

1. Po-Yi Lu, Lely A. Ningsih, Ayu C. Heksa, Che-Chia Hu, W. C. Chen *, Yu-Cheng Chiu*, “Solid base-assisted photocatalytic degradation of polyethylene via the Norrish mechanism through the generation of alternating polyketones“, *Polym. J.*, 57, 575 (2025).
2. Chen-Fu Lin, Ya-Shuan Wu, Wei-Cheng Chen, Bi-Hsuan Lin, Yan-Cheng Lin*, Chi-Ching Kuo*, W. C. Chen *, “Boosting the Photoresponse of Transistor Memory Utilizing the Ferroelectric Polarization Effect of Polyfluorene/PVDF-Based Copolymer Blends“, *ACS Appl. Electron. Mater.*, 7, 1068 (2025).
3. Yen-Han Shih, Guan-Lin Wu, Pin-Hsiang Chueh, Jing-Chun Chen, Chu-Yen Tsai, Ting-Yu Wang, Ming-Hsuan Yu, Yi-Pei Li, W. C. Chen, Chu-Chen Chueh*, “The Influence of Interlocking Effects in Conjugated Polymers Synthesized by Aldol Polycondensation on Field-Effect Transistor Properties and Morphology“, *JACS Au*, 5, 1382 (2025).
4. Pin-Hsuan Huang, Yi-Hsun Weng, Ya-Shuan Wu, Chih-Wei Hsu, Cheng-Liang Liu, Yan-Cheng Lin*, W. C. Chen *, “Organic Room-Temperature Phosphorescent Materials for High-Performance Floating Gate Photomemory and Synaptic Phototransistor Applications“, *Adv. Intell. Discov.*, 1, 2500008 (2025).
5. Zi-Yue Huang, Yi-Hsun Weng, Yan-Cheng Lin*, W. C. Chen *, “Boosting the Photoresponse of Transistor Memory through Triplet–Triplet Annihilation Upconversion Using Diphenylanthracene Copolymers“, *ACS Appl. Opt. Mater.*, 3, 861 (2025).
6. Yu Liu, En-Chi Chang, Nai-Wen Kang, Yan-Cheng Lin*, W. C. Chen *, “Biobased and Negative-Type Photosensitive Polyimides with Low Dielectric Constant and Dissipation Factor Formulated by Using a Photobase Generator“, *ACS Appl. Polym. Mater.*, 7, 5418 (2025).
7. Yu-Chiung Li, Yi-An Tsai, Po-Yi Lu, Mitsuru Ueda, Yan-Cheng Lin*, W. C. Chen *, “Improving the mechanical and high-frequency dielectric properties of the bio-based thermoplastic copolyesters using fatty acid dimer diol and aromatic diester monomers“, *Eur. Polym. J.*, 235, 114070 (2025).
8. Chia-Yang Lin, Guan-Lin Wu, Ting-Yu Wang, Waner He, Ying-Sheng Wu, Shunsuke Imaoka, Shohei Shimizu, W. C. Chen, Yoshimitsu Sagara, Chu-Chen Chueh*, Tsuyoshi Michinobu*, “Vinylene-bridged naphthalenediimide-based dual-acceptor copolymers for thin-film transistors and solar steam generation“, *RSC Appl. Polym.*, 3, 1011 (2025).
9. Lu, PY , Ningsih, LA , Heksa, AC , Hu, CC, W. C. Chen ,Chiu, YC,” Solid base-assisted photocatalytic degradation of polyethylene via the Norrish mechanism through the generation of alternating polyketones” *Polymer Journal* 57(5), pp.575-586(2025).
10. W. C. Chen , Wu, YS , Lin, YC ,Huang, YH , Wu, JY,Lin, KW ,Liu, CL, Kuo, CC, ,” Ultralow energy consumption conjugated polymers with perovskite quantum dots via polarity adjustment for photosynaptic transistors” *Materials Horizons* 12(20), pp.8711-8723(2025).
11. Chang, CY, Liu, Y,Wu, MH ,Ueda, M , W. C. Chen ,Lin, YC,” Post-polymerization strategy with a thermal and acid-catalyzed crosslinker at chain ends for low-dielectric poly(ether imide)s in high-frequency insulating applications spanning the 10-40 GHz range” *Polymer* 335(2025).
12. Tsai, YA,Li, YC , Liu, Y ,Ueda, M , W. C. Chen ,Lin, YC ,” Development of the Biobased Copolyesters of Poly(Isosorbide Terephthalate) With High Biomass Contents Using Dimer Diol and Diacid and a Distannoxane Catalyst” *Journal Of Polymer Science* 63(20), pp.4267-4279(2025).
13. Weng, YH , W. C. Chen ,Lu, CH,Hsu, CW , Ercan, E, Wu, CC,Liu, CL,Lin, YC,” Performance

enhancement of phototransistor memory enabled by the interfacial dipole engineering with twisted intramolecular charge transfer”, *Materials Today Chemistry* 48(2025).

14. Chung, CL, Tsai, YA, Liu, Y, Chen, YC, Chiu, CC, W. C. Chen, Lin, YC, ” Universally Correlating the High-Frequency Dielectric Properties with Structural Parameters of Polyimides with Diversified Functional Groups”, *ACS Applied Polymer Materials* 7(17), pp.11679-11689(2025).
15. W. C. Chen, YW, Wu, YS, Ercan, E, Isono, T, Satoh, T, Liu, CL, Lin, YC, Lo, CT, ” Improving the current stability of perovskite quantum dot phototransistors utilizing the ferrocene-cyclodextrin host-guest supramolecules as a floating gate dielectric”, *Journal Of Materials Chemistry*, 13(30), pp.15655-15665(2025).
16. W. C. Chen, Yun-Hsuan, Wang, Tzu-Yun Huang, Chih-Chun, Lane, Hsien-Yuan, ” The Impact of Temperature Variation and Air Pollution on Symptom Severity and Cognitive Function in Bipolar Disorder”, *Bipolar Disorders* 27, pp.S147-S147(2025).
17. Hsu, Chih-Wei, Shen, Ming-Yan, Wang, Yi-Jen, Hong, Shao-Huan, Liu, Yu, Wu, Hsuan-Chen, W. C. Chen, Liu, Cheng-Liang, ” Morphology-engineered spider silk-carbon nanotube composites for high-performance and sustainable thermoelectric energy harvesting”, *Chemical Engineering Journal* 524(2025).
18. Li, Hong, Mumtaz, Muhammad, Isono, Takuya, Satoh, Toshifumi, Liu, Cheng-liang, W. C. Chen, Borsali, Redouane, ” Rainbow Photonic Crystals: Self-Assembly of Carbohydrate Bottlebrushes Block Copolymers”, *Advanced Materials* (DOI10.1002/adma.202514152).
19. Wu, Ya-Shuan, Chen, Wei-Cheng, Lin, Yi-Sa, Liu, Cheng-Liang, Lin, Yan-Cheng, W. C. Chen, ” Strategic Fermi Level Engineering of Donor-Acceptor Self-Assembled Monolayer toward Ultrahigh Paired-Pulse Facilitations in Photosynaptic Transistors”, *Journal Of The American Chemical Society* 147(42), pp.38341-38353(2025).
20. Yu, Ping-Jui, Chen, Wei-Cheng, Wu, Ya-Shuan, Lin, Bi-Hsuan, Lin, Yan-Cheng, Borsali, Redouane, W. C. Chen, ” Oligosaccharide Block Copolymers with Branched Architectures and Channel Energy Level Optimizations for High-Performance Floating Gate Phototransistor Memory” *ACS Applied Materials & Interfaces* 17(38), pp.53837-53851(2025).
21. Shi, Shin-Hao, Chen, Wei-Cheng, Hou, Yu-Cheng, Hsu, Chih-Wei, Lin, Yan-Cheng, Kuo, Chi-Ching, Lin, Ja-Hon, Liu, Cheng-Liang, W. C. Chen, ” Enhanced Photonic Transistor Memory Performance Through Morphology-Dependent Scattering Effects and Amplified Spontaneous Emission” *Advanced Materials Technologies* 10(17).2025.

-2024

22. Meng-Hsuan Wu, Chieh-Yuan Chang, Yu Liu, W. C. Chen *, Yan-Cheng 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*, Early Access, (2024).
23. Islam M. A. Mekhemer, Ying-Sheng Wu, Ahmed M. Elewa, W. C. Chen, Chu-Chen Chueh*, Ho-Hsiu Chou*, “Naphthalenediimide-Based Polymer Dots with Dual Acceptors as a New Class of Photocatalysts for Photocatalytic Hydrogen Generation under Visible Light Irradiation“, *SOLAR RRL*, 8, 2300994 (2024).
24. Chen-Fu Lin, Ya-Shuan Wu, Hui-Ching Hsieh, Wei-Cheng Chen, Takuya Isono, Toshifumi Satoh, Yan-Cheng Lin*, Chi-Ching Kuo*, W. C. Chen *, “Enhanced performance of phototransistor memory by optimizing the block copolymer architectures comprising Polyfluorenes and hydrogen-

bonded insulating coils“, *Polymer*, 295, 126772 (2024).

