Jun Takeya

List of Publications by Year
in descending order

102 papers	6,620 citations	87888 38 h-index	62596 80 g-index
103 all docs	103 docs citations	103 times ranked	6003 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, .	3.3	3
2	Scalable printing of two-dimensional single crystals of organic semiconductors towards high-end device applications. Applied Physics Express, 2022, 15, 030101.	2.4	9
3	Nitrogen-Containing Perylene Diimides: Molecular Design, Robust Aggregated Structures, and Advances in n-Type Organic Semiconductors. Accounts of Chemical Research, 2022, 55, 660-672.	15.6	38
4	Hyper 100 Â°C Langmuirâ€“Blodgett (Langmuirâ€“Schaefer) Technique for Organized Ultrathin Film of Polymeric Semiconductors. Langmuir, 2022, 38, 5237-5247.	3.5	14
5	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.	3.2	2
6	Mixed-Orbital Charge Transport in N-Shaped Benzene- and Pyrazine-Fused Organic Semiconductors. Journal of the American Chemical Society, 2022, 144, 11159-11167.	13.7	14
7	Doped semiconducting polymer nanoantennas for tunable organic plasmonics. Communications Materials, 2022, 3, .	6.9	9
8	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.	4.6	10
9	Nanoâ€Ground Glass as a Superhydrophilic Template for Printing Highâ€Performance Organic Singleâ€Crystal Thin Films. Advanced Materials Interfaces, 2021, 8, 2100033.	3.7	5
10	Strongly correlated superconductivity in a copper-based metal-organic framework with a perfect kagome lattice. Science Advances, 2021, 7, .	10.3	44
11	Stabilizing solution-processed metal oxide thin-film transistors via trilayer organicâ€“inorganic hybrid passivation. AIP Advances, 2021, 11, .	1.3	8
12	Supramolecular cocrystals built through redox-triggered ion intercalation in Ï€-conjugated polymers. Communications Materials, 2021, 2, .	6.9	16
13	Band mobility exceeding 10â€‰cm2 Vâ^'1 sâ^'1 assessed by field-effect and chemical double doping in semicrystalline polymeric semiconductors. Applied Physics Letters, 2021, 119, 013302.	3.3	8
14	Two-dimensional hole gas in organic semiconductors. Nature Materials, 2021, 20, 1401-1406.	27.5	25
15	Highly air-stable, n-doped conjugated polymers achieved by dimeric organometallic dopants. Journal of Materials Chemistry C, 2021, 9, 4105-4111.	5.5	7
16	Surface Doping of Organic Singleâ€Crystal Semiconductors to Produce Strainâ€Sensitive Conductive Nanosheets. Advanced Science, 2021, 8, 2002065.	11.2	10
17	Strong and Atmospherically Stable Dicationic Oxidative Dopant. Advanced Science, 2021, 8, e2101998.	11.2	10
18	Gate induced modulation of electronic states in monolayer organic field-effect transistor. Applied Physics Letters, 2021, 119, 223301.	3.3	0

