## Luping Yu

## List of Publications by Citations

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| #  | Paper   | IF              | Citations |
|----|---|-----------------|-----------|
| 96 | Polymer solar cells with enhanced open-circuit voltage and efficiency. <i>Nature Photonics</i> , <b>2009</b> , 3, 649-65  | i <b>3</b> ;3.9 | 2870      |
| 95 | Recent Advances in Bulk Heterojunction Polymer Solar Cells. <i>Chemical Reviews</i> , <b>2015</b> , 115, 12666-731  | 68.1            | 1994      |
| 94 | Ternary blend polymer solar cells with enhanced power conversion efficiency. <i>Nature Photonics</i> , <b>2014</b> , 8, 716-722   | 33.9            | 538       |
| 93 | High-performance ternary blend polymer solar cells involving both energy transfer and hole relay processes. <i>Nature Communications</i> , <b>2015</b> , 6, 7327                                  | 17.4            | 383       |
| 92 | Covalently Bound Clusters of Alpha-Substituted PDI-Rival Electron Acceptors to Fullerene for Organic Solar Cells. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 7248-51    | 16.4            | 346       |
| 91 | Rational Design of Porous Conjugated Polymers and Roles of Residual Palladium for Photocatalytic Hydrogen Production. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 7681-6 | 16.4            | 302       |
| 90 | How to design low bandgap polymers for highly efficient organic solar cells. <i>Materials Today</i> , <b>2014</b> , 17, 11-15   | 21.8            | 184       |
| 89 | Overcoming efficiency challenges in organic solar cells: rational development of conjugated polymers. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 8158                             | 35.4            | 182       |
| 88 | Electron Acceptors Based on <del>E</del> bubstituted Perylene Diimide (PDI) for Organic Solar Cells.  Chemistry of Materials, <b>2016</b> , 28, 1139-1146   | 9.6             | 165       |
| 87 | Are we there yet? Design of better conjugated polymers for polymer solar cells. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 18934   |                 | 142       |
| 86 | Photovoltaic Function and Exciton/Charge Transfer Dynamics in a Highly Efficient Semiconducting Copolymer. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 10-26                         | 15.6            | 128       |
| 85 | Transport properties of a single-molecule diode. ACS Nano, 2012, 6, 4931-9  | 16.7            | 124       |
| 84 | Synthesis of amphiphilic conjugated diblock oligomers as molecular diodes. <i>Angewandte Chemie - International Edition</i> , <b>2002</b> , 41, 3598-601; 3514                                    | 16.4            | 122       |
| 83 | Polyselenopheno[3,4-]selenophene for Highly Efficient Bulk Heterojunction Solar Cells <i>ACS Macro Letters</i> , <b>2012</b> , 1, 361-365   | 6.6             | 115       |
| 82 | Mediating Solar Cell Performance by Controlling the Internal Dipole Change in Organic Photovoltaic Polymers. <i>Macromolecules</i> , <b>2012</b> , 45, 6390-6395                                  | 5.5             | 115       |
| 81 | Development of Semiconducting Polymers for Solar Energy Harvesting. <i>Polymer Reviews</i> , <b>2010</b> , 50, 454  | -4743           | 101       |
| 80 | Synthesis and Search for Design Principles of New Electron Accepting Polymers for All-Polymer Solar Cells. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 3450-3459                            | 9.6             | 98        |