25. Yi-Chieh Neu, Yi-Sa Lin, Yi-Hsun Weng, Wei-Cheng Chen, Cheng-Liang Liu, Bi-Hsuan Lin, Yan-Cheng Lin*, and W. C. Chen *, “Reversible Molecular Conformation Transitions of Smectic Liquid Crystals for Light/Bias-Gated Transistor Memory“, *ACS Appl. Mater. Interfaces*, 16, 7500 (2024).
26. Hao-Chi Yen, Chih-Yuan Sung, Pin-Hong Chen, Yan-Cheng Lin*, Tomoya Higashihara*, and W. C. Chen *, “Imparting Stretchable Semiconducting Polymers with Ambipolar Charge-Transport Capability by Using a Lewis Base of Triazabicyclodecene“, *ACS Appl. Polym. Mater.*, 6, 2534 (2024).
27. Yen-Han Shih, Guan-Lin Chen, Pang-Hsiao Liu, Kai-Wei Tseng, Wen-Ya Lee, W. C. Chen, Leeyih Wang*, and Chu-Chen Chueh*, “Revealing the Effect of Branched Side Chain Length on Polymer Aggregation and Paracrystallinity for Improved Mobility–Stretchability Properties“, *ACS Appl. Electron. Mater.*, 6, 1797 (2024).
28. Chih-Wei Hsu, Sheng-Kai Yu, Ming-Yan Shen, Ender Ercan, Yi-Jen Wang, Bi-Hsuan Lin, Hsuan-Chen Wu*, Yan-Cheng Lin*, Cheng-Liang Liu*, W. C. Chen *, “Spider Silk/Hemin Biobased Electrets for Organic Phototransistor Memory: A Comprehensive Study on Solution Process Engineering“, *Adv. Funct. Mater.*, 34, 2314907 (2024).
29. Chih-Yuan Sung, Wei-Cheng Chen, Cheng-Liang Liu, Bi-Hsuan Lin, Yan-Cheng Lin*, W. C. Chen *, “Ultrafast Quasi-2D/3D Perovskite Photodetectors Conferred Using Interfacial Engineering of Self-Assembled Monolayers“, *Adv. Opt. Mater.*, 12, 2303241 (2024).
30. Ping-Jui Yu, Wei-Cheng Chen, Chih-Chien Hung, Ya-Shuan Wu, Yan-Cheng Lin*, Redouane Borsali*, W. C. Chen *, “Developing biobased and degradable polyazomethines from hemin“, *Mater. Today Sustain.*, 26, 100759 (2024).
31. Hsueh-Sheng Tseng, Thanapon Puangniyom, Chi-Yuan Chang, Jayakrishnan Aerathupalathu Janardhanan, Hsiao-hua Yu, W. C. Chen, Chu-Chen Chueh*, Yu-Sheng Hsiao*, “Strategically tailoring ethylene glycol side chains with bridged-carbonyl ester in polythiophene-based organic electrochemical transistors for bioelectronics“, *Chem. Eng. J.*, 486, 150371 (2024).
32. Hung-An Lin, Yi-Hsun Weng, Tiffany Mulia, Cheng-Liang Liu, Yan-Cheng Lin*, Yang-Yen Yu*, and W. C. Chen *, “Electrical Double-Layer Transistors Comprising Block Copolymer Electrolytes for Low-Power-Consumption Photodetectors“, *ACS Appl. Mater. Interfaces*, 16, 25042 (2024).
33. Wei-Cheng Chen, Yan-Cheng Lin, Zih-Syuan Syu, Ya-Shuan Wu, Kai-Wei Lin, Cheng-Liang Liu, Chi-Ching Kuo*, W. C. Chen *, “Surface ligand engineering of perovskite quantum dots for n-type and stretchable photosynaptic transistor with an ultralow energy consumption“, *Chem. Eng. J.*, 494, 152897 (2024).
34. Sung-Te Chang, Wei-Cheng Chen, Chen-Fu Lin, Pei-Zhen Yu, Cheng-Hang Tsai, Chia-Jung Cho, Yan-Cheng Lin*, W. C. Chen *, Chi-Ching Kuo*, “Quasi-2D Perovskite with Ligand Engineering to Improve the Stability of Phototransistor Memory with a Floating Gate“, *Adv. Opt. Mater.*, 12, 2400470 (2024).
35. Tiffany Mulia, Ender Ercan, Muhammad Mumtaz, Yan-Cheng Lin*, Redouane Borsali*, W. C. Chen*, “Carbohydrate-based block copolymers with sub-10 nm face-centered cubic nanostructures for low-power-consuming and ultraviolet light-triggered synaptic phototransistors“, *Carbohydr. Polym.*, 344, 122476 (2024).
36. Cheng-Hang Tsai, Wei-Cheng Chen, Yan-Cheng Lin, Yu-Hang Huang, Kai-Wei Lin, Jing-Yang Wu,

Toshifumi Satoh, W. C. Chen *, Chi-Ching Kuo*, “Ultralow-Energy-Consumption Photosynaptic Transistor Utilizing Conjugated Polymers/Perovskite Quantum Dots Nanocomposites With Ligand Density Optimization“, *Small*, 20, 2402567 (2024).

37. Yin-Jia Hu, Chih-Wei Hsu, Yi-Hsun Weng, Bi-Hsuan Lin, Cheng-Liang Liu, Yan-Cheng Lin*, Yang-Yen Yu*, W. C. Chen *, “Hydrogen-bonded supramolecular electrets comprising block copolymers and amino-functionalized porphyrin for low-power-consumption phototransistors“, *Polymer*, 312, 127668 (2024).
38. Meng-Chu Mi, Fu-En Szu, Ying-Chi Cheng, Cheng-Hang Tsai, Jia-Hong Chen, Jui-Hsiung Huang, Chi-Ching Kuo*, Yan-Cheng Lin*, Man-kit Leung*, W. C. Chen *, “Semiaromatic Poly(ester imide) Copolymers with Alicyclic Diamines for Low-K Properties at a High Frequency of 10–40 GHz“, *ACS Appl. Polym. Mater.*, 6, 11137 (2024).
39. Muhammad Mumtaz*, Daniel Hermida Merino, Eduardo Solano, W. C. Chen, Redouane Borsali*, “Simple Approach to Synthesize Carbohydrate-based Janus-Type Bottlebrush Copolymers and Their Self-Assemblies in Sub-5 nm Features in Thin Films“, *Macromolecules*, 57, 9595 (2024).
40. Yi-Sa Lin, Chih-Chien Hung, Jin-Chieh Ho, Wei-Cheng Chen, Ender Ercan, Yan-Cheng Lin*, Yu-Cheng Chiu*, W. C. Chen *, “Multi-level Nonvolatile Transistor Memory With Optical Rewritability Utilizing Reverse-Bias P-N Junction of Oriented Rod-Like Organic Molecules“, *Adv. Funct. Mater.*, 35, 2416306 (2024).
41. Ping-Jui Yu, Pei-Zhen Yu, Wei-Cheng Chen, Hong Li, Bi-Hsuan Lin, Chi-Ching Kuo, Yan-Cheng Lin*, Redouane Borsali*, W. C. Chen *, “Regulating the perovskite nanocrystal allocations in carbohydrate block copolymers through architecture engineering for nonvolatile phototransistor memory“, *Mater. Today Nano*, 29, 100563 (2024).
42. Yi-Chieh Neu, Chih-Wei Hsu, Ya-Shuan Wu, Yu Liu, Cheng-Liang Liu, Yan-Cheng Lin*, W. C. Chen *, “Interfacial charge trap engineering of organic semiconductors using reactive oxygen plasma for enhanced performance in phototransistor memory“, *Mater. Today Chem.*, 42, 102445 (2024).
43. Ping-Jui Yu, Yan-Cheng Lin*, W. C. Chen *, “Review of bioderived and biodegradable polymers/block-copolymers and their biomedical and electronic applications“, *Polym. J.*, 57, 233 (2024).
44. Ya-Shuan Wu, Wei-Cheng Chen, Yi-Sa Lin, Cheng-Liang Liu, Yan-Cheng Lin*, W. C. Chen *, “Revealing the Effect of Crystalline Self-Assembled Monolayer in Biomimetic Photosynapse with Ultraviolet Light Protection Capability“, *ACS Appl. Mater. Interfaces*, 16, 69645 (2024).

-2023

45. W.-C. Yang,* E. Ercan, Y.-C. Lin, 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)
46. 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)
47. 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)

48. Y.-C. Chiang, W. C. Yang, C. C. Hung, E. Ercan, Y.-C. Chiu, Y. C.- Lin,* and W. C. Chen,* "Fully Photoswitchable Phototransistor Memory Comprising Perovskite Quantum Dots based Hybrid Nanocomposites as a Photoresponsive Floating Gate", *ACS Appl. Mater. Interfaces* 2023, 15, 1, 1675-1684 (2023). (SCI)
49. C.-H. Ho, Y.-S. Lin, C.-C. Hung, Y.-C. Chiu, C.-C. Kuo, Y.-C. Lin,* and W. C. Chen,* “Discotic Liquid Crystals with Highly Order Columnar Hexagonal Structure for Ultraviolet Light-Sensitive Phototransistor Memory”, *ACS Appl. Electron. Mater.*, 2023, 5, 2, 1067-1076 (2023). (SCI)
50. 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)
51. C.-H. Ho, Y.-S. Lin, C.-C. Hung, Y.-C. Chiu, C.-C. Kuo,* Y.-C. Lin,* and W. C. Chen,* “Discotic Liquid Crystals with Highly Ordered Columnar Hexagonal Structure for Ultraviolet Light-Sensitive Phototransistor Memory “, *ACS Appl. Electron. Mater.*, 5, 1067-1076 (2023). (SCI)
52. E. Ercan,* C.-C. Hung, G.-S. Li, Y.-F. Yang, Y.-C. Lin, and W. C. Chen,* “Molecular template growth of organic heterojunctions to tailor visual neuroplasticity for high performance phototransistors with ultralow energy consumption“, *Nanoscale Horiz.*, 8, 632-640 (2023). (SCI)
53. S. Inagaki, C.-Y. Sung, A.-C. Chang, Y.-C. Lin,* and W. C. Chen,* and T. Higashihara,* “Synthesis of ABCBA-type miktoarm H-shaped copolymers with poly(3-hexylthiophene) segments and their application to intrinsically stretchable photonic transistor memory”, *J. Mater. Chem. C*, 11, 6306-6316 (2023). (SCI)
54. 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)
55. Y.-H. Weng, Y.-C. Lin,* J.-C. Ho, W.-C. Yang, B.-H. Lin, C.-L. Liu, and W. C. Chen,*. “High-Performance Phototransistor Memory with an Ultrahigh Memory Ratio Conferred Using Hydrogen-Bonded Supramolecular Electrets”, *ACS Appl. Mater. Interfaces*, 15, 19258–19269 (2023). (**Featured on issue front cover**, SCI).
56. 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)
57. 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)
58. 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)
59. A.-C. Chang, T. Mulia, Y.-S. Wu, Y.-H. Weng, Y.-C. Lin,* and W. C. Chen,* “Recent developments of block copolymers in nonvolatile memory and artificial synapses”, *J. Polym. Sci.*, 61, 2633-2654 (2023). (SCI)
60. E.-C. Chang, L.-Y. Tseng, Y. Liu, C.-K. Chen, C.-C. Kuo, M. Ueda, Y.-C. Lin,* and W. C. Chen,* “Investigating the structure–sensitivity relationship of photosensitive polyimide formulated by using a photobase generator “, *J. Polym. Sci.*, 6, 2122-2132 (2023). (SCI)