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19	Approaching isotropic charge transport of n-type organic semiconductors with bulky substituents. Communications Chemistry, 2021, 4, .	4.5	10
20	A Large Anisotropic Enhancement of the Charge Carrier Mobility of Flexible Organic Transistors with Strain: A Hall Effect and Raman Study. Advanced Science, 2020, 7, 1901824.	11.2	37
21	Cooperative Aggregations of Nitrogen-Containing Perylene Diimides Driven by Rigid and Flexible Functional Groups. Chemistry of Materials, 2020, 32, 9115-9125.	6.7	14
22	Correlation between the static and dynamic responses of organic single-crystal field-effect transistors. Nature Communications, 2020, 11, 4839.	12.8	24
23	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.	3.1	1
24	Controlled steric selectivity in molecular doping towards closest-packed supramolecular conductors. Communications Materials, 2020, 1, .	6.9	11
25	Coherent Electron Transport in Airâ€Stable, Printed Singleâ€Crystal Organic Semiconductor and Application to Megahertz Transistors. Advanced Materials, 2020, 32, e2003245.	21.0	19
26	Electrolessâ€Plated Gold Contacts for Highâ€Performance, Low Contact Resistance Organic Thin Film Transistors. Advanced Functional Materials, 2020, 30, 2003977.	14.9	14
27	Low-voltage complementary inverters using solution-processed, high-mobility organic single-crystal transistors fabricated by polymer-blend printing. Applied Physics Letters, 2020, 117, 033301.	3.3	12
28	Band-like transporting and thermally durable V-shaped organic semiconductors with a phenyl key block. Journal of Materials Chemistry C, 2020, 8, 14172-14179.	5.5	7
29	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.	13.7	25
30	Evaluations of nonlocal electron-phonon couplings in tetracene, rubrene, and C10â^'DNBDTâ^'NW based on density functional theory. Physical Review B, 2020, 102, .	3.2	11
31	Robust, high-performance n-type organic semiconductors. Science Advances, 2020, 6, eaaz0632.	10.3	135
32	Damage-free Metal Electrode Transfer to Monolayer Organic Single Crystalline Thin Films. Scientific Reports, 2020, 10, 4702.	3.3	17
33	Charge mobility calculation of organic semiconductors without use of experimental single-crystal data. Scientific Reports, 2020, 10, 2524.	3.3	13
34	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.	7.1	32
35	Sub-molecular structural relaxation at a physisorbed interface with monolayer organic single-crystal semiconductors. Communications Physics, 2020, 3, .	5.3	10
36	Solution-processed flexible metal-oxide thin-film transistors operating beyond 20 MHz. Flexible and Printed Electronics, 2020, 5, 015003.	2.7	25

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37	Highâ€Speed Organic Singleâ€Crystal Transistor Responding to Very High Frequency Band. Advanced Functional Materials, 2020, 30, 1909501.	14.9	57
38	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.	13.7	108
39	Multiple magnetic order parameters coexisting in multiferroic hexaferrites resolved by soft x rays. Journal of Applied Physics, 2020, 128, .	2.5	2
40	Atom/molecular nanoarchitectonics for devices and related applications. Nano Today, 2019, 28, 100762.	11.9	77
41	Patterned Quantum Dot Photosensitive FETs for Medium Frequency Optoelectronics. Advanced Materials Technologies, 2019, 4, 1900054.	5.8	10
42	Evaluating intrinsic mobility from transient terahertz conductivity spectra of microcrystal samples of organic molecular semiconductors. Applied Physics Letters, 2019, 115, .	3.3	3
43	Review of advanced sensor devices employing nanoarchitectonics concepts. Beilstein Journal of Nanotechnology, 2019, 10, 2014-2030.	2.8	37
44	Scalable Fabrication of Organic Single-Crystalline Wafers for Reproducible TFT Arrays. Scientific Reports, 2019, 9, 15897.	3.3	39
45	Efficient molecular doping of polymeric semiconductors driven by anion exchange. Nature, 2019, 572, 634-638.	27.8	208
46	Air-Stable Benzo[c]thiophene Diimide n-Type Ï€-Electron Core. Organic Letters, 2019, 21, 4448-4453.	4.6	23
47	Self-assembly as a key player for materials nanoarchitectonics. Science and Technology of Advanced Materials, 2019, 20, 51-95.	6.1	322
48	Validity of the Mott formula and the origin of thermopower in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Ï€</mml:mi></mml:math> -conjugated semicrystalline polymers. Physical Review B, 2019, 100, .	3.2	26
49	Nanoarchitectonicâ€Based Material Platforms for Environmental and Bioprocessing Applications. Chemical Record, 2019, 19, 1891-1912.	5.8	17
50	Correlation between coherent charge transport and crystallinity in doped Ï€-conjugated polymers. Applied Physics Express, 2019, 12, 011004.	2.4	7
51	Soft 2D nanoarchitectonics. NPG Asia Materials, 2018, 10, 90-106.	7.9	121
52	Wafer-scale, layer-controlled organic single crystals for high-speed circuit operation. Science Advances, 2018, 4, eaao5758.	10.3	237
53	Microscopic properties of ionic liquid/organic semiconductor interfaces revealed by molecular dynamics simulations. Physical Chemistry Chemical Physics, 2018, 20, 13075-13083.	2.8	13
54	Zigzagâ€Elongated Fused Ï€â€Electronic Core: A Molecular Design Strategy to Maximize Chargeâ€Carrier Mobility. Advanced Science, 2018, 5, 1700317.	11.2	43

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55	Remarkably low flicker noise in solution-processed organic single crystal transistors. Communications Physics, 2018, 1, .	5.3	23
56	Solution-crystallized n-type organic thin-film transistors: An impact of branched alkyl chain on high electron mobility and thermal durability. Organic Electronics, 2018, 62, 548-553.	2.6	15
57	Broadening of Distribution of Trap States in PbS Quantum Dot Field-Effect Transistors with High-k Dielectrics. ACS Applied Materials & Interfaces, 2017, 9, 4719-4724.	8.0	20
58	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.	5.5	22
59	Control of molecular doping in conjugated polymers by thermal annealing. Organic Electronics, 2017, 47, 139-146.	2.6	20
60	Oxygen- and Sulfur-Bridged Bianthracene V-Shaped Organic Semiconductors. Bulletin of the Chemical Society of Japan, 2017, 90, 931-938.	3.2	28
61	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.	5.1	57
62	Enabling Ambipolar to Heavy n-Type Transport in PbS Quantum Dot Solids through Doping with Organic Molecules. ACS Applied Materials & Interfaces, 2017, 9, 18039-18045.	8.0	34
63	Spontaneously formed high-performance charge-transport layers of organic single-crystal semiconductors on precisely synthesized insulating polymers. Applied Physics Letters, 2017, 110, .	3.3	14
64	Strainâ€Modulated Charge Transport in Flexible PbS Nanocrystal Fieldâ€Effect Transistors. Advanced Electronic Materials, 2017, 3, 1600360.	5.1	20
65	Impact of Phenyl Groups on Oxygen-bridged V-shaped Organic Semiconductors. Chemistry Letters, 2017, 46, 338-341.	1.3	9
66	Boron-Stabilized Planar Neutral Ï€-Radicals with Well-Balanced Ambipolar Charge-Transport Properties. Journal of the American Chemical Society, 2017, 139, 14336-14339.	13.7	97
67	Molecular doping in organic semiconductors: fully solution-processed, vacuum-free doping with metalâ€“organic complexes in an orthogonal solvent. Journal of Materials Chemistry C, 2017, 5, 12023-12030.	5.5	46
68	Coexistence of ultra-long spin relaxation time andÂcoherent charge transport in organic single-crystal semiconductors. Nature Physics, 2017, 13, 994-998.	16.7	126
69	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.	2.7	2
70	On the Extraction of Charge Carrier Mobility in Highâ€Mobility Organic Transistors. Advanced Materials, 2016, 28, 151-155.	21.0	178
71	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.	2.6	33
72	Suppressing molecular vibrations in organic semiconductors by inducing strain. Nature Communications, 2016, 7, 11156.	12.8	105

#	Article	IF	Citations
73	Mobility Exceeding 10 cm²/(VÂ·s) in Donorâ€“Acceptor Polymer Transistors with Band-like Charge Transport. Chemistry of Materials, 2016, 28, 420-424.	6.7	147
74	High-speed organic transistors with three-dimensional organic channels and organic rectifiers based on them operating above 20MHz. Organic Electronics, 2015, 20, 119-124.	2.6	49
75	All solution-processed organic single-crystal transistors with high mobility and low-voltage operation. Organic Electronics, 2015, 22, 1-4.	2.6	22
76	Correlation between thermal fluctuation effects and phase coherence factor in carrier transport of single-crystal organic semiconductors. Applied Physics Letters, 2015, 106, .	3.3	14
77	Carrier dynamics of rubrene single-crystals revealed by transient broadband terahertz spectroscopy. Applied Physics Letters, 2014, 105, .	3.3	17
78	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.	3.7	44
79	Furan fused V-shaped organic semiconducting materials with high emission and high mobility. Chemical Communications, 2014, 50, 5342-5344.	4.1	49
80	Highâ€Performance Solutionâ€Processable Nâ€Shaped Organic Semiconducting Materials with Stabilized Crystal Phase. Advanced Materials, 2014, 26, 4546-4551.	21.0	206
81	Transition Between Band and Hopping Transport in Polymer Fieldâ€Effect Transistors. Advanced Materials, 2014, 26, 8169-8173.	21.0	61
82	Splitâ€Gate Organic Fieldâ€Effect Transistors for Highâ€Speed Operation. Advanced Materials, 2014, 26, 2983-2988.	21.0	33
83	Vâ€Shaped Organic Semiconductors With Solution Processability, High Mobility, and High Thermal Durability. Advanced Materials, 2013, 25, 6392-6397.	21.0	196
84	Structural investigation of ionic liquid/rubrene single crystal interfaces by using frequency-modulation atomic force microscopy. Chemical Communications, 2013, 49, 10596.	4.1	38
85	Doping of Organic Semiconductors: Impact of Dopant Strength and Electronic Coupling. Angewandte Chemie - International Edition, 2013, 52, 7751-7755.	13.8	186
86	Inch-Size Solution-Processed Single-Crystalline Films of High-Mobility Organic Semiconductors. Applied Physics Express, 2013, 6, 076503.	2.4	102
87	High-speed organic single-crystal transistors gated with short-channel air gaps: Efficient hole and electron injection in organic semiconductor crystals. Organic Electronics, 2013, 14, 1656-1662.	2.6	38
88	Charge modulation infrared spectroscopy of rubrene single-crystal field-effect transistors. Applied Physics Letters, 2013, 102, .	3.3	11
89	Temperature dependence of the Hall effect in pentacene field-effect transistors: Possibility of charge decoherence induced by molecular fluctuations. Physical Review B, 2012, 85, .	3.2	50
90	Band-like transport in solution-crystallized organic transistors. Current Applied Physics, 2012, 12, S87-S91.	2.4	63

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91	Hall-Effect Measurements Probing the Degree of Charge-Carrier Delocalization in Solution-Processed Crystalline Molecular Semiconductors. Physical Review Letters, 2011, 107, 066601.	7.8	101
92	Patternable Solutionâ€Crystallized Organic Transistors with High Charge Carrier Mobility. Advanced Materials, 2011, 23, 1626-1629.	21.0	337
93	Solutionâ€Crystallized Organic Fieldâ€Effect Transistors with Chargeâ€Acceptor Layers: Highâ€Mobility and Lowâ€Thresholdâ€Voltage Operation in Air. Advanced Materials, 2011, 23, 3309-3314.	21.0	156
94	High Electron Mobility in Air for N,Nâ€²â€²H,1Hâ€Perfluorobutyldicyanoperylene Carboxydiâ€imide Solutionâ€Crystallized Thinâ€Film Transistors on Hydrophobic Surfaces. Advanced Materials, 2011, 23, 3681-3685.	21.0	119
95	Organic Field-Effect Transistors: High Electron Mobility in Air for N,Nâ€²-1H,1H-Perfluorobutyldicyanoperylene Carboxydi-imide Solution-Crystallized Thin-Film Transistors on Hydrophobic Surfaces (Adv. Mater. 32/2011). Advanced Materials, 2011, 23, 3680-3680.	21.0	0
96	Free-electron-like Hall effect in high-mobility organic thin-film transistors. Physical Review B, 2010, 81, .	3.2	53
97	Organic field-effect transistors using single crystals. Science and Technology of Advanced Materials, 2009, 10, 024314.	6.1	332
98	Very High Mobility in Solution-Processed Organic Thin-Film Transistors of Highly Ordered [1]Benzothieno[3,2-b]benzothiophene Derivatives. Applied Physics Express, 2009, 2, 111501.	2.4	254
99	In-Crystal and Surface Charge Transport of Electric-Field-Induced Carriers in Organic Single-Crystal Semiconductors. Physical Review Letters, 2007, 98, 196804.	7.8	161
100	Single-crystal field-effect transistors of benzoannulated fused oligothiophenes and oligoselenophenes. Applied Physics Letters, 2007, 90, 072102.	3.3	82
101	Very high-mobility organic single-crystal transistors with in-crystal conduction channels. Applied Physics Letters, 2007, 90, 102120.	3.3	697
102	Hall Effect of Quasi-Hole Gas in Organic Single-Crystal Transistors. Japanese Journal of Applied Physics, 2005, 44, L1393-L1396.	1.5	154