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#### A. 代表作 5 篇

1. Y.-C. Chiang, C.-C. Hung, Y.-C. Lin, Y.-C. Chiu, T. Isono, T. Satoh,\* and W.-C. Chen,\* "High-Performance Nonvolatile Organic Photonic Transistor Memory Devices using Conjugated Rod-Coil Materials as a Floating Gate", *Adv. Mater.*, 32, 2002638 (2020). (**SCI, 2023 Impact Factor: 29.4**)。
2. Y.-F. Yang, Y.-C. Chiang, Y.-C. Lin, G.-S. Li, C.-C. Hung, and W.-C. Chen,\* "Highly Efficient Photo-Induced Recovery Conferred Using Charge-Transfer Supramolecular Electrets in Bistable Photonic Transistor Memory", *Adv. Funct. Mater.*, 31, 2102174, (2021) (**SCI, 2023 Impact Factor:19.0**)
3. E. Ercan\*, Y.-C. Lin, W.-C. Yang, and W.-C. Chen,\* "Self-Assembled Nanostructures of Quantum Dot/Conjugated Polymer Hybrids for Photonic Synaptic Transistors with Ultralow Energy Consumption and Zero-Gate Bias" *Adv. Funct. Mater.*, 32, 2107925 (2022). (**SCI, 2023 Impact Factor:19.0**)
4. C C.-C. Hung, Y.-C. Chiang, Y.-C. Lin, Y.-C. Chiu, and W.-C. Chen,\* "Conception of a Smart Artificial Retina Based on a Dual-Mode Organic Sensing Inverter", *Adv. Sci.*, 8, 21000742, (2021) (**SCI, 2023 Impact Factor: 15.1**)
5. W.-C. Yang, Y.-C. Lin, S. Inagaki, H. Shimizu, E. Ercan, L.-C. Hsu, C.-C. Chueh, T. Higashihara,\* and W.-C. Chen,\* "Low-Energy-Consumption and Electret-Free Photosynaptic Transistor Utilizing Poly(3-hexylthiophene)-Based Conjugated Block Copolymers" *Adv. Sci.*, 9, 2105190, (2022). (**SCI, 2023 Impact Factor: 15.1**)

## B. 近 5 年期刊論文著作 141 篇(2024-2019)

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1. C.-W. Hsu, S.-K. Yu, M.-Y. Shen, E. Ercan, Y.-J. Wang, B.-H. Lin, H.-C. Wu,\* Y.-C. Lin,\* C.-L. Liu,\* and W.-C. Chen,\* “Spider Silk/Hemin Biobased Electrets for Organic Phototransistor Memory: A Comprehensive Study on Solution Process Engineering”, *Adv. Funct. Mater.* (10.1002/adfm.202314907), in press.
2. C.-Y. Sung, W.-C. Chen, C.-L. Liu, B.-H. Lin, Y.-C. Lin,\* and W.-C. Chen,\* “Ultrafast Quasi-2D/3D Perovskite Photodetectors Conferred Using Interfacial Engineering of Self-Assembled Monolayers”, *Adv. Opt. Mater.* (adom.202303241R1), in press.
3. L. A. Ningsih, P.-Y. Lu, S. Ashimura, M. Yoshida, W.-C. Chen, Y.-C. Chiu, C. Hu,\* “Highly effective photocatalytic degradation of plastic film (LDPE) using Ruthenium-incorporated g-C<sub>3</sub>N<sub>4</sub> via the Norrish mechanism”, *Chem. Eng. J.*, 480, 148089 (2024). (SCI).
4. M.-H. Wu, C.-Y. Chang, Y. Liu, W.-C. Chen, Y.-C. Lin,\* “Impact of Ring Structure and Conjugation on the Dielectric Properties of Polyimides at a High Frequency of 10–40 GHz”, *Journal of Polymer Science* (pol.20230799R1), in press.
5. I. M. A. Mekhemer, Y.-S. Wu, A. M. Elewa, W.-C. Chen, C.-C. Chueh,\* H-H. Chou,\* “Naphthalenediimide Based-Polymer Dots with Dual Acceptors as a New Class of Photocatalysts for Photocatalytic Hydrogen Generation under Visible Light Irradiation”, *Solar RRL* (solr.202300994R2), in press.
6. Y.-C. Neu, Y.-S. Lin, Y.-H. Weng, W.-C. Chen, C.-L. Liu, B.-H. Lin, Y.-C. Lin,\* and W.-C. Chen,\* “Reversible Molecular Conformation Transitions of Smectic Liquid Crystals for Light/Bias-Gated Transistor Memory” *ACS Appl. Mater. Interfaces* ( am-2023-16882r.R2), in press.
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8. C.-F. Lin, Y.-S. Wu, H.-C. Hsieh, W.-C. Chen, T. Isono, T. Satoh, Y.-C. Lin,\* C.-C. Kuo,\* and W.-C. Chen,\* “Enhanced Performance of Phototransistor Memory by Optimizing the Block Copolymer Architectures Comprising Polyfluorenes and Hydrogen-Bonded Insulating Coils”, *POLYMER-23-3172R1*, in press.