## (2017-1990)

| 79 | Ladder polymers: recent developments in syntheses, characterization, and potential applications as electronic and optical materials. <i>Chemistry of Materials</i> , <b>1990</b> , 2, 649-659                                       | 9.6  | 98 |
|----|---|------|----|
| 78 | Donor Acceptor Porous Conjugated Polymers for Photocatalytic Hydrogen Production: The Importance of Acceptor Comonomer. <i>Macromolecules</i> , <b>2016</b> , 49, 6903-6909   | 5.5  | 96 |
| 77 | Nanoporous Porphyrin Polymers for Gas Storage and Separation. <i>Macromolecules</i> , <b>2012</b> , 45, 7413-7419   | 5.5  | 92 |
| 76 | Multifunctional Polymers Exhibiting Photorefractive Effects. <i>Accounts of Chemical Research</i> , <b>1996</b> , 29, 13-21   | 24.3 | 90 |
| 75 | Nanoporous Polyporphyrin as Adsorbent for Hydrogen Storage. <i>Macromolecules</i> , <b>2010</b> , 43, 3325-3330   | 5.5  | 81 |
| 74 | Propeller-Shaped Acceptors for High-Performance Non-Fullerene Solar Cells: Importance of the Rigidity of Molecular Geometry. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 1127-1133  | 9.6  | 77 |
| 73 | Conjugated block copolymers and co-oligomers: from supramolecular assembly to molecular electronics. <i>Journal of Materials Chemistry</i> , <b>2007</b> , 17, 2183   |      | 73 |
| 72 | Synthesis of Ladder-Type Thienoacenes and Their Electronic and Optical Properties. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 868-75  | 16.4 | 68 |
| 71 | Mechanistic Studies of Effect of Dispersity on the Photovoltaic Performance of PTB7 Polymer Solar Cells. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 537-543  | 9.6  | 68 |
| 70 | Synthesis and Characterization of Diblock Copolymers Containing Oligothiophenes with Defined Regiospecificity and Molecular Weights. <i>Macromolecules</i> , <b>1996</b> , 29, 7329-7334  | 5.5  | 68 |
| 69 | Photocatalysts Based on Cobalt-Chelating Conjugated Polymers for Hydrogen Evolution from Water. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 5394-5399   | 9.6  | 67 |
| 68 | Exceptional Single-Molecule Transport Properties of Ladder-Type Heteroacene Molecular Wires.<br>Journal of the American Chemical Society, <b>2016</b> , 138, 10630-5  | 16.4 | 63 |
| 67 | Conjugated Polymers Containing Mixed-Ligand Ruthenium(II) Complexes. Synthesis, Characterization, and Investigation of Photoconductive Properties. <i>Journal of the American Chemical Society</i> , <b>2000</b> , 122, 11806-11811 | 16.4 | 62 |
| 66 | Photophysical and Morphological Implications of Single-Strand Conjugated Polymer Folding in Solution. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 2814-2822   | 9.6  | 61 |
| 65 | Chemoselective Immobilization of Gold Nanoparticles onto Self-Assembled Monolayers. <i>Langmuir</i> , <b>2002</b> , 18, 311-313   | 4    | 55 |
| 64 | Exploration of Syntheses and Functions of Higher Ladder-type EConjugated Heteroacenes. <i>CheM</i> , <b>2018</b> , 4, 2538-2570   | 16.2 | 54 |
| 63 | Beyond Molecular Wires: Design Molecular Electronic Functions Based on Dipolar Effect. <i>Accounts of Chemical Research</i> , <b>2016</b> , 49, 1852-63   | 24.3 | 47 |
| 62 | Two Photon Absorption Study of Low-Bandgap, Fully Conjugated Perylene<br>Diimide-Thienoacene-Perylene Diimide Ladder-Type Molecules. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 6726-6                                       | i732 | 47 |

