

# Ying Diao

## List of Publications by Citations

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86

papers

6,182

citations

40

h-index

78

g-index

94

ext. papers

7,072

ext. citations

12.3

avg, IF

6.02

L-index

| #  | Paper   | IF   | Citations |
|----|---|------|-----------|
| 86 | Integrated materials design of organic semiconductors for field-effect transistors. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 6724-46  | 16.4 | 1124      |
| 85 | Solution coating of large-area organic semiconductor thin films with aligned single-crystalline domains. <i>Nature Materials</i> , <b>2013</b> , 12, 665-71   | 27   | 770       |
| 84 | Morphology control strategies for solution-processed organic semiconductor thin films. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 2145-2159   | 35.4 | 426       |
| 83 | Chromium(III) Terephthalate Metal Organic Framework (MIL-101): HF-Free Synthesis, Structure, Polyoxometalate Composites, and Catalytic Properties. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 1664-1675                | 9.6  | 308       |
| 82 | Flow-enhanced solution printing of all-polymer solar cells. <i>Nature Communications</i> , <b>2015</b> , 6, 7955  | 17.4 | 191       |
| 81 | Conjugated-Backbone Effect of Organic Small Molecules for n-Type Thermoelectric Materials with ZT over 0.2. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 13013-13023                                  | 16.4 | 156       |
| 80 | Surface design for controlled crystallization: the role of surface chemistry and nanoscale pores in heterogeneous nucleation. <i>Langmuir</i> , <b>2011</b> , 27, 5324-34   | 4    | 156       |
| 79 | Understanding polymorphism in organic semiconductor thin films through nanoconfinement. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 17046-57   | 16.4 | 155       |
| 78 | Polymorphism as an emerging design strategy for high performance organic electronics. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 3915-3933  | 7.1  | 150       |
| 77 | The role of nanopore shape in surface-induced crystallization. <i>Nature Materials</i> , <b>2011</b> , 10, 867-71   | 27   | 134       |
| 76 | Bulky end-capped [1]benzothieno[3,2-b]benzothiophenes: reaching high-mobility organic semiconductors by fine tuning of the crystalline solid-state order. <i>Advanced Materials</i> , <b>2015</b> , 27, 3066-72 <sup>24</sup> |      | 133       |
| 75 | One-dimensional self-confinement promotes polymorph selection in large-area organic semiconductor thin films. <i>Nature Communications</i> , <b>2014</b> , 5, 3573  | 17.4 | 116       |
| 74 | Gel-induced selective crystallization of polymorphs. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 673-84  | 16.4 | 113       |
| 73 | NDI-Based Small Molecule as Promising Nonfullerene Acceptor for Solution-Processed Organic Photovoltaics. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1500195   | 21.8 | 91        |
| 72 | Solution-Processed Nanoporous Organic Semiconductor Thin Films: Toward Health and Environmental Monitoring of Volatile Markers. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1701117                              | 15.6 | 90        |
| 71 | High mobility N-type transistors based on solution-sheared doped 6,13-bis(triisopropylsilylethynyl)pentacene thin films. <i>Advanced Materials</i> , <b>2013</b> , 25, 4663-7   | 24   | 86        |
| 70 | Conjugation-Break Spacers in Semiconducting Polymers: Impact on Polymer Processability and Charge Transport Properties. <i>Macromolecules</i> , <b>2015</b> , 48, 2048-2053   | 5.5  | 78        |