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9. W.-C. Yang,\* E. Ercan, Y.-C. Lin, W. C. Chen, Y. Watanabe, K. Nakabayashi, B.-H. Lin, C. T. Lo, H. Mori,\* and W. C. Chen,\* “High-Performance Organic Photosynaptic Transistors Using Donor–Acceptor Type and Crosslinked Core–Shell Nanoparticles as a Floating Gate Electretadom”, *Adv. Opt. Mater.*, 11, 202202110 (2023). (SCI)
10. W.-C. Yang, Y.-W. Chen, Y.-Y. Yu, Y.-C. Lin,\* T. Higashihara,\* and W. C. Chen,” “Enhancing the Performance of Electret-Free Phototransistor Memory by Using All-Conjugated Block Copolymer”, *Macromol. Rapid Commun.* 44, 2200756 (2023). (SCI)
11. E. Ercan,\* L.-C. Hsu, Y.-C. Lin, B. H. Lin, and W. C. Chen,\* “Multistimuli-Responsive Plasticity Transitions of Phototransistor Conferred by Using Thermoresponsive Polyfluorene Block Copolymers”, *ACS Appl. Polym. Mater.*, 5, 463–475 (2023). (SCI)

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14. P.-J. Yu, Y.-C. Lin,\* C.-Y. Lin, and W. C. Chen,\* "Enhanced mobility preservation of polythiophenes in stretched states utilizing thienyl-ester conjugated side chain", *Polymer* 264, 125575 (2023). (SCI)
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20. C.-Y. Sung, C.-Y. Lin, C.-C. Chueh, Y.-C. Lin,\* and W. C. Chen,\* "Investigating the Mobility–Compressibility Properties of Conjugated Polymers by the Contact Film Transfer Method with Prestrain", *Macromol. Rapid Commun.* 44, 2300058 (2023). (SCI)
21. M. Matsuda, C.-Y. Lin, K. Enomoto, Y.-C. Lin,\* and W. C. Chen,\* and Tomoya Higashihara,\* Impact of the Heteroatoms on Mobility–Stretchability Properties of n-Type Semiconducting Polymers with Conjugation Break Spacers", *Macromolecules*, 56, 2348–2361 (2023). (SCI)
22. T. Mulia, M. Mumtaz, E. Ercan, W.-C. Yang, C.-F. Lin, Y.-C. Lin,\* R. Borsali,\* and W. C. Chen,\* "Exploring the Charge-Trapping Behavior of Self-Assembled Sugar-based Block Copolymers with a Pendant Design in Photoassisted Memory", *ACS Appl. Polym. Mater.* 5, 3898–3911 (2023). (SCI)
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25. Y.-C. Cheng, Y.-C. Chen, Y.-C. Lin,\* C.-C. Kuo,\* and W. C. Chen,\* "Exploring the Cross-Linking Effect