| 61 | Molecular Rectification Tuned by Through-Space Gating Effect. <i>Nano Letters</i> , <b>2017</b> , 17, 308-312  | 11.5 | 43 |
|----|--|------|----|
| 60 | Optical, Electrical, and Magnetic Studies of Organic Solar Cells Based on Low Bandgap Copolymer with Spin [] Radical Additives. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 1895-1902           | 15.6 | 39 |
| 59 | Roles of Quinoidal Character and Regioregularity in Determining the Optoelectronic and Photovoltaic Properties of Conjugated Copolymers. <i>Macromolecules</i> , <b>2014</b> , 47, 6252-6259                 | 5.5  | 37 |
| 58 | Synthesis and Structure/Property Correlation of Fully Functionalized Photorefractive Polymers. <i>Macromolecules</i> , <b>2002</b> , 35, 4636-4645   | 5.5  | 35 |
| 57 | Proton-triggered switch based on a molecular transistor with edge-on gate. <i>Chemical Science</i> , <b>2016</b> , 7, 3137-3141  | 9.4  | 34 |
| 56 | A Single-Molecular AND Gate Operated with Two Orthogonal Switching Mechanisms. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701248   | 24   | 33 |
| 55 | Synthesis of Alternating Donor-Acceptor Ladder-Type Molecules and Investigation of Their Multiple Charge-Transfer Pathways. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 6442-6448   | 16.4 | 32 |
| 54 | Effect of acceptor strength on optical and electronic properties in conjugated polymers for solar applications. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 5759-69                 | 16.4 | 31 |
| 53 | Effects of Exciton Polarity in Charge-Transfer Polymer/PCBM Bulk Heterojunction Films. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 1856-63   | 6.4  | 30 |
| 52 | Wide bandgap OPV polymers based on pyridinonedithiophene unit with efficiency >5. <i>Chemical Science</i> , <b>2015</b> , 6, 4860-4866   | 9.4  | 30 |
| 51 | Efficient molecular photorefractive materials based on methine dyes. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 700-702  | 3.4  | 30 |
| 50 | Charge Transfer and Aggregation Effects on the Performance of Planar vs Twisted Nonfullerene Acceptor Isomers for Organic Solar Cells. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 4263-4276           | 9.6  | 29 |
| 49 | Incremental optimization in donor polymers for bulk heterojunction organic solar cells exhibiting high performance. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2012</b> , 50, 1057-1070 | 2.6  | 29 |
| 48 | Conjugated, Liquid Crystalline Polymers. <i>Angewandte Chemie International Edition in English</i> , <b>1993</b> , 32, 1345-1347   |      | 29 |
| 47 | Edge-on gating effect in molecular wires. <i>Nano Letters</i> , <b>2015</b> , 15, 958-62   | 11.5 | 28 |
| 46 | Tuning the Polarizability in Donor Polymers with a Thiophenesaccharin Unit for Organic Photovoltaic Applications. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 3432-3437                         | 15.6 | 27 |
| 45 | Enhancement in Open-Circuit Voltage in Organic Solar Cells by Using Ladder-Type Nonfullerene Acceptors. <i>ACS Applied Materials &amp; amp; Interfaces</i> , <b>2018</b> , 10, 13528-13533                   | 9.5  | 24 |
| 44 | Hybridized approach to new polymers exhibiting large photorefractivity. <i>Applied Physics Letters</i> , <b>1996</b> , 69, 4002-4004   | 3.4  | 24 |

## (2020-2009)

| 43 | Structure and dynamics correlations of photoinduced charge separation in rigid conjugated linear donor deceptor dyads towards photovoltaic applications. <i>New Journal of Chemistry</i> , <b>2009</b> , 33, 1497                   | 3.6  | 22 |
|----|---|------|----|
| 42 | Conjugated photorefractive polymer. <i>Applied Physics Letters</i> , <b>1994</b> , 64, 2489-2491  | 3.4  | 22 |
| 41 | Intra-molecular Charge Transfer and Electron Delocalization in Non-fullerene Organic Solar Cells. <i>ACS Applied Materials &amp; Delocation (Color)</i> 10, 10043-10052   | 9.5  | 20 |
| 40 | Synthesis of Amphiphilic Conjugated Diblock Oligomers as Molecular Diodes. <i>Angewandte Chemie</i> , <b>2002</b> , 114, 3750-3753  | 3.6  | 20 |
| 39 | Novel second-order nonlinear optical, aromatic, and aliphatic polyimides exhibiting high-temperature stability. <i>Applied Physics Letters</i> , <b>1995</b> , 66, 1050-1052  | 3.4  | 20 |
| 38 | A Multifunctional Photorefractive Material Showing High Optical Gain and Diffraction Efficiency. <i>Advanced Materials</i> , <b>1998</b> , 10, 927-931  | 24   | 19 |
| 37 | Morphological characterization of fullerene and fullerene-free organic photovoltaics by combined real and reciprocal space techniques. <i>Journal of Materials Research</i> , <b>2017</b> , 32, 1921-1934                           | 2.5  | 18 |
| 36 | Solution Phase Exciton Diffusion Dynamics of a Charge-Transfer Copolymer PTB7 and a Homopolymer P3HT. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 7447-56   | 3.4  | 17 |
| 35 | Design of High-Performance Organic Light-Emitting Transistors. ACS Omega, 2020, 5, 68-74  | 3.9  | 16 |
| 34 | High Performance Ternary Organic Solar Cells due to Favored Interfacial Connection by a Non-Fullerene Electron Acceptor with Cross-Like Molecular Geometry. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 11305-11311 | 3.8  | 15 |
| 33 | Lessons learned from research on photorefractive polymers and molecular materials. <i>Journal of Polymer Science Part A</i> , <b>2001</b> , 39, 2557-2564   | 2.5  | 15 |
| 32 | An Electromechanical Approach to Understanding Binding Configurations in Single-Molecule Devices. <i>Nano Letters</i> , <b>2018</b> , 18, 6638-6644   | 11.5 | 15 |
| 31 | Investigations of Thienoacene Molecules for Classical and Entangled Two-Photon Absorption. <i>Journal of Physical Chemistry A</i> , <b>2018</b> , 122, 8167-8182  | 2.8  | 14 |
| 30 | Intramolecular hydrogen bonding assisted charge transport through single rectifying molecule. <i>Langmuir</i> , <b>2011</b> , 27, 2084-7  | 4    | 13 |
| 29 | Fine-tuning photorefractive properties of monolithic molecular materials. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 3385-3387  | 3.4  | 13 |
| 28 | Highly Emissive Semi-Ladder-Type Copolymers, Aggregation State, and Solution-Processed Organic Light-Emitting Transistor. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 4672-4680   | 9.6  | 10 |
| 27 | Visualization of hierarchical nanodomains in polymer/fullerene bulk heterojunction solar cells. <i>Microscopy and Microanalysis</i> , <b>2014</b> , 20, 1507-13   | 0.5  | 10 |
| 26 | BODIPY-Containing Polymers with Ultralow Band Gaps and Ambipolar Charge Mobilities. <i>Macromolecules</i> , <b>2020</b> , 53, 2014-2020   | 5.5  | 9  |

| 25 | Synthesis of Alternating Donor Acceptor Ladder-Type Molecules and Investigation of Their Multiple Charge-Transfer Pathways. <i>Angewandte Chemie</i> , <b>2018</b> , 130, 6552-6558  | 3.6                  | 7   |
|----|--|----------------------|-----|
| 24 | Dipolar and electronic effects on charge transport through single transition metal complexes. <i>Science China Chemistry</i> , <b>2011</b> , 54, 410-414   | 7.9                  | 7   |
| 23 | Investigation of the Liquid Crystalline Botropic Phase Transition in Oligo (phenylenevinylene) with Alkyl Side Chains. <i>Macromolecules</i> , <b>1997</b> , 30, 6274-6279   | 5.5                  | 7   |
| 22 | Synergy between Photoluminescence and Charge Transport Achieved by Finely Tuning Polymeric Backbones for Efficient Light-Emitting Transistor. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 5239-5246 | 16.4                 | 7   |
| 21 | Controlled Self-Assembly of Cyclophane Amphiphiles: From 1D Nanofibers to Ultrathin 2D Topological Structures. <i>Macromolecules</i> , <b>2016</b> , 49, 5172-5178   | 5.5                  | 7   |
| 20 | Photoinduced cationic polycondensation in solid state towards ultralow band gap conjugated polymers. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 7026-7033  | 7.1                  | 6   |
| 19 | Effect of a local electric field on photogeneration efficiency in a photorefractive polymer. <i>Applied Physics Letters</i> , <b>1998</b> , 73, 2546-2548  | 3.4                  | 5   |
| 18 | Inhomogeneity of the Ultrafast Excited State Dynamics in Organic Photovoltaic Materials Measured at Nanoscale. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 22201-22209                                       | 3.8                  | 5   |
| 17 | Photophysical implications of ring fusion, linker length, and twisting angle in a series of perylenediimide-thienoacene dimers. <i>Chemical Science</i> , <b>2020</b> , 11, 7133-7143  | 9.4                  | 3   |
| 16 | Length-dependent self-assembly of oligothiophene derivatives in thin films. <i>Journal of Materials Research</i> , <b>2011</b> , 26, 296-305   | 2.5                  | 3   |
| 15 | The Role of the Core Attachment Positioning in Triggering Intramolecular Singlet Exciton Fission in Perylene Diimide Tetramers. <i>Journal of Physical Chemistry B</i> , <b>2021</b> , 125, 5114-5131                        | 3.4                  | 3   |
| 14 | Molecular Design towards Controlling Charge Transport. <i>Chemistry - A European Journal</i> , <b>2018</b> , 24, 171   | 80 <sub>‡</sub> .871 | 872 |
| 13 | PICOSECOND OPTICAL LIMITING PERFORMANCE OF A NOVEL PPV-ZnPc CONJUGATED POLYMER.<br>Journal of Nonlinear Optical Physics and Materials, <b>2000</b> , 09, 289-296   | 0.8                  | 2   |
| 12 | Molecular Control of Charge Carrier and Seebeck Coefficient in Hybrid Two-Dimensional Nanoparticle Superlattices. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 17-24  | 3.8                  | 2   |
| 11 | Finely Designed P3HT-Based Fully Conjugated Graft Polymer: Optical Measurements, Morphology, and the Faraday Effect. <i>ACS Applied Materials &amp; Design (Materials &amp; Design)</i> , 12, 30856-30861                    | 9.5                  | 1   |
| 10 | Novel Photorefractive Materials Based on Multifunctional Organic Glasses. <i>ACS Symposium Series</i> , <b>1999</b> , 226-236  | 0.4                  | 1   |
| 9  | Rational Designs of Multifunctional Polymers-Conjugated Photorefractive Polymers. <i>Materials Research Society Symposia Proceedings</i> , <b>1993</b> , 328, 63   |                      | 1   |
| 8  | Frontispiece: Synthesis of Alternating DonorAcceptor Ladder-Type Molecules and Investigation of Their Multiple Charge-Transfer Pathways. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57,                | 16.4                 | 1   |

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| 6 | Organic Photovoltaics: Photovoltaic Function and Exciton/Charge Transfer Dynamics in a Highly Efficient Semiconducting Copolymer (Adv. Funct. Mater. 1/2014). <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 2-2    | 15.6 |
|---|---|------|
| 5 | Disposable organic fluorescence biosensor for water pollution monitoring <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1358, 50301   |      |
| 4 | Structural Evolution and Alignment of Cylinder-Forming PS-b-PEP Thin Films in Confinement Studied by Time-Lapse Atomic Force Microscopy. <i>Materials Research Society Symposia Proceedings</i> , <b>2004</b> , 854, U11.17.1 |      |
| 3 | Synthesis of Thioester End-Functionalized Poly(Etaprolactone) and Its Application in Chemoselective Ligation. <i>ACS Symposium Series</i> , <b>1998</b> , 92-104  | 0.4  |
| 2 | Progress in Fully Functionalized Photorefractive Materials. <i>Materials Research Society Symposia Proceedings</i> , <b>1999</b> , 597, 203   |      |

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