61. 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)
62. 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)
63. A.-C. Chang, Y.-S. Wu, W.-C. Chen, Y.-H. Weng, B.-H. Lin, C.-C. Chueh, Y.-C. Lin,* and W. C. Chen,* “Modulating the Photoresponsivity of Perovskite Photodetectors through Interfacial Engineering of Self-Assembled Monolayers “, *Adv. Opt. Mater.*, <https://doi.org/10.1002/adom.202301789> (2023). (SCI)
64. Y.-S. Wu, A.-C. Chang, W.-C. Chen, E. Ercan, Y.-H. Weng, B.-H. Lin, C.-L. Liu, Y.-C. Lin,* and W. C. Chen,* “High-Performance Synaptic Phototransistor Using a Photoactive Self-Assembled Layer Toward Ultralow Energy Consumption“ , *Adv. Opt. Mater.*, <https://doi.org/10.1002/adom.202302040> (2023). (SCI)
65. C.-K. Chen, J.-C. Ho, C.-C. Hung, W.-C. Chen, T. Satoh,* and W. C. Chen,* “Sustained Flexible Photonic Transistor Memories Based on Fully Natural Floating Gate Electrets“, *ACS Appl. Mater. Interfaces*, 15, 33829-33837 (2023). (SCI)
66. J.-C. Ho, K. Hatakeyama-Sato, A. Chiba, M. Hayashi, Y. Igarashi, K. Oyaizu,* and W. C. Chen,* “Sandwich Configuration of Zinc Anode, Gel Electrolyte, and Radical Polymer Cathode for Fully Stretch-Rechargeable Battery “, *Adv. Sustain. Syst.*, 7, 2300080 (2023). (SCI)
67. P.-J. Lin, C.-H. Liao, S.-C. Yeh, Y.-C. Tseng, F.-C. Chang, W. C. Chen, R.-J. Jeng,* N.-L. Wu, and C.-C. Chueh,* “2,2,6,6-Tetramethylpiperidine-1-oxyl-Oxidized Cellulose Nanofiber-Embedded Polymer Electrolytes for All-Solid-State Lithium Metal Batteries“, *ACS Sustain. Chem. Eng.*, 11, 10191-10200 (2023). (SCI)
68. 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)
69. 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)
70. C.-H. Tsai, Y.-C. Lin, W.-N. Wu, S.-H. Tung, W. C. Chen, and C.-L. Liu,* “Optimizing the Doping Efficiency and Thermoelectric Properties of Isoindigo-Based Conjugated Polymers Using Side Chain Engineering “, *J. Mater. Chem. C.*, 11, 6874-6883 (2023). (SCI)
71. -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)
72. 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)

73. K.-C. Wang, P.-S. Lin, Y.-C. Lin,* S.-H. Tung, W.-C. Chen, and C.-L. Liu,* “Tunable Thermoelectric Performance of the Nanocomposites Formed by Diketopyrrolopyrrole/Isoindigo-Based Donor–Acceptor Random Conjugated Copolymers and Carbon Nanotubes” *ACS Appl. Mater. Interface*, 15, 56116–56126 (2023). (SCI)
74. Y.-T. Li, S. P. Prakoso, L.-C. Hsu, X.-Ni X., 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.* 44, 2300382 (2023). (SCI)
75. Z. Y. Huang, Y. H. Weng, Y. F. Yang, B. H. Lin, Y. C. Lin,* and W. C. Chen,* Unveiling the Delayed Fluorescence Effects of Triplet–Triplet Annihilation Upconversion on the Photoresponse of Transistor Memory, *ACS Photonics*, 10, 4509–4518 (2023). (SCI)

-2022

76. Y. C. Lin, K. Terayama, K. Yoshida, P.-J. Yu, P.-H. Chueh, C. C. Chueh, T. Higashihara, and W. C. Chen, “Strain-Insensitive Naphthalene-Diimide-Based Conjugated Polymers Through Sequential Regularity Control”, *Mater. Chem. Front.*, 6, 891–900 (2022). (SCI)
77. J.-C. Ho, Y.-C. Lin, C.-K. Chen, L.-C. Hsu, and W.-C. Chen,* “Hydrogel-Based Sustainable and Stretchable Field-Effect Transistors”, *Org. Electronics*, 100, 106358 (2022). (SCI)
78. 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)
79. 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 Rylene diimides with Highly Order Smectic Layer Structure as a Floating Gate for Multiband Photoresponding Photonic Transistor Memory”, *Adv. Electron. Mater.*, 8, 2100798 (2022). (SCI)
80. 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, **Featured on inside front cover**).
81. 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)
82. 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)
83. H. Li, M. Mumtaz, T. Isono, T. Satoh, W.-C. Chen, and R. Borsali,* “Self-Assembly of Carbohydrate-based Block Copolymer Systems: Glyconanoparticles and Highly Nanostructured Thin Films”, *Polym. J.*, 54, 455–464 (2022). (SCI)
84. 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)
85. Y. C. Lin,* W. C. Yang, Y.-C. Chiang, and W.-C. Chen,* “Recent Advances in Organic Phototransistors: Nonvolatile Memory, Artificial Synapses, and Photodetectors”, *Small Sci.*, 2, 2100109 (2022). (SCI)
 86. S. Inagaki, Y.-C. Lin, H. Tanaka, T. Koganezaw, W.-C. Chen,* and T. Higashihara,* “Synthesis of a novel A-b-(B-co-C)-type terpolymer with a regioregular poly(3-hexylthiophene) segment and its application to intrinsically stretchable transistor memory”, *Mater. Chem. Phys.*, 281, 125911(2022). (SCI)
 87. 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)
 88. C. H. Ho, Y.-C. Lin,* W. C. Yang, E. Ercan, Y. C. Chiang, B.-H. Lin, C. C. Kuo, and W. C. Chen,* “Fast Photoresponsive Phototransistor Memory using Star-Shaped Conjugated Rod–Coil Molecules as a Floating Gate”, *ACS Appl. Mater. Interface*, 14, 15468-15477(2022). (SCI)
 89. Y.-C. Tseng, A. Kato, J.-F. Chang, W.-C. Chen, T. Higashihara* and C.-C. Chueh,* “Impact of the segment ratio on a donor–acceptor all-conjugated block copolymer in single-component organic solar cells”, *Nanoscale*, 14, 5472-5481(2022). (SCI)
 90. Y.-C. Lin,* G.-S. Li, P.-J. Yu, Dr. E. Ercan, and W.-C. Chen,* “Organic Liquid Crystals in Optoelectronic Device Applications: Field-Effect Transistors, Nonvolatile Memory, and Photovoltaics”, *J. Chin. Chem Soc.*, 69, 1289-1304 (2022). (SCI).
 91. C.-K. Chen, Y.-C. Lin, J.-C. Ho, W.-C. Yang, and W.-C. Chen,* “Biomass-derived Degradable Poly(azomethine)s for Flexible Bistable Photonic Transistor Memories”, *ACS Sustainable Chem. Eng.*, 10, 5268-5277 (2022) (SCI)
 92. L.-C. Hsu, Y.-C. Lin,* C.-K. Chen, W.-C. Yang, J.-C. Ho, and W.-C. Chen,* “Mechanically Tough and Durable Poly(siloxane imide) Network Elastomer for Stretchable Electronic Applications” *ACS Appl. Polym. Mater.* 4, 3498-3510 (2022). (SCI)
 93. C.-C. Hung, Y.-C. Lin, T. H. Chuang, Y.-C. Chiang, Y.-C. Chiu, M. Mumtaz, R. Borsali,* and W.-C. Chen,* “Harnessing of Spatially Confined Perovskite Nanocrystals Using Polysaccharide-based Block Copolymer Systems *ACS Appl. Mater. Interfaces*, 14, 30279–30289 (2022). (SCI)
 94. Y.-C. Chen, Y.-C. Lin,* E.-C. Chang, C.-C. Kuo, M. Ueda, and W.-C. Chen,* “Investigation of the Structure–Dielectric Relationship of Polyimides with Ultralow Dielectric Constant and Dissipation Factors Using Density Functional Theory”, *Polymer* 256, 125184 (2022). (SCI)
 95. Y.-T. Hung, C.-K. Chen,* Yan-Cheng Lin, Y.-Y. Yu,* and W.-C. Chen,* “Dimensionally Thermal Stable Biomass-Based Polyimides for Flexible Electronic Applications”, *Polymer J.* 54, 1489–1499 (2022). (SCI)
 96. E. Ercan,* Y.-C. Lin, Y. S.-Otsuka, R. Borsali, and W.-C. Chen,* “Harnessing Biobased Materials in Photosynaptic Transistors with Multibit Data Storage and Panchromatic Photoresponses Extended to Near-Infrared Band”, *Adv. Opt. Mater.*, 10, 2201240 (2022). (SCI)
 97. Y.-T. Yang, Y.-S. Wu, W. He, H.-C. Tien, W.-C. Yang, T. Michinobu, W.-C. Chen, W.-Y. Lee,* and C.-C. Chueh,* “Tuning Ambipolarity of the Conjugated Polymer Channel Layers of Floating-Gate Free Transistors: From Volatile Memories to Artificial Synapses”, *Adv. Sci.*, 9, 2203025 (2022). (SCI)