- on Decreasing the Dielectric Constant and Dissipation Factor of Poly(ester imide)s at a High Frequency of 10–40 GHz“, *ACS Appl. Polym. Mater.*, 5, 7907-7917 (2023). (SCI)
26. E. Ercan,\* Y.-C. Lin, Y.-F. Yang, B.-H. Lin, H. Shimizu, S. Inagaki, T. Higashihara, and W. C. Chen,\* “Tailoring Wavelength-Adaptive Visual Neuroplasticity Transitions with Photoswitchable Dual-Mode of Learning/Forgetting Neural Functions of Synaptic Transistor Utilizing Rod–Coil Block Copolymer“, *ACS Appl. Mater. Interfaces*, 15, 46157-46170 (2023). (SCI)
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32. I.-H. Chao, Y.-T. Yang, M.-H. Yu, C.-H. Chen, C.-H. Liao, B.-H. Lin, I.-C. Ni, W. C. Chen, A. W. Y. Ho-Baillie, and C.-C. Chueh,\* “Performance Enhancement of Lead-Free 2D Tin Halide Perovskite Transistors by Surface Passivation and Its Impact on Non-Volatile Photomemory Characteristics“, *Small*, 19, 2207734 (2023). (SCI)
33. Y. Chang, Y.-S. Wu, S.-H. Tung, W. C. Chen, C.-C. Chueh,\* and C.-L. Liu,\* “N-type Doping of Naphthalenediimide-Based Random Donor-Acceptor Copolymers to Enhance Transistor Performance and Structural Crystallinity“, *ACS Appl. Mater. Interfaces*, 15, 15745-15757 (2023). (SCI)
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35. Y.-T. Li, S. P. Prakoso, L.-C. Hsu, X.-N. Xu, C.-C. Hung, Y.-L. Chen, Y.-H. Wu, W. C. Chen, B.-H. Lin,\* and Y.-C. Chiu,\* “Controlled Growth of Highly Oriented Perovskite Crystals in Polymer Solutions via Selective Solvent Vapor Diffusion“, *Macromol Rapid Commun*, <https://doi.org/10.1002/marc.202300382> (2023). (SCI)
36. M. Matsuda, C.-Y. Lin, C.-Y. Sung, Y.-C. Lin,\* W. C. Chen,\* and T. Higashihara,\* “Unraveling the Effect of Stereoisomerism on Mobility–Stretchability Properties of n-Type Semiconducting Polymers with Biobased Epimers as Conjugation Break Spacers“, *ACS Appl. Mater. Interface*, 15, 51492-51504(2023). (SCI)

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39. E. Ercan,\* Y.-C. Lin, C.-K. Chen, Y.-K. Fang, W.-C. Yang, Y.-F. Yang, and W. C. Chen,\* “Realizing Fast Photoinduced Recovery with Polyfluorene–block-Poly(vinylphenyl oxadiazole) Block Copolymers as Electret in Photonic Transistor Memory Devices”, *J. Polym. Sci.*, 60, 525-537 (2022). (SCI)
40. Y. S. Lin, Y.-C. Lin,\* W.-C. Yang, G.-S. Li, E. Ercan, C.-C. Hung, W.-C. Chien,\* and W. C. Chen,\* “Liquid Crystalline Rylenediimides with Highly Order Smectic Layer Structure as a Floating Gate for Multiband Photoresponding Photonic Transistor Memory”, *Adv. Electron. Mater.*, 8, 2100798 (2022). (SCI)
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42. G.-S. Li, C.-C. Hung, Y.-C. Chiang, Y.-C. Lin, Y.-F. Yang, W.-C. Yang, H.-C. Yen, C.-K. Chen, L.-C. Hsu, W. C. Chen,\* “Volatility Transition from Short–Term to Long–Term Photonic Transistor Memory by Using Smectic Liquid Crystalline Molecules as a Floating Gate”, *Adv. Electron Mater.*, 8, 2101123 (2022). (SCI)
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45. J. Aimi,\* T. Yasuda, C.-F. Huang, M. Yoshio, and W. C. Chen, “Fabrication of solution-processable OFET memory using a nano-floating gate based on phthalocyanine-cored star-shaped polymer”, *Mater. Adv.*, 2022, 3, 3128 – 3134 (2022). (SCI)
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48. A. C. Chang, Y.-C. Lin,\* H.-C. Yen, W.-C. Yang, Y.-F. Yang, and W.-C. Chen\* “Unraveling the Singlet Fission Effects on Charge Modulations of Organic Phototransistor Memory Devices”, *ACS Appl. Electron. Mater.*, 4, 1266-1276(2022). (SCI)
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59. Y.-W. Chen, Y.-C. Lin,\* W.-C. Yang, Y.-F. Yang, Y.-C. Peng, W. C. Chen, B.-H. Lin, Y.-Y. Yu,\* and W. C. Chen,\* “Development of Multilevel Organic Phototransistor Memory using Conjugated/Insulating Polymer Blends with a Vertical Phase Separation”, *Macromol. Mater. Eng.* 2022, 2200388 (2022).
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