
16	Approaching isotropic charge transport of n-type organic semiconductors with bulky substituents. Communications Chemistry, 2021, 4, .	2.0	10
17	Cooperative Aggregations of Nitrogen-Containing Perylene Diimides Driven by Rigid and Flexible Functional Groups. Chemistry of Materials, 2020, 32, 9115-9125.	3.2	14
18	Correlation between the static and dynamic responses of organic single-crystal field-effect transistors. Nature Communications, 2020, 11, 4839.	5.8	24

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19	Effect of Electronically Distinct Aromatic Substituents on the Molecular Assembly and Hole Transport of V-Shaped Organic Semiconductors. Journal of Physical Chemistry C, 2020, 124, 17503-17511.	1.5	1
20	Coherent Electron Transport in Airâ€Stable, Printed Singleâ€Crystal Organic Semiconductor and Application to Megahertz Transistors. Advanced Materials, 2020, 32, e2003245.	11.1	19
21	Electrolessâ€Plated Gold Contacts for Highâ€Performance, Low Contact Resistance Organic Thin Film Transistors. Advanced Functional Materials, 2020, 30, 2003977.	7.8	14
22	Low-voltage complementary inverters using solution-processed, high-mobility organic single-crystal transistors fabricated by polymer-blend printing. Applied Physics Letters, 2020, 117, 033301.	1.5	12
23	Band-like transporting and thermally durable V-shaped organic semiconductors with a phenyl key block. Journal of Materials Chemistry C, 2020, 8, 14172-14179.	2.7	7
24	Alkyl-Substituted Selenium-Bridged V-Shaped Organic Semiconductors Exhibiting High Hole Mobility and Unusual Aggregation Behavior. Journal of the American Chemical Society, 2020, 142, 14974-14984.	6.6	25
25	Evaluations of nonlocal electron-phonon couplings in tetracene, rubrene, and C10â^'DNBDTâ^'NW based on density functional theory. Physical Review B, 2020, 102, .	1.1	11
26	Robust, high-performance n-type organic semiconductors. Science Advances, 2020, 6, eaaz0632.	4.7	135
27	Damage-free Metal Electrode Transfer to Monolayer Organic Single Crystalline Thin Films. Scientific Reports, 2020, 10, 4702.	1.6	17
28	Charge mobility calculation of organic semiconductors without use of experimental single-crystal data. Scientific Reports, 2020, 10, 2524.	1.6	13
29	High-performance, semiconducting membrane composed of ultrathin, single-crystal organic semiconductors. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 80-85.	3.3	32
30	Sub-molecular structural relaxation at a physisorbed interface with monolayer organic single-crystal semiconductors. Communications Physics, 2020, 3, .	2.0	10
31	Highâ€Speed Organic Singleâ€Crystal Transistor Responding to Very High Frequency Band. Advanced Functional Materials, 2020, 30, 1909501.	7.8	57
32	Bent-Shaped p-Type Small-Molecule Organic Semiconductors: A Molecular Design Strategy for Next-Generation Practical Applications. Journal of the American Chemical Society, 2020, 142, 9083-9096.	6.6	108
33	Evaluating intrinsic mobility from transient terahertz conductivity spectra of microcrystal samples of organic molecular semiconductors. Applied Physics Letters, 2019, 115, .	1.5	3
34	Scalable Fabrication of Organic Single-Crystalline Wafers for Reproducible TFT Arrays. Scientific Reports, 2019, 9, 15897.	1.6	39
35	Efficient molecular doping of polymeric semiconductors driven by anion exchange. Nature, 2019, 572, 634-638.	13.7	208
36	Bis[1]benzothieno[5,4-d:5â€²,4â€²-dâ€²]benzo[1,2-b:4,5-bâ€²]dithiophene Derivatives: Synthesis and Effect of Sulfur Positions on Their Transistor Properties. Bulletin of the Chemical Society of Japan, 2019, 92, 1107-1116.	2.0	3

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37	Next-generation organic semiconductors driven by bent-shaped Ï€-electron cores. Polymer Journal, 2019, 51, 825-833.	1.3	12
38	Air-Stable Benzo[c]thiophene Diimide n-Type Ï€-Electron Core. Organic Letters, 2019, 21, 4448-4453.	2.4	23
39	Formation of Pores and Ï€-Stacked Columns in Benzothienobenzothiophene-based Linear Coordination Polymers. Chemistry Letters, 2019, 48, 756-759.	0.7	2
40	Wafer-scale, layer-controlled organic single crystals for high-speed circuit operation. Science Advances, 2018, 4, eaao5758.	4.7	237
41	Organic Semiconductors: Zigzag-Elongated Fused Ï€-Electronic Core: A Molecular Design Strategy to Maximize Charge-Carrier Mobility (Adv. Sci. 1/2018). Advanced Science, 2018, 5, 1870005.	5.6	2
42	Zigzagâ€Elongated Fused Ï€â€Electronic Core: A Molecular Design Strategy to Maximize Chargeâ€Carrier Mobility. Advanced Science, 2018, 5, 1700317.	5.6	43
43	Remarkably low flicker noise in solution-processed organic single crystal transistors. Communications Physics, 2018, 1, .	2.0	23
44	Endâ€Capping Ï€â€Conjugated Systems with Mediumâ€Sized Sulfurâ€Containing Rings: A Route Towards Solutionâ€Processable Airâ€Stable Semiconductors. Chemistry - A European Journal, 2018, 24, 11503-11510.	1.7	5
45	Oxygenâ€and Sulfurâ€bridged Lâ€shaped Ï€â€Conjugated Molecules: Synthesis, Aggregated Structures, and Charge Transporting Behavior. Asian Journal of Organic Chemistry, 2018, 7, 2309-2314.	1.3	6
46	High performance solution-crystallized thin-film transistors based on V-shaped thieno[3,2-f:4,5-fâ€²]bis[1]benzothiophene semiconductors. Journal of Materials Chemistry C, 2017, 5, 1903-1909.	2.7	22
47	Oxygen- and Sulfur-Bridged Bianthracene V-Shaped Organic Semiconductors. Bulletin of the Chemical Society of Japan, 2017, 90, 931-938.	2.0	28
48	Painting Integrated Complementary Logic Circuits for Singleâ€Crystal Organic Transistors: A Demonstration of a Digital Wireless Communication Sensing Tag. Advanced Electronic Materials, 2017, 3, 1600456.	2.6	57
49	Spontaneously formed high-performance charge-transport layers of organic single-crystal semiconductors on precisely synthesized insulating polymers. Applied Physics Letters, 2017, 110, .	1.5	14
50	Solution-processed organicâ€“inorganic hybrid CMOS inverter exhibiting a high gain reaching 890. Organic Electronics, 2017, 48, 127-131.	1.4	17
51	Impact of Phenyl Groups on Oxygen-bridged V-shaped Organic Semiconductors. Chemistry Letters, 2017, 46, 338-341.	0.7	9
52	Boron-Stabilized Planar Neutral Ï€-Radicals with Well-Balanced Ambipolar Charge-Transport Properties. Journal of the American Chemical Society, 2017, 139, 14336-14339.	6.6	97
53	Precise engineering of quantum dot array coupling through their barrier widths. Nature Communications, 2017, 8, 787.	5.8	55
54	Coexistence of ultra-long spin relaxation time andÂcoherent charge transport in organic single-crystal semiconductors. Nature Physics, 2017, 13, 994-998.	6.5	126

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55	Alkylated oxygen-bridged V-shaped molecules: impacts of the substitution position and length of the alkyl chains on the crystal structures and fundamental properties in aggregated forms. Polymer Journal, 2017, 49, 215-221.	1.3	2
56	High performance oxygen-bridged N-shaped semiconductors with a stabilized crystal phase and blue luminescence. RSC Advances, 2016, 6, 28966-28969.	1.7	15
57	Stable growth of large-area single crystalline thin films from an organic semiconductor/polymer blend solution for high-mobility organic field-effect transistors. Organic Electronics, 2016, 39, 127-132.	1.4	33
58	Organometallic Bonding in an Ullmann-Type On-Surface Chemical Reaction Studied by High-Resolution Atomic Force Microscopy. Small, 2016, 12, 5303-5311.	5.2	52
59	Soluble 2,6-Bis(4-pentylphenylethynyl)anthracene as a High Hole Mobility Semiconductor for Organic Field-effect Transistors. Chemistry Letters, 2016, 45, 1403-1405.	0.7	7
60	Suppressing molecular vibrations in organic semiconductors by inducing strain. Nature Communications, 2016, 7, 11156.	5.8	105
61	Shortâ€Channel Solutionâ€Processed Organic Semiconductor Transistors and their Application in Highâ€Speed Organic Complementary Circuits and Organic Rectifiers. Advanced Electronic Materials, 2015, 1, 1500178.	2.6	32
62	All solution-processed organic single-crystal transistors with high mobility and low-voltage operation. Organic Electronics, 2015, 22, 1-4.	1.4	22
63	Highâ€Mobility Organic Transistors with Wetâ€Etchâ€Patterned Top Electrodes: A Novel Patterning Method for Fineâ€Pitch Integration of Organic Devices. Advanced Materials Interfaces, 2014, 1, 1300124.	1.9	44
64	Solution-processed single-crystalline organic transistors on patterned ultrathin gate insulators. Organic Electronics, 2014, 15, 1184-1188.	1.4	15
65	Furan fused V-shaped organic semiconducting materials with high emission and high mobility. Chemical Communications, 2014, 50, 5342-5344.	2.2	49
66	Highâ€Performance Solutionâ€Processable Nâ€Shaped Organic Semiconducting Materials with Stabilized Crystal Phase. Advanced Materials, 2014, 26, 4546-4551.	11.1	206
67	Highly Oriented Polymer Semiconductor Films Compressed at the Surface of Ionic Liquids for Highâ€Performance Polymeric Organic Fieldâ€Effect Transistors. Advanced Materials, 2014, 26, 6430-6435.	11.1	69
68	Splitâ€Gate Organic Fieldâ€Effect Transistors for Highâ€Speed Operation. Advanced Materials, 2014, 26, 2983-2988.	11.1	33
69	Vâ€Shaped Organic Semiconductors With Solution Processability, High Mobility, and High Thermal Durability. Advanced Materials, 2013, 25, 6392-6397.	11.1	196
70	Benzopyrazine-fused tetracene derivatives: Thin-film formation at the crystalline mesophase for solution-processed hole transporting devices. Organic Electronics, 2013, 14, 437-444.	1.4	11
71	Dinaphtho[1,2-b:2â€²,1â€²-d]chalcogenophenes: Comprehensive Investigation of the Effect of the Chalcogen Atoms in the Phenacene-Type Ï€-Electronic Cores. Chemistry of Materials, 2013, 25, 3952-3956.	3.2	52
72	1â€Arylâ€4â€Silylmethyl[60]fullerenes: Synthesis, Properties, and Photovoltaic Performance. Chemistry - an Asian Journal, 2013, 8, 121-128.	1.7	15

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73	Two-dimensional crystal growth of thermally converted organic semiconductors at the surface of ionic liquid and high-mobility organic field-effect transistors. Organic Electronics, 2013, 14, 1211-1217.	1.4	20
74	Formation of Photoconductive Nanowires of Tetracene Derivative in Composite Thin Film. ACS Applied Materials & Interfaces, 2013, 5, 1937-1942.	4.0	13
75	Doping of Organic Semiconductors: Impact of Dopant Strength and Electronic Coupling. Angewandte Chemie - International Edition, 2013, 52, 7751-7755.	7.2	186
76	Inch-Size Solution-Processed Single-Crystalline Films of High-Mobility Organic Semiconductors. Applied Physics Express, 2013, 6, 076503.	1.1	102
77	Investigation of Hole Transporting Properties in Thin-Film and Single-Crystal Organic Field-Effect Transistor Based on Dinaphtho[2,1-b:1',2'-d]thiophene. Japanese Journal of Applied Physics, 2013, 52, 05DC10.	0.8	3
78	Single-crystal Field-effect Transistors with a Furan-containing Organic Semiconductor Having a Twisted Ï€-Electronic System. Chemistry Letters, 2013, 42, 654-656.	0.7	27
79	Organic Semiconductors: V-Shaped Organic Semiconductors With Solution Processability, High Mobility, and High Thermal Durability (Adv. Mater. 44/2013). Advanced Materials, 2013, 25, 6306-6306.	11.1	1
80	High-power three-dimensional polymer FETs. Current Applied Physics, 2012, 12, S92-S95.	1.1	3
81	Impact of regioregularity on thin-film transistor and photovoltaic cell performances of pentacene-containing polymers. Journal of Materials Chemistry, 2012, 22, 4356.	6.7	14
82	Tetracene Dicarboxylic Imide and Its Disulfide: Synthesis of Ambipolar Organic Semiconductors for Organic Photovoltaic Cells. Chemistry - an Asian Journal, 2012, 7, 105-111.	1.7	41
83	Synthesis of regioregular pentacene-containing conjugated polymers. Journal of Materials Chemistry, 2011, 21, 7078.	6.7	19
84	Arylâ^'Perfluoroaryl Substituted Tetracene: Induction of Face-to-Face Ï€â^'Ï€ Stacking and Enhancement of Charge Carrier Properties. Chemistry of Materials, 2011, 23, 1646-1649.	3.2	135
85	Synthesis, Physical Properties, and Crystal Structure of Acetetracenylene-1,2-dione. Chemistry Letters, 2011, 40, 739-741.	0.7	2
86	2,9-Dibromopentacene: Synthesis and the role of substituent and symmetry on solid-state order. Synthetic Metals, 2010, 160, 2447-2451.	2.1	10
87	Anthradithiophene-Containing Copolymers for Thin-Film Transistors and Photovoltaic Cells. Macromolecules, 2010, 43, 6361-6367.	2.2	49
88	Electronic structure of bis(benzo)pentathienoacene in gas andÂsolid phase: ultraviolet photoemission spectroscopy andÂenergyÂbandÂcalculation. Applied Physics A: Materials Science and Processing, 2009, 95, 185-191.	1.1	1
89	Functionalized Asymmetric Linear Acenes for Highâ€Performance Organic Semiconductors. Advanced Functional Materials, 2008, 18, 1579-1585.	7.8	37
90	Electronic Modulation of Fused Oligothiophenes by Chemical Oxidation. Organic Letters, 2008, 10, 3393-3396.	2.4	51

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91	Synthesis and Characterization of Pentaceneâ^' and Anthradithiopheneâ^'Fluorene Conjugated Copolymers Synthesized by Suzuki Reactions. Macromolecules, 2008, 41, 6977-6980.	2.2	58
92	Bis-Phosphoryl-Bridged Stilbenes Synthesized by an Intramolecular Cascade Cyclization. Organic Letters, 2008, 10, 913-916.	2.4	145
93	708 Design and Shape Optimization of Noise Barrier. The Proceedings of Conference of Chugoku-Shikoku Branch, 2008, 2008.46, 247-248.	0.0	0
94	Synthesis of Solution-Soluble Pentacene-Containing Conjugated Copolymers. Journal of the American Chemical Society, 2007, 129, 10308-10309.	6.6	85
95	Thiophene- and Selenophene-Based Heteroacenes:â€‰ Combined Quantum Chemical DFT and Spectroscopic Raman and UVâ^'Visâ^'NIR Study. Journal of Physical Chemistry B, 2007, 111, 7488-7496.	1.2	32
96	Single-crystal field-effect transistors of benzoannulated fused oligothiophenes and oligoselenophenes. Applied Physics Letters, 2007, 90, 072102.	1.5	82
97	General Synthesis of Extended Fused Oligothiophenes Consisting of an Even Number of Thiophene Rings. Chemistry - A European Journal, 2007, 13, 548-556.	1.7	105
98	Synthesis, Characterization, and Fieldâ€Effect Transistor Performance of Pentacene Derivatives. Advanced Materials, 2007, 19, 3381-3384.	11.1	67
99	343 Sound Field Analysis for the Design and Development of Environmentally-Conscious Noise Barrier. The Proceedings of the Dynamics & Design Conference, 2007, 2007, _343-1_-_343-6_.	0.0	0
100	High-Performance Organic Semiconductors:Â Asymmetric Linear Acenes Containing Sulphur. Journal of the American Chemical Society, 2006, 128, 16002-16003.	6.6	209
101	Reactions of Fused Polycyclic 1,2-Dithiins with Transition Metals:â€‰ Synthesis of Heteroacenes via Desulfurization. Organometallics, 2006, 25, 2374-2377.	1.1	23
102	Ladder Ï€-conjugated materials with main group elements. Pure and Applied Chemistry, 2006, 78, 721-730.	0.9	105
103	Exchange Interaction of 5,5â€˜-(m- andp-Phenylene)bis(10-phenyl-5,10-dihydrophenazine) Dications and Related Analogues. Journal of Organic Chemistry, 2005, 70, 10073-10081.	1.7	37
104	General Synthesis of Thiophene and Selenophene-Based Heteroacenes. Organic Letters, 2005, 7, 5301-5304.	2.4	163
105	1,4-Benzoxazino[2,3-b]phenoxazine and Its Sulfur Analogues:â€‰ Synthesis, Properties, and Application to Organic Light-Emitting Diodes. Chemistry of Materials, 2005, 17, 5504-5511.	3.2	36
106	A Stable Radical-Substituted Radical Cation with Strongly Ferromagnetic Interaction:Â Nitronyl Nitroxide-Substituted 5,10-Diphenyl-5,10-dihydrophenazine Radical Cation. Journal of the American Chemical Society, 2004, 126, 58-59.	6.6	101
107	Remarkable Structure Deformation in Phenothiazine Trimer Radical Cation. Organic Letters, 2004, 6, 3493-3496.	2.4	78
108	Facile Synthesis of 5,10-Diaryl-5,10-dihydrophenazines and Application to EL Devices.. ChemInform, 2003, 34, no.	0.1	0

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109	Facile Synthesis of 5,10-Diaryl-5,10-dihydrophenazines and Application to EL Devices. Organic Letters, 2003, 5, 373-376.	2.4	56
110	Synthesis and properties of benzooxazinophenooxazine and the related compounds. Synthetic Metals, 2001, 120, 933-934.	2.1	1
111	Benzoxazinophenoxazines: neutral and charged species. Tetrahedron Letters, 2001, 42, 7591-7594.	0.7	6
112	Two dimensional electron system in ferroelectrics, polar dielectrics and alkali halides. Ferroelectrics, 1992, 137, 325-336.	0.3	1