98. 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.*, 2200388 (2022). (SCI)
99. C.-Y. Chang, Y.-H. Shih, W.-C. Chen, and C.-C. Chueh,* “Influence of Side-Chain Substitution for Thiophene-based Conjugated Polymers on the Charge Transport Properties: Carboxylate Ester Group versus Carboxamide Group”, *Org. Electron.* 110, 106634 (2022). (SCI)
100. Y.-S. Wu, J.-S. Li, C. Y. Chang, W. He, T. Michinobu, Y.-C. Lin,* W.-C. Chen,* and C.-C. Chueh,* “Structural Influence of the Proquinoidal Acceptor Moiety on Transistor Performance and Doping Capability for Diketopyrrolopyrrole-based Dual-Acceptor Conjugated Polymers”, *J. Mater. Chem. C.*, **10**, 17936-17944 (2022). (SCI)
101. P.-H. Chueh, C.-Y. Chang, Y.-C. Lin,* W.-C. Chen,* and C.-C. Chueh,* “Stretchable Diketopyrrolopyrrole-Based Conjugated Polymers with Asymmetric Sidechain Designs for Field-Effect Transistor Applications“, *J. Taiwan. Inst. Chem. Eng.* 140, 104566 (2022). (SCI)
102. S. Yamamoto, M. Matsuda, C.-Y. Lin, K. Enomoto, Y. C. Lin,* W.-C. Chen,* and T. Higashihara, "Intrinsically Stretchable Block Copolymer Comprised of Polyisobutene and Naphthalenediimide–Bithiophene-Based π -Conjugated Polymer Segments for Field–Effect Transistors", *ACS Appl. Polym. Mater.* 4, 8942–8951 (2022). (SCI)

-2021

103. P.-C. Lin, C.-T. Hsieh, X. Liu, F.-C. Chang, W.-C. Chen, J. Yu, and C.-C. Chueh,* “Fabricating Efficient Flexible Organic Photovoltaics Using an Eco-Friendly Cellulose Nanofibers/Silver Nanowires Conductive Substrate”, *Chem. Eng. J.*, 45, 126996 (2021). (SCI)
104. Li. Y. Su, H.-H. Huang, Y.-C. Lin, G.-L. Chen, W.-C. Chen, W. Chen, L. Wang,* and C.-C Chueh* “Enhancing Long-Term Thermal Stability of Non-Fullerene Organic Solar Cells Using Self-Assembly Amphiphilic Dendritic Block Copolymer Interlayers”, *Adv. Funct. Mater.*, 31, 202005753 (2021). (SCI)
105. K.-T. Huang, C.-C. Chueh,* and W.-C. Chen* “Recent advance in renewable materials and green processes for optoelectronic applications”, *Materials Today Sustainability*, 11-12, 100057 (2021).
106. Y.-C. Chen, H.-C. Hsieh, Y.-C. Lin, L.-C. Hsu, W.-C. Yang, T. Isono, T. Satoh, and W.-C. Chen,* “Improving Performance of Photonic Transistor Memory Devices using Conjugated Block Copolymers as a Floating Gate”, *J. Mater. Chem. C*, 9, 1259-1268 (2021). (SCI)
107. C.-C. Kuo, Y.-C. Lin, Y.-C. Chen, P.-H. Wu, S. Ando,* M. Ueda,* and W.-C. Chen,* “Correlating the Molecular Structure of Polyimides with Dielectric Constant and Dissipation Factor at A High Frequency of 10 GHz”, *ACS Appl. Polym. Mater.*, 3, 362-371 (2021) (**Featured on issue cover page**). (SCI)
108. H.-C. Wu, F. Lissel, G.-J. N. Wang, D. M. Koshy, S. Nikzad, H. Yan, J. Xu, S. Luo, N. Matsuhisa, Y. Cheng, F. Wang, B. Ji, D. Li, W.-C. Chen, G. Xue, Z. Bao,* “Metal-Ligand Based Mechanophores Enhance Both Mechanical Robustness and Electronic Performance of Polymer Semiconductors”, *Adv. Funct. Mater.*, 31, 200921 (2021). (SCI)
109. H.-C. Yen, Y.-C. Lin, and W.-C. Chen,* “Modulation of the Hydrophilicity on Asymmetric Side-chains of Isoindigo-Based Polymers for Improving Carrier Mobility-Stretchability Properties”, *Macromolecules*, 54, 1665-1676 (2021). (SCI)
110. Y. Sakai-Otsuka, Y. Ogawa, T. Satoh, W.-C. Chen and R. Borsali,* “Carbohydrate-attached Fullerene Derivative for Selective Localization in Ordered Carbohydrate-block-Poly(3-hexylthiophene) Nanodomains”, *Carbohydrate Polymers*, 255, 117528 (2021). (SCI)
111. L.-C. Hsu, T. Isono, Y.-C. Lin, S. Kobayashi, Y.-C. Chiang, D.-H. Jiang, C.-C. Hung, E. Ercan, H.-C. Hsieh, K. Tajima, T. Satoh* and W.-C. Chen,* “Stretchable OFET Memories: Tuning the

Morphology and the Charge-Trapping Ability of Conjugated Block Copolymers through Soft Segment Branching”, *ACS Appl. Mater. Interface*, 13, 2932-2943 (2021). (SCI)

112. J.-S. Li, Y.-W. Huang, Y.-C. Lin, F.-H. Chen, W.-C. Chen,* and C.-C. Chueh* “Exploring the Effect of the Spacer Structure in the Heterocyclic Ring-Fused Isoindigo-based Conjugated Polymer on the Charge-Transporting Property”, *J. Polym. Res.*, 28, 51 (2021). (SCI)
113. J.-C. Ho, Y.-C. Lin,* and W.-C. Chen,* “Stretchable Multi-color Emission of Polymer/Dye Blends Induced by Intermolecular Interaction and Solid-state Aggregation”, *Macromol. Chem. Phys.*, 222, 2000428 (2021). (SCI)
114. C.-K. Chen, Y.-C. Lin, L.-C. Hsu, J.-C. Ho, M. Ueda, and W.-C. Chen,* “High performance biomass-based polyimides for flexible electronic applications”, *ACS Sus. Chem. Eng.*, 9, 3278-3288 (2021). **(Featured on issue cover page)**. (SCI)
115. W.-C. Zhu, P.-Q. He, H.-C. Tien, H.-L. Liu, W.-C. Chen, W. Lv,* and W.-Y. Lee,* “Solvent-Enhanced Transparent Stretchable Polymer Nanocomposite Electrode for Supercapacitors”, *ACS Appl. Energy Mater.*, 4, 2266-2274 (2021). (SCI)
116. Y. C. Lin, Y. W. Huang, Y. S. Wu, J.-S. Li, Y. F. Yang, W. C. Chen,* and C. C. Chueh,* “Improving Mobility-Stretchability Properties of Polythiophene Derivatives through Ester-Substituted, Biaxially-Extended Conjugated Side Chains”, *ACS Appl. Polym. Mater.* 3, 1628-1637 (2021). (SCI)
117. Y.-C. Lin, C.-C. Hung, C.-K. Chen, Y.-C. Chiang, L.-C. Hsu, J.-S. Li, C.-C. Chueh, T. Higashigara* and W.-C. Chen,* “Pyrene-Incorporated Side-chain in π -Conjugated Polymers for Non-Volatile Transistor-Type Memory Devices with Improved Stretchability”, *ACS Appl. Polym. Mater.*, 3, 1628-1637 (2021). (SCI)
118. E. Ercan,* Y.-C. Lin, L.-C. Hsu, C.-K. Chen, and W.-C. Chen,* “Multilevel Photonic Transistor Memory Devices Based on One-Dimensional Electrospun Semiconducting Polymer/Perovskite Composite Nanofibers”, *Adv. Mater. Technol.*, 6, 2100080 (2021). (SCI)
119. M.-Y. Liao, M. H. Elsayed, C.-L. Chang, Y.-C. Chiang, W.-Y. Lee, W.-C. Chen, H.-H. Chou*, and C.-C. Chueh,* “Realizing Nonvolatile Photomemories with Multilevel Memory Behaviors Using Water-Processable Polymer Dots-Based Hybrid Floating Gates” *ACS Appl. Electron. Mater.*, 4, 1708-1718 (2021). (SCI)
120. W.-C. Yang, Y.-C. Lin, M.-Y. Liao, L.-C. Hsu, J.-Y. Lam, T.-H. Chuang, G.-S. Li, Y.-F. Yang, C.-C. Chueh,* and W.-C. Chen,* “Comprehensive Non-Volatile Photo-Programming Transistor Memory via a Dual Functional Perovskite-based Floating Gate”, *ACS Appl. Mater. Interface*, 13, 20417-20426 (2021). (SCI)
121. 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, 2100742(2021) **(Featured on inside front cover)**. (SCI)
122. A. Löfstrand,* R. J. Jam, K. Mothander, T. Nylander, M. Mumtaz, A. Vorobiev, W.-C. Chen, R. Borsali, and I. Maximov,* “Poly(styrene)-block-Maltoheptaose Films for Sub 10 nm Pattern Transfer: Implications for Transistor Fabrication”, *ACS Appl. Nano. Mater.*, 4, 5141-5151(2021). (SCI)
123. 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) **(Featured on inside back cover)**. (SCI)
124. S. Miyane, C.-K. Chen, Y.-C. Lin, M. Ueda and W.-C. Chen,* “Thermally Stable Colorless Copolyimides with a Low Dielectric Constant and Dissipation Factor and Their Organic Field Effect Transistor Applications”, *ACS Appl. Polym. Mater.*, 3, 3153-3163 (2021). (SCI)
125. C.-K. Chen, Y.-C. Lin,* E. Ercan, P.-J. Yu, J.-C. Ho, M. Ueda, and W.-C. Chen,* “Functionalized Poly(phenylene ether) with High Thermal Stability as Flexible Dielectrics and Substrates for Organic Field-effect Transistors”, *Org. Electron*, 96, 106225 (2021). (SCI)
126. Y.-W. Huang, Y.-C. Lin, J.-S. Li, W.-C. Chen,* and C.-C. Chueh,* “Investigating the Backbone Conformation and Configuration Effects for Donor-Acceptor Conjugated Polymers with Ladder-Type Structures Synthesized Through Aldol Polycondensation”, *J. Mater. Chem. C*, 9, 9473-9483 (2021). (SCI)
127. Y. C. Lin, M. Matsuda, C. K. Chen, W.-C. Yang, C.-C. Chueh,* T. Higashihara,* and W. C. Chen,* “Investigation of the Mobility-Stretchability Properties of Naphthalenediimide-based Conjugated

Random Terpolymers with a Functionalized Conjugation Break Spacer”, *Macromolecules*, 54, 7388-7399 (2021). (SCI)

128. C.-F. Lin, Y.-C. Lin,* W.-C. Yang, L.-C. Hsu, E. Ercan, C.-C Hung, Y.-Y Yu,* and W.-C. Chen,* “Multiband Photoresponding Field-effect Transistor Memory using Conjugated Block Copolymers with Pendent Isoindigo Coils as a Polymer Electret”, *Adv. Electron. Mater.*, 7, 2100655 (2021). (SCI)
129. C.-H. Chen, Y.-C. Lin, Y.-F. Yang, Y.-C. Chiang, Z. Li, H.-L.Yip, W.-C. Chen,* and C.-C. Chueh*, “Improving the performance of all-inorganic perovskite lightemitting diodes through using polymeric interlayers with a pendant design”, *Mater. Chem. Front.*, 5, 7199-7207(2021). (SCI)
130. A. Kato, L.-Y. Su,* Y.-C. Lin, L. Y. Wang, W.-C. Chen, C-Chen Chueh,*and T. Higashihara,* “Naphthalene-diimide-based all-conjugated block copolymer as an effective compatibilizer to improve the performance and thermal stability of all-polymer solar cells”, *Mater. Chem. Front.*, 5, 7216-7227 (2021). (SCI)
131. J.-Y. Gao, C.-K. Chen, Y.-C. Lin,* C.-C. Kuo,* and W.-C. Chen,* “Highly Thermal Stable Polyimides Applied in Flexible Resistive Memory”, *Macromol. Mater. Eng.*, 306, 2100512(2021). (SCI)
132. Y.-C. Lin, M. Matsuda, K.-I. Sato, C.-K. Chen, W.-C. Yang, C.-C. Chueh,* T. Higashihara,* and W.-C. Chen*, “Intrinsically Stretchable Naphthalenediimide-Bithiophene Conjugated Statistical Terpolymers Using Branched Conjugation Break Spacers for Field-Effect Transistors” *Polym. Chem.* 12, 6167-6178(2021). (SCI)
133. H. C. Yen, Y. C. Lin,* and W. C. Chen,* “Enhancing the Memory-Stretchability Property of π -Conjugated Polymers Using Pendant Arene Side Chains in Nonvolatile Transistor Memory”, *ACS Appl. Polym. Mater.*, 3, 6416-6426 (2021). (SCI)

-2020

134. Q. Xiao, S.-Y. Hong, M. Han, J. He, C.-C. Chueh* W.-C. Chen, Z. Li, Z-A. Li*, “Conjugated polysquaraines synthesized by polycondensation: Physical, optical, and charge transport properties”, *Dyes and Pigments*, 175, 108162 (2020). (SCI)
135. J.-Y. Chen,* H.-C. Hsieh, Y.-C. Chiu, W.-Y. Lee, C.-C. Hung, C.-C. Chueh and W.-C. Chen,* “Electrospinning-Induced Elastomeric Properties of Conjugated Polymers for Extremely Stretchable Nanofibers and Rubbery Optoelectronics”, *J. Mater. Chem. C*, 8, 873-882 (2020). **(Featured by back cover page)**. (SCI)
136. P.-H. Wu, Y.-C. Lin, L. Laysandra, M.-H. Lee, Y.-C. Chiu, T. Isono, T. Satoh,* and W.-C. Chen,* “Organic-Inorganic Nanocomposite Film for High Performance Stretchable Resistive Memory Device”, *Macromol. Rapid. Commun.*, 41, 1900542 (2020). (SCI)
137. S. Nikzad, H.-C. Wu, J. Kim, C. M. Mahoney, J. R. Matthews, W. Niu, Y. Li, H. Wang, W.-C. Chen, M. F. Toney, M. He,* and Z. Bao,* “Inducing Molecular Aggregation of Polymer Semiconductors in a Secondary Insulating Polymer Matrix to Enhance Charge Transport”, *Chem. Mater.*, 32, 897-905 (2020). (SCI)
138. Y.-A. Su, N. Maebayashi, H. Fujita, Y.-C. Lin, C.-I Chen, W.-C. Chen, T. Michinobu,* C.-C. Chueh,* and T. Higashihara,* “Development of Block Copolymers with Poly(3-hexylthiophene) Segments as Compatibilizers in Non-Fullerene Organic Solar Cells”, *ACS Appl. Mater. Interface*, 12, 12083-12092 (2020). (SCI)
139. Y.-T. Wong, P.-C. Lin, C.-W. Tseng, Y.-W. Huang, Y.-A. Su, W.-C. Chen, C.-C. Chueh,* “Biaxially-extended side-chain engineering of benzodithiophene-based conjugated polymers and their applications in polymer solar cells”, *Org. Electron*, 79, 150630 (2020). (SCI)
140. Y.-T. Tseng, Y.-C. Lin, C.-C. Shih, H.-C. Hsieh, W.-Y. Lee, Y.-C. Chiu, and W.-C. Chen,* , “Morphology and Properties of PEDOT:PSS/Soft Polymer Blends through Hydrogen Bonding Interaction and Their Pressure Sensor Application”, *J. Mater. Chem. C*, 8, 6013-6024(2020). **(Featured on issue front cover page)**. (SCI)
141. J.-Y. Lam, G.-W. Jang, C.-J. Huang, S.-H. Tung,* and W.-C. Chen,* “Environmentally Friendly Resistive Switching Memory Devices with DNA as Active Layers and Bio-Based Polyethylene Furanoate as Substrates”, *ACS Sus. Chem. Eng.*, 8, 13, 5100-5106 (2020). (SCI)
142. F.-C. Liang, H.-J. Ku, C.-J. Cho, W.-C. Chen, W.-Y. Lee, W.-C. Chen, S.-P. Rwei, R. Borsali,* and C.-C. Kuo,* “An Intrinsically Stretchable and Ultrasensitive Skin-Inspired Nanofiber-Based Resistive Pressure Sensor for Wearable Electronics”, *J. Mater. Chem. C*, 8, 5361-5369 (2020). (SCI)