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|----|---|------|----|
| 69 | Pursuing High-Mobility n-Type Organic Semiconductors by Combination of "Molecule-Framework" and "Side-Chain" Engineering. <i>Advanced Materials</i> , <b>2016</b> , 28, 8456-8462                                 | 24   | 78 |
| 68 | Controlled nucleation from solution using polymer microgels. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 3756-9  | 16.4 | 78 |
| 67 | Selenium-Substituted Diketopyrrolopyrrole Polymer for High-Performance p-Type Organic Thermoelectric Materials. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 18994-18999                  | 16.4 | 75 |
| 66 | Self-assembled monolayers of cyclohexyl-terminated phosphonic acids as a general dielectric surface for high-performance organic thin-film transistors. <i>Advanced Materials</i> , <b>2014</b> , 26, 7190-6      | 24   | 75 |
| 65 | Effect of Spacer Length of Siloxane-Terminated Side Chains on Charge Transport in Isoindigo-Based Polymer Semiconductor Thin Films. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 3455-3462            | 15.6 | 74 |
| 64 | Effect of Non-Chlorinated Mixed Solvents on Charge Transport and Morphology of Solution-Processed Polymer Field-Effect Transistors. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 3524-3534            | 15.6 | 73 |
| 63 | Direct Uniaxial Alignment of a Donor-Acceptor Semiconducting Polymer Using Single-Step Solution Shearing. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 9285-96                                | 9.5  | 71 |
| 62 | Flow-Directed Crystallization for Printed Electronics. <i>Accounts of Chemical Research</i> , <b>2016</b> , 49, 2756-2764   | 4.3  | 70 |
| 61 | Dynamic-template-directed multiscale assembly for large-area coating of highly-aligned conjugated polymer thin films. <i>Nature Communications</i> , <b>2017</b> , 8, 16070                                       | 17.4 | 66 |
| 60 | Look fast: Crystallization of conjugated molecules during solution shearing probed in-situ and in real time by X-ray scattering. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 177-179 | 2.5  | 65 |
| 59 | Tuning conformation, assembly, and charge transport properties of conjugated polymers by printing flow. <i>Science Advances</i> , <b>2019</b> , 5, eaaw7757   | 14.3 | 63 |
| 58 | Tunable structural color of bottlebrush block copolymers through direct-write 3D printing from solution. <i>Science Advances</i> , <b>2020</b> , 6, eaaz7202  | 14.3 | 61 |
| 57 | Rotator side chains trigger cooperative transition for shape and function memory effect in organic semiconductors. <i>Nature Communications</i> , <b>2018</b> , 9, 278  | 17.4 | 60 |
| 56 | Significance of the double-layer capacitor effect in polar rubbery dielectrics and exceptionally stable low-voltage high transconductance organic transistors. <i>Scientific Reports</i> , <b>2015</b> , 5, 17849 | 4.9  | 53 |
| 55 | Thienoacene dimers based on the thieno[3,2-b]thiophene moiety: synthesis, characterization and electronic properties. <i>Journal of Materials Chemistry C</i> , <b>2015</b> , 3, 674-685                          | 7.1  | 52 |
| 54 | Multiscale assembly of solution-processed organic electronics: the critical roles of confinement, fluid flow, and interfaces. <i>Nanotechnology</i> , <b>2018</b> , 29, 044004                                    | 3.4  | 50 |
| 53 | Nucleation under Soft Confinement: Role of Polymer-Solute Interactions. <i>Crystal Growth and Design</i> , <b>2012</b> , 12, 508-517  | 3.5  | 48 |
| 52 | Tuning the Morphology of Solution-Sheared P3HT:PCBM Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 1742-51   | 9.5  | 47 |

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|----|--|------|----|
| 51 | Symmetry Breaking in Side Chains Leading to Mixed Orientations and Improved Charge Transport in Isoindigo-alt-Bithiophene Based Polymer Thin Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 25426-25433 | 9.5  | 46 |
| 50 | Critical Role of Surface Energy in Guiding Crystallization of Solution-Coated Conjugated Polymer Thin Films. <i>Langmuir</i> , <b>2018</b> , 34, 1109-1122   | 4    | 44 |
| 49 | Large Modulation of Charge Carrier Mobility in Doped Nanoporous Organic Transistors. <i>Advanced Materials</i> , <b>2017</b> , 29, 1700411   | 24   | 43 |
| 48 | Complementary Semiconducting Polymer Blends: The Influence of Conjugation-Break Spacer Length in Matrix Polymers. <i>Macromolecules</i> , <b>2016</b> , 49, 2601-2608  | 5.5  | 42 |
| 47 | Complementary Semiconducting Polymer Blends for Efficient Charge Transport. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 7164-7170  | 9.6  | 41 |
| 46 | Martensitic transition in molecular crystals for dynamic functional materials. <i>Chemical Society Reviews</i> , <b>2020</b> , 49, 8287-8314   | 58.5 | 37 |
| 45 | A Reversible Structural Phase Transition by Electrochemically-Driven Ion Injection into a Conjugated Polymer. <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 7434-7442                                     | 16.4 | 36 |
| 44 | Three-Dimensional Printable Nanoporous Polymer Matrix Composites for Daytime Radiative Cooling. <i>Nano Letters</i> , <b>2021</b> , 21, 1493-1499  | 11.5 | 34 |
| 43 | Compact Roll-to-Roll Coater for in Situ X-ray Diffraction Characterization of Organic Electronics Printing. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 1687-94   | 9.5  | 32 |
| 42 | Understanding Interfacial Alignment in Solution Coated Conjugated Polymer Thin Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 27863-27874   | 9.5  | 31 |
| 41 | Continuous Melt-Drawing of Highly Aligned Flexible and Stretchable Semiconducting Microfibers for Organic Electronics. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1705584  | 15.6 | 31 |
| 40 | Probing the interfacial molecular packing in TIPS-pentacene organic semiconductors by surface enhanced Raman scattering. <i>Journal of Materials Chemistry C</i> , <b>2014</b> , 2, 2985-2991                                    | 7.1  | 25 |
| 39 | Tuning Local Molecular Orientation-Composition Correlations in Binary Organic Thin Films by Solution Shearing. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 3131-3137  | 15.6 | 25 |
| 38 | Repurposing DNA-binding agents as H-bonded organic semiconductors. <i>Nature Communications</i> , <b>2019</b> , 10, 4217   | 17.4 | 22 |
| 37 | Super- and Ferroelastic Organic Semiconductors for Ultraflexible Single-Crystal Electronics. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 13004-13012  | 16.4 | 21 |
| 36 | Complementary Semiconducting Polymer Blends: Influence of Side Chains of Matrix Polymers. <i>Macromolecules</i> , <b>2017</b> , 50, 6202-6209  | 5.5  | 18 |
| 35 | Single Atom Substitution Alters the Polymorphic Transition Mechanism in Organic Electronic Crystals. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 9115-9126   | 9.6  | 16 |
| 34 | Hybrid Mechanism of Nucleation and Cooperative Propagation in a Single-Crystal-to-Single-Crystal Transition of a Molecular Crystal. <i>Crystal Growth and Design</i> , <b>2018</b> , 18, 4245-4251                               | 3.5  | 15 |

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| 33 | Understanding Film-To-Stripe Transition of Conjugated Polymers Driven by Meniscus Instability. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 40692-40701   | 9.5  | 14 |
| 32 | Orientation-Dependent Host-Dopant Interactions for Manipulating Charge Transport in Conjugated Polymers. <i>Advanced Materials</i> , <b>2020</b> , 32, e2002823  | 24   | 13 |
| 31 | When Assembly Meets Processing: Tuning Multiscale Morphology of Printed Conjugated Polymers for Controlled Charge Transport. <i>Chemistry of Materials</i> , <b>2021</b> , 33, 469-498                                       | 9.6  | 12 |
| 30 | Understanding the Role of Bulky Side Chains on Polymorphism of BTBT-Based Organic Semiconductors. <i>Crystal Growth and Design</i> , <b>2020</b> , 20, 1646-1654   | 3.5  | 11 |
| 29 | Printing 2D Conjugated Polymer Monolayers and Their Distinct Electronic Properties. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1909787   | 15.6 | 11 |
| 28 | Solution Coating of Pharmaceutical Nanothin Films and Multilayer Nanocomposites with Controlled Morphology and Polymorphism. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 10480-10489                   | 9.5  | 11 |
| 27 | Selenium-Substituted Diketopyrrolopyrrole Polymer for High-Performance p-Type Organic Thermoelectric Materials. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 19170-19175  | 3.6  | 11 |
| 26 | Design rules for dynamic-template-directed crystallization of conjugated polymers. <i>Molecular Systems Design and Engineering</i> , <b>2020</b> , 5, 125-138  | 4.6  | 11 |
| 25 | Ion Gel Dynamic Templates for Large Modulation of Morphology and Charge Transport Properties of Solution-Coated Conjugated Polymer Thin Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 22561-22574 | 9.5  | 10 |
| 24 | Radically Tunable n-Type Organic Semiconductor via Polymorph Control. <i>Chemistry of Materials</i> , <b>2021</b> , 33, 2466-2477  | 9.6  | 9  |
| 23 | Macroscopic Alignment and Assembly of $\pi$ -Conjugated Oligopeptides Using Colloidal Microchannels. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 41586-41593  | 9.5  | 8  |
| 22 | What Is the Assembly Pathway of a Conjugated Polymer From Solution to Thin Films?. <i>Frontiers in Chemistry</i> , <b>2020</b> , 8, 583521   | 5    | 7  |
| 21 | Lyotropic Liquid Crystalline Mesophase Governs Interfacial Molecular Orientation of Conjugated Polymer Thin Films. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 6043-6054   | 9.6  | 7  |
| 20 | Quantitative Image Analysis of Fractal-Like Thin Films of Organic Semiconductors. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2019</b> , 57, 1622-1634   | 2.6  | 7  |
| 19 | Mitigating Meniscus Instabilities in Solution-Sheared Polymer Films for Organic Field-Effect Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 30079-30088                                      | 9.5  | 6  |
| 18 | Role of Multivalent Interactions in Dynamic-Template-Directed Assembly of Conjugated Polymers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 2753-2762   | 9.5  | 5  |
| 17 | Implicit Side-Chain Model and Experimental Characterization of Bottlebrush Block Copolymer Solution Assembly. <i>Macromolecules</i> , <b>2021</b> , 54, 3620-3633  | 5.5  | 4  |
| 16 | Molecular Mechanisms of Superelasticity and Ferroelasticity in Organic Semiconductor Crystals. <i>Chemistry of Materials</i> , <b>2021</b> , 33, 1883-1892   | 9.6  | 3  |

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|----|---|------|---|
| 15 | Materials Design of Highly Branched Bottlebrush Polymers at the Intersection of Modeling, Synthesis, Processing, and Characterization. <i>Chemistry of Materials</i> , <b>2022</b> , 34, 1990-2024                                | 9.6  | 3 |
| 14 | Chiral emergence in multistep hierarchical assembly of achiral conjugated polymers.. <i>Nature Communications</i> , <b>2022</b> , 13, 2738  | 17.4 | 3 |
| 13 | Spin-coated fluorinated PbS QD superlattice thin film with high hole mobility. <i>Nanoscale</i> , <b>2020</b> , 12, 11174-11181   | 4.1  | 1 |
| 12 | Rapid, interface-driven domain orientation in bottlebrush diblock copolymer films during thermal annealing.. <i>Soft Matter</i> , <b>2022</b> ,   | 3.6  | 2 |
| 11 | Manipulation and statistical analysis of the fluid flow of polymer semiconductor solutions during meniscus-guided coating. <i>MRS Bulletin</i> , <b>2021</b> , 46, 380-393  | 3.2  | 2 |
| 10 | Drastic Modulation of Molecular Packing and Intrinsic Dissolution Rates by Meniscus-Guided Coating of Extremely Confined Pharmaceutical Thin Films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 56519-56529 | 9.5  | 1 |
| 9  | Super- and Ferroelastic Organic Semiconductors for Ultraflexible Single-Crystal Electronics. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 13104-13112  | 3.6  | 1 |
| 8  | Enhancing Single-Crystal Dichroism of an Asymmetric Azo Chromophore by Perfluorophenyl Embraces and Boron Coordination. <i>Crystal Growth and Design</i> , <b>2021</b> , 21, 3143-3147  | 3.5  | 1 |
| 7  | PolyChemPrint: A hardware and software framework for benchtop additive manufacturing of functional polymeric materials. <i>Journal of Polymer Science</i> ,   | 2.4  | 1 |
| 6  | Using automated synthesis to understand the role of side chains on molecular charge transport.. <i>Nature Communications</i> , <b>2022</b> , 13, 2102   | 17.4 | 1 |
| 5  | Modulation of $\pi$ -stacking modes and photophysical properties of an organic semiconductor through isosteric cocrystallization. <i>Journal of Chemical Physics</i> , <b>2021</b> , 155, 071102                                  | 3.9  | 0 |
| 4  | Thin Films: Tuning Local Molecular Orientation/Composition Correlations in Binary Organic Thin Films by Solution Shearing (Adv. Funct. Mater. 21/2015). <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 3106-3116        | 15.6 | 1 |
| 3  | Manipulation and statistical analysis of the fluid flow of polymer semiconductor solutions during meniscus-guided coating. <i>MRS Bulletin</i> , 1-14   | 3.2  |   |
| 2  | Organic Electronics: Pursuing High-Mobility n-Type Organic Semiconductors by Combination of Molecule-Framework and Side-Chain Engineering (Adv. Mater. 38/2016). <i>Advanced Materials</i> , <b>2016</b> , 28, 8455-8455          | 24   |   |
| 1  | Titelbild: Selenium-Substituted Diketopyrrolopyrrole Polymer for High-Performance p-Type Organic Thermoelectric Materials (Angew. Chem. 52/2019). <i>Angewandte Chemie</i> , <b>2019</b> , 131, 18893-18893                       | 3.6  |   |