143. L. Veeramuthu, F.-C. Liang, Z.-X. Zhang, C.-J. Cho, E. Ercan, C. C. Chueh, W. C. Chen, R. Borsali, C. C. Kuo,* “Improving Performance and Stability of Perovskite Light-Emitting Diodes by Polymeric Nano-thickness Interlayer Assisted Grain Control Process”, *ACS Omega*, 5, 15, 8972-8981 (2020). (SCI)
144. T.-H. Chuang, Y.-C. Chiang, H.-C. Hsieh, T. Isono, C.-W. Huang, R. Borsali, T. Satoh,* and W.-C. Chen,* “Nanostructure- and Orientation- Controlled Resistive Memory Behaviors of Carbohydrate-block-Polystyrene with Different Molecular Weights Via Solvent Annealing”, *ACS Appl. Mater. Interface*, 12, 23217-23224 (2020). (SCI)
145. Y.-W. Huang, Y.-C. Lin, Y.-S. Wu, Y.-T. Wong, M.-Y. Kuo, W.-C. Chen,* and C.-C. Chueh,* “Structure-Mobility Relationship of Benzodithiophene-Based Conjugated Polymers with Varied Biaxially-Extended Conjugated Side Chains”, *Ind. Eng. Chem. Res.*, 59, 9105-9115 (2020). (SCI)
146. Y.-S. Wu, Y.-C. Lin, S.-Y. Hung, C.-K. Chen, Y.-C. Chiang, C.-C. Chueh,* and W.-C. Chen,* “Investigation of Mobility-Stretchability Relationship of Alkoxy-carbonyl-Substituted Polythiophene Derivatives”, *Macromolecules*, 53, 4968-4981 (2020). (SCI)
147. H.-C. Hsieh, N. Wu, T.-H. Chuang, W.-Y. Lee, J.-Y. Chen, and W.-C. Chen,* “Morphology and Property of Eco-friendly Polyfluorene/Poly(butylene succinate) Blends and Their Electronic Device Application on Biodegradable Substrate”, *ACS Appl. Polym. Mater.*, 2, 2469-2476 (2020). (SCI)
148. L.-C. Hsu, S. Kobayashi, T. Isono, Y.-C. Chiang, B. J. Ree, T. Satoh* and W.-C. Chen,* “Highly Stretchable Semiconducting Polymers for Field Effect Transistors Through Branched Soft-Hard-Soft Type Triblock Copolymers”, *Macromolecules*, 53, 7496-7510 (2020). **(featured on issue cover page)** (SCI)
149. T. Isono,* S. Nakahira, H.-C. Hsieh, H. Mamiya, T. Yamamoto, W.-C. Chen, R. Borsali, K. Tajima, and T. Satoh,* “Carbohydrates as Novel Hard Segments for Sustainable Elastomers: Carbohydrates Direct the Self-assembly and Mechanical Properties of Fully Bio-based Block Copolymers”, *Macromolecules*, 53, 5408-5417. (2020). (SCI)
150. C.-K. Chen, Y.-C. Lin, S. Miyane, S. Ando, M. Ueda, and W.-C. Chen,* “Highly Thermal Stable and Mechanically Durable Polyimides as Flexible Substrate for Organic Field-effect Transistors”, *ACS Appl. Polym. Mater.*, 2, 3422-3432 (2020). **(Featured on issue cover page)** (SCI)
151. Y.-C. Lin, C.-K. Chen, Y.-C. Chiang, C.-C. Hung, M.-C. Fu, S. Inagaki, C.-C. Chueh, T. Higashihara, Tomoya,* and W.-C. Chen,* “Study on Intrinsic Stretchability of Diketopyrrolopyrrole-based π -Conjugated Copolymers with Poly(acryl amide) Side-chains for Organic Field-effect Transistors”, *ACS Appl. Mater. Interface*, 12, 33014-33027 (2020)**(Featured on issue cover page)** (SCI)
152. E. Ercan, C.-L. Liu,* and W.-C. Chen,* “Nano-Micro Dimensional Structures of Fiber-Shaped Luminous Halide Perovskite Composites for Photonic and Optoelectronic Applications”, *Macromol. Rapid Commun.*, 41, 2000157 (2020). (SCI)
153. Y.-C. Chiang, C.-C. Hung, Y.-C. Lin, Y.-C. Chiu, T. Isono, T. Satoh,* and W.-C. Chen,* “High Performance Non-volatile Organic Photonic Transistor Memory Devices Using Conjugated Rod-Coil Materials as Floating Gate”, *Adv. Mater.*, 32, 2002638 (2020). (SCI)
154. L.-Y. Tseng, Y.-C. Lin, C.-C. Kuo, C.-K. Chen, C.-E. Wang, C.-C. Kuo,* M. Ueda, W.-C. Chen,* “Alkaline-developable and Negative-type Photosensitive Polyimide with High Sensitivity and Excellent Mechanical Properties using Photo-base Generator”, *J. Polym. Sci.*, 58, 2366-2375(2020). (SCI)
155. K.-T. Huang, C.-P. Chen, B.-H. Jiang, R.-J. Jeng, W.-C. Chen,* “Green Poly-Lysine as Electron-Extraction Modified Layer with over 15% Power Conversion Efficiency and Its Application in Bio-Based Flexible Organic Solar Cells”, *Org. Electron.*, 87, 105924 (2020). (SCI)
156. W.-C. Yang, Y.-C. Chiang, J.-Y. Lam, T.-H. Chuang, E. Ercan, C.-C. Chueh,* and W.-C. Chen,* “Improving Performance of Nonvolatile Perovskite-based Photomemory by Size Restrained of Perovskites Nanocrystals in the Hybrid Floating Gate,” *Adv. Electron Mater.*, 10, 202000458 (2020). (SCI)
157. Y.-W. Huang, Y.-C. Lin, H.-C. Yen, C.-K. Chen, W.-Y. Lee, W.-C. Chen,* and C.-C. Chueh,* “High Mobility Preservation of Near Amorphous Conjugated Polymers in the Stretched States Enabled by Biaxially-Extended Conjugated Side-Chain Design,” *Chem. Mater.*, 32, 7370-7382 (2020). (SCI)

158. M.-Y. Liao, Y.-C. Chiang, C.-H. Chen, W.-C. Chen, and C.-C. Chueh,* “2D Cs₂Pb(SCN)₂Br₂-based Photomemory Devices Showing a Photo-induced Recovery Behavior and an Unprecedented Fully Optically-Driven Memory Behavior”, *ACS Appl. Mater. Interface*, 12, 36398-36408 (2020). (SCI)
159. E. Ercan,* Y.-C. Lin, H.-C. Hsieh, L.-C. Hsu, J.-C. Ho, and W.-C. Chen,* “One-Dimensional Micro-Scale Patterned Conjugated Polymer Structures in Bilayer Architecture and Light Emitting Diode Application”, *Org. Electron*, 85, 105965 (2020). (SCI)
160. Y. Sakai-Otsuka, Y. Nishiyama, J.-L. Putaux, M. Brinkmann, T. Satoh, W.-C. Chen, and R. Borsali,* “Competing Molecular Packing of Blocks in Lamella-forming Carbohydrate-block-Poly(3-hexylthiophene) Copolymer”, *Macromolecules*, 53, 9054-9064(2020). (SCI)
161. L.-Y. Tseng, Y.-C. Lin, C.-C. Kuo, C.-C. Kuo,* M. Ueda, W.-C. Chen,* “An Ultra Heat-resistant Polyimide Formulated with Photo-base Generator for Alkaline-developable, Negative-type Photoresist”, *React. Funct. Polym.*, 157, 104760 (2020). (SCI)
162. Y.-C. Lin, Y.-W. Huang, C.-C. Hung, Y.-C. Chiang, C.-K. Chen, L.-C. Hsu, C.-C. Chueh,* and W.-C. Chen,* “Backbone Engineering of Diketopyrrolopyrrole-Based Conjugated Polymers through Random Terpolymerization for Improved Mobility-Stretchability Property”, *ACS Appl. Mater. Interface*, 12, 50648-50659 (2020). (SCI)

-2019

163. H. Y. Liu, H.-C. Hsieh, J.-Y. Chen, C.-C. Shih, W.-Y. Lee, Y.-C. Chiang and W.-C. Chen,* “Fabrication and Application of Highly Stretchable Conductive Fiber-Based Electrode of Epoxy/NBR Electrospun Fibers Spray-Coated with AgNW/PU Composites”, *Macromol. Chem. Phys.*, 220, 1800387 (2019). (SCI)
164. M. Aiba*, X.-C. Sun, Y. Shibasaki, M. Oda, C. Ooka, S. Fukuta, T. Higashihara, S. Ando, M. Ueda, and W. C. Chen, “Synthesis of Poly(o-cresol) by Oxidative Coupling Polymerization of o-Cresol”, *J. Polym. Sci. Part A: Polym. Chem.*, 57, 878-884 (2019). (SCI)
165. C. K. Chen, H. C. Hsieh, C.-C. Shih, C.-H. Wu, M.-C. Fu, T. Higashihara,* R.-J. Jeng,* and W.-C. Chen,* “Enhancing Performance of Nonvolatile Transistor Memories via Electron-Accepting Composition in Triphenylamine-Based Random Copolymers”, *J. Polym. Sci. Part A: Polym. Chem.*, 57, 1113-1121 (2019). (SCI)
166. Y. C. Lin, C. H. Chiang, C. C. Kuo, S. N. Hsu, T. Higashihara*, M. Ueda, and W. C. Chen,* “A Compatible and Crosslinked Poly(2-allyl-6-methylphenol-co-2,6-dimethylphenol)/Polystyrene Blend for Insulating Adhesive Film at High Frequency”, *J. Appl. Polym. Sci.*, 136, 47828(2019). (SCI)
167. C. C. Shih, Y. C. Lin, M. Gao, M. Wu, H.-C., Hsieh, N.-L. Wu, and W.-C. Chen* “A rapid and green method for the fabrication of conductive hydrogels and their applications in stretchable supercapacitors”, *J. Power Sources*, 426, 205-215 (2019). (SCI)
168. C.-T. Lo, Y. Watanabe, D. Murakami, C.-C. Shih, K. Nakabayashi, H. Mori,* and W.-C. Chen,* “Donor-Acceptor Core-Shell Nanoparticles and Their Application to Non-Volatile Transistor Memory Devices”, *Macromol. Rapid Commun.*, 40, 1900115 (2019). (SCI)
169. Y.-C. Chiang, H.-C. Wu, H.-F. Wen, C.-C. Hung, C.-W. Hong, C.-C. Kuo, T. Higashihara*, and W.-C. Chen,* “Tailoring Carbosilane Side Chains towards Intrinsically Stretchable Semiconducting Polymers”, *Macromolecules*, 52, 4396-4004 (2019). (SCI)
170. E. Ercan, P.-C. Tsai, J.-Y. Chen, J. Y. Lam, L.-C. Hsu, C.-C. Chueh, and W.-C. Chen,* “Stretchable and Ambient Stable Perovskite/Polymer Luminous Hybrid Nanofibers of Multicolor Fiber Mats and Their White LED Applications”, *ACS Appl. Mater. Interface*, 11, 23605-23615(2019). (SCI)
171. J.-Y. Chen,* C.-Y. Su, C.-H. Hsu, Y.-H. Zhang, Q.-C. Zhang, C.-C. Hua,* and W.-C. Chen,* “Solvent Effects on Morphology and Electrical Properties of the Poly(3-hexylthiophene) Electrospun Nanofibers”, *Polymers*, 11, 1501 (2019). (SCI)
172. Y.-C. Lin, C.-C. Shih, Y.-C. Chiang, C.-K. Chen, and W.-C. Chen,* “Intrinsically Stretchable

Isoindigo-Bithiophene Conjugated Copolymers using Polyacrylateamide Side Chains for Organic Field-Effect Transistors”, *Polym. Chem.*, 10, 5172 - 5183 (2019) (**Featured on issue front cover**). (SCI)

173. C.-H. Chen; Z. Li; Q. Xue;* Y.-A. Su; C.-C. Lee; H.-L. Yip;* W.-C. Chen, and C. C. Chueh,* “Engineering of Perovskite Light-Emitting Diodes Based on Quasi-2D Perovskites Formed by Diamine Cations”, *Organ. Electron.*, 75,105400 (2019). (SCI)
174. C.-I. Chen, S. Wu, Y.-A. Lu, C.-C. Lee, K.-C. Ho, Z. Zhu, * W.-C. Chen, and C.-C. Chueh, *”Enhanced Near-Infrared Photo-response of Inverted Perovskite Solar Cells Through Rational Design of Bulk-Heterojunction Electron-Transporting Layers”, *Adv. Sci.*, 6, 1901714 (2019). (SCI)
175. Y.-C. Lin, F.-H. Chen, Y.-Chi Chiang, C.-C. Chueh,* and W.-C. Chen,* “Asymmetric Side-Chain Engineering of Isoindigo based Polymers for Well Stretchable Field-Effect”, *ACS Appl. Mater. Interface*, 11, 34158-34170 (2019). (SCI)
176. Y.-C. Chiang, S. Kobayashi T. Isono, C.-C. Shih, T. Shingu, C.-C. Hung, H.-C. Hsieh, S.-H. Tung, T. Satoh, * and W.-C. Chen,* “Effect of Conjugated Rod/coil Sequence on Morphology and Electronic Properties of Polythiophene based Stretchable Block Copolymers”, *Polym. Chem.*, 10, 5452-5464 (2019). (SCI)
177. K.-T. Huang, C.-C. Shih, B.-H. Jiang, R.-J. Jeng, C.-P. Chen, and W.-C. Chen,* “The Green Poly-Lysine *Enantiomers* as Electron Extraction for High Performance Organic Photovoltaics”, *J. Mater. Chem. C.*, 7, 12572-12579 (2019). (SCI)
178. C.-C. Shih, Y.-C. Chiang, H.-C. Hsieh, Y.-C. Lin and W.-C. Chen,* “Multilevel photonic transistor memory devices using conjugated/insulated polymer blend electrets”, *ACS Appl. Mater. Interface*, 11, 42429-42437 (2019). (SCI)
179. Y. Liao, K. Liu, W.-C. Chen, B. Wei and R. Borsali*, “Robust Sub-10 nm Pattern of Standing Sugar Cylinders via Rapid ‘Microwave Cooking’”, *Macromolecules*, 52, 8752-8758 (2019). (SCI)

-2018

180. H. C. Hsieh, J. Y. Chen, W. Y. Lee, D. Bera and W. C. Chen,* “Stretchable Fluorescent Polyfluorene/Acrylonitrile Butadiene Rubber Blend Electrospun Fibers through Physical Interaction and Geometrical Confinement” *Macromol. Rapid Commun.*, 39, 1700616 (2018). (SCI)
181. M. Gao, S.-Y. Pan , W. C. Chen,* and P. C. Chiang* “A Cross-disciplinary Overview of Naturally Derived Materials for Electrochemical Energy Storage”, *Mater. Today Energy*, 7, 58-79 (2018). (SCI)
182. Y. T. Hsieh, J. Y. Chen, C. C. Shih, C. C. Chueh,* and W. C. Chen,* “Mechanically Robust, Stretchable Organic Solar Cells via Buckle-On-Elastomer Strategy”, *Org. Electron*, 53, 339-345 (2018). (SCI)
183. L.-C. Hsu, M. C. Yang, T. Higashihara, W.-C. Chen, and M. Ueda,* “Synthesis and Characterization of Poly(2,6-dialkoxy-1,5-naphthylene)s with Low Dielectric Constants”, *Polym. J.*, 50, 277-280 (2018). (SCI)
184. J. Aimi,* P. H. Wang, C. C. Shih, C. F. Huang,* T. Nakanishi, M. Takeuchi, and W. C. Chen,* “Metal phthalocyanine-cored star-shaped polystyrene as a charge storage material for controlling the performance of organic field effect transistor memory devices”, *J. Mater. Chem. C.*, 6, 2724-2732 (2018). (**Featured on issue back cover page**). (SCI)
185. C. L. Chung, H. C. Chen,* Y. S. Yang, W. Y. Tung, J. W. Chen, W. C. Chen, C. G. Wu, and K. T. Wong*, “S,N-Heteroacene-Based Copolymers for Highly Efficient Organic Field Effect Transistors and Organic Solar Cells: Critical Impact of Aromatic Subunits in Ladder π -System”, *ACS Appl. Mater. Interface*, 10, 6471–6483 (2018). (SCI)
186. P. C. Tsai, J. Y. Chen, E. Ercan, C. C. Chueh, S. H. Tung,* and W. C. Chen,* “Uniform luminous perovskite nanofibers with color-tunability and improved stability prepared by one-step core/shell electrospinning”, *Small*, 14, 1704379 (**Featured as issue back cover**). (SCI)
187. J. Y. Lam, C. C. Shih, W. Y. Lee, C. C. Chueh, G. W. Jang, C. J. Huang, S. H. Tung*, and W. C. Chen,* “Bio-based transparent conductive film consisting of polyethylene furanoate and silver nanowires for flexible optoelectronic devices”, *Macromol. Rapid Commun.*, 39, 1800271 (2018). (SCI)

188. C. H. Tsai, Y. A. Su, P. C. Lin, C. C. Shih, H. C. Wu, W. C. Chen, and C. C. Chueh,* “High-Performance Ternary Polymer Solar Cells Using Wide Bandgap Biaxially-Extended Octithiophene-Based Conjugated Polymers”, *J. Mater. Chem. C*, 6, 6920-6928 (**Featured on issue front cover page**). (SCI)
189. S. Miyane, H. F. Wen, W. C. Chen,* T. Higashihara,* “Synthesis of Block Copolymers Comprised of Poly(3-hexylthiophene) Segment with Trisiloxane Side Chains and Their Application to Organic Thin Film Transistor”, *J. Polym. Sci. Part A: Polym. Chem.*, 56, 1787-1794 (2018). (SCI)
190. Y.-T. Hsieh, J. Y. Chen, S. Fukuta, P. C. Lin, T. Higashihara, C.-C. Chueh,* and W.-C. Chen,* “Realization of Intrinsically Stretchable Organic Solar Cells Enabled by Charge-Extraction Layer and Photoactive Material Engineering”, *ACS Appl. Mater. Interfaces*, 10, 20712-21720 (2018). (SCI)
191. H.-C. Wu, S. Rondeau-Gagné, Y.-C. Chiu, F. Lissel, J. W. F. To, Y. Tsao, J. Y. Oh, B. Tang, W.-C. Chen, J. B.-H. Tok, and Z. Bao,* “Enhanced Charge Transport and Stability Conferred by Iron(III)-Coordination in a Conjugated Polymer Thin Film Transistor”, *Adv. Electron. Mater.*, 4, 1800239 (2018). (SCI)
192. H. C. Hsieh, C. C. Hung, K. Watanabe, J. Y. Chen, Y.-C. Chiu, T. Isono, Y. C. Chiang, R. R. Reghu, T. Satoh * and W. C. Chen *, “Unraveling the Stress Effects on Optical Properties of Stretchable Rod-Coil Polyfluorene-Poly(n-butyl acrylate) Block Copolymer Thin Films”, *Polym. Chem.* 9, 3820-3831 (2018). (SCI)
193. C. C. Hung, S. Nakahira, Y. C. Chiu, T. Isono, H. C. Wu, K. Watanabe, Y. C. Chiang, S. Takashima, R. Borsali, S.-H. Tung,* T. Satoh,* and W. C. Chen,* “Control over Molecular Architectures of Carbohydrate-Based Block Copolymers for Stretchable Electrical Memory Devices”, *Macromolecules*, 51, 4966-4975 (2018). (SCI)
194. C. H. Tsai, N. Li, C. C. Lee, H. C. Wu, Z. Zhu,* L. Wang, W.-C. Chen, H. Yan,* and C.-C. Chueh* “Efficient and UV-Stable Perovskite Solar Cells Enabled by Side Chain-Engineered Polymeric Hole-Transporting Layers”, *J. Mater. Chem. A*, 6, 12999-13004 (2018). (SCI)
195. C. C. Shih, M. Wu, S. N. Hsu, C. W. Huang, L.-C. Hsu, J. Y. Lam and W. C. Chen,* “A robust, air-stable and recyclable hydrogel toward stretchable electronic device applications”, *Macromol. Mater. Eng.*, 303, 1800282 (2018). (SCI)
196. P.-C. Lin, Y. T. Wong, Y. A. Su,* W.-C. Chen, and C. C. Chueh,* “Interlayer Modification Using Eco-Friendly Glucose-Based Natural Polymers in Polymer Solar Cells” *ACS Sustainable Chem. Eng.*, 6, 14621–14630 (2018). (SCI)
197. L. C. Hsu, C. C. Shih, H.-C. Hsieh, Y. C. Chiang, P.-H. Wu, C.-C. Chueh, and W.-C. Chen,* “Intrinsically stretchable, solution-processable functional poly(siloxane-imide)s for stretchable resistive memory applications”, *Polym. Chem.*, 9, 5145-5154 (2018). (SCI)
198. E. Ercan, J.-Y. Chen, C.-C. Shih, C.-C. Chueh,* and W.-C. Chen,* “Influence of Polymeric Electrets on the Performance of Derived Hybrid Perovskite-Based Photo-memory Devices”, *Nanoscale*, 10, 18869-18877 (2018). (SCI)
199. Y.-C. Chiang, C.-C. Shih, S.-H. Tung,* and W.-C. Chen,* “Blends of polythiophene nanowire/fluorine rubber with multiscale phase separation suitable for stretchable semiconductors”, *Polymer*, 155, 146-151 (2018). (SCI)
200. M. Gao, C.-C. Shi, S.-Y. Pan, C.-C. Chueh, and W.-C. Chen,* “Advances and Challenges of Green Materials for Electronic and Energy Storage Applications: From Design to End-of-Life Recovery”, *J. Mater. Chem. A*, 6, 20546-20563 (2018). (SCI)
201. K.-T. Huang, C.-C. Shih, H.-Y. Liu, D. Murakami, R. Kanto, C.-T. Lo, H. Mori,* C.-C. Chueh,* and W.-C. Chen*, “Alcohol-Soluble Cross-Linked Poly(nBA)_n-b-Poly(NVTri)_m Block Copolymer and Its Applications in Organic Photovoltaic Cells for Improved Stability”, *ACS Appl. Mater. Interface*, 10, 44741-44750 (2018). (SCI)

-2017

202. H. S. Sun, Y. C. Chiu*, and W. C. Chen,* “Renewable Polymeric Materials for Electronic Applications”, *Polym. J.*, 49, 61-73 (2017, **invited paper**). (SCI)
203. C. Lu, W. Y. Lee, X. Gu, J. Xu, H.-H. Chou, H. Yan, Y. C. Chiu, M. He, J. R Matthews, W. Niu, J. B.-H. Tok, M. F. Toney, W.-C. Chen, and Z. Bao,* “Effects of Molecular Structure and Packing Order

- on the Stretchability of Semicrystalline Conjugated Poly(Tetrathienoacene-diketopyrrolopyrrole) Polymers”, *Adv. Electron. Mater.*, 3, 1600311 (2017). (SCI)
204. J. T. Wang, S. Takashima, H. C. Wu, C. C. Shih, T. Isono, T. Kakuchi, T. Satoh* and W. C. Chen,* “Stretchable Conjugated Rod-Coil Poly(3-hexylthiophene)-block-Poly(butyl acrylate) Thin Films For Field Effect Transistor Applications”, *Macromolecules*, 50, 1442-1452(2017). (SCI)
 205. C. C. Hung, Y. C. Chiu, H. C. Wu, C. Lu, C. Bouilhac, I. Otsuka, S. Halila, R. Borsali*, S. H. Tung*, and W. C. Chen,* “Conception of Stretchable Resistive Memory Devices based on Nanostructure-Controlled Carbohydrate-block-Polyisoprene Block Copolymers”, *Adv. Funct. Mater.*, 27, 1606161 (2017). (SCI)
 206. J. Wang, C. Lu, T. Higashihara,* and W. C. Chen,* “All-Conjugated Donor-Acceptor Graft/Block Copolymers as Single Active Components and Surfactants in All-polymer Solar Cells” *Microsyst. Technol.*, 23, 1183-1189 (2017). (SCI)
 207. W. Y. Lee, H. C. Wu, C. Lu, B. D. Naab, W. C. Chen, Z. Bao,* “N-type Doped Conjugated Polymer for Non-Volatile Memory”, *Adv. Mater.*, 29, 1605166 (2017). (SCI)
 208. J. Y. Chen, C. C. Chueh, Z. Zhu, W. C. Chen,* and A. K.-Y. Jen,* “Low-Temperature Electrodeposited Crystalline SnO₂ as an Efficient Electron-Transporting Layer for Conventional Perovskite Solar Cells” *Sol. Energy. Mater. Solar Cells.*, vol.164, 47-55 (2017). (SCI)
 209. C.T. Chen, W. Y. Lee, T. L. Shen, H. C. Wu, C. C. Shih, B. W. Ye, T. Y. Lin, W. C. Chen, and Y. F. Chen,* “Highly Reliable and Sensitive Tactile Transistor Memory”, *Adv. Electron. Mater.*, 3, 1600548 (2017). (SCI)
 210. C. C. Shih, W. Y. Lee, C. Lu, H. C. Wu, and W. C. Chen,* “Enhancing the mechanical durability of an the organic field effect transistor through the fluoroelastomer substrate with a crosslinking-induced self-wrinkled structure”, *Adv. Electron. Mater.*, 3, 201600477 (2017). (SCI)
 211. C. P. Chen,* C. Y. Chiang, Y. Y. Yu, and W. C. Chen,* “High-Performance, Robust, Stretchable Organic Photovoltaics Using Commercially Available Tape as a Deformable Substrate”, *Sol. Energy. Mater. Solar Cells.*, 165, 111-118 (2017). (SCI)
 212. F. C. Liang, C. C. Kuo,* B. Y. Chen, C. J. Cho, C. C. Hung, W. C. Chen, and R. Borsali, “RGB-Switchable Porous Electrospun Nanofiber Chemoprobe-filter Prepared from Multifunctional Copolymers for Versatile Sensing of pH and Heavy Metals”, *ACS Appl. Mater. Interface*, 9, 16381-16396 (2017). (SCI)
 213. H. F. Wen, H. C. Wu,* J. Aimi, C. C. Hung, Y. C. Chiang, C. C. Kuo,* and W. C. Chen,* “Soft Poly(Butyl Acrylate) Side Chains Toward Intrinsically Stretchable Polymeric Semiconductors for Field-Effect Transistor Applications”, *Macromolecules*, 50, 4982–4992 (2017). (SCI)
 214. J. Y. Chen, Y. C. Chiu,* Y. T. Lee, C. C. Chueh, and W. C. Chen,* “Non-Volatile Perovskite-based Photomemory with a Multi-Level Memory Behavior”, *Adv. Mater.*, 29, 1701645 (2017). (SCI)
 215. C. Lu, W. Y. Lee,* C. C. Shih, M. Y. Wen and W. C. Chen, “Stretchable Polymer Dielectrics for Low-Voltage-Driven Field-Effect Transistors”, *ACS Appl. Mater. Interface*, 9, 25522-25532 (2017). (SCI)
 216. Y. Y. Yu*, C. H. Chen, C. C. Chueh, C. Y. Chiang, C. P. Chen*, and W. C. Chen,* “Intrinsically Stretchable Nanostructured Silver Electrodes for Realizing Efficient Strain Sensors and Stretchable Organic Photovoltaics”, *ACS Appl. Mater. Interface*, 9, 27853–27862 (2017). (SCI)

217. Y. Liao, W. C. Chen and R. Borsali,* “Carbohydrate-based block copolymer thin films: ultra-fast nano-organization with 7 nm resolution using microwave energy”, *Adv. Mater.*, 29, 1701645 (2017). (SCI)
218. E. Ercan, J. Y. Chen, E. Tsai, J. Y. Lam, S. C. W. Huang, C. C. Chueh,* and W.-C. Chen,* “A Redox-Based Resistive Switching Random Access Memory Device Consisting of Organic-Inorganic Hybrid Perovskite/Polymer Composite Thin Film”, *Adv. Electron Mater.*, 3, 1700344 (2017). (SCI)
219. C. C. Shih, C. W. Huang, M. Gao, C. C. Chueh, and W. C. Chen,* “Multi-state Memristive Behavior in the Light-Emitting Electrochemical Cell”, *J. Mater. Chem. C*, 5, 11421-11428 (2017). (SCI)
220. J. Y. Lam, J. Y. Chen, P. C. Tsai, Y. T. Hsieh, C. C. Chueh,* S. H. Tung,* and W. C. Chen,* “A Stable, Efficient Textile-based Flexible Perovskite Solar Cell with Improved Washable and Deployable Capabilities for Wearable Device Applications”, *RSC Adv.*, 7, 54361-54368 (2017). (SCI)

-2016

221. S. Fukuta, H. C. Wu, T. Koganezawa, Y. Isshiki, M. Ueda, W. C. Chen, T. Higashihara*, “Synthesis and FET characterization of Novel Ambipolar and Low-bandgap naphthalene-diimide-based semiconducting polymers”, *J. Polym. Sci. Part A: Polym. Chem.*, 54, 359-367 (2016). (SCI)
222. T. Kurosawa, Y. C. Chiu, Y. Zhou, X. Gu, W. C. Chen, and Z. Bao*, “Impact of polystyrene oligomer side chains on naphthalenediimide-bithiophene polymers as n-type semiconductors for organic field-effect transistors”, *Adv. Funct. Mater.*, 26, 1261-1270 (2016). (SCI)
223. J. Aimi,* C. T. Lo, H. C. Wu, C. F. Huang, T. Nakanishi, M. Takeuchi, and W. C. Chen,* “Phthalocyanine-Cored Star-Shaped Polystyrene for Nano Floating Gate in Nonvolatile Organic Transistor Memory Device”, *Adv. Electron Mater.*, 2, 1500300 (2016). (SCI)
224. C. C. Shih, W. Y. Lee, Y. C. Chiu, H. W. Hsu, H. C. Chang, C. L. Liu, and W. C. Chen,* “High Performance Transparent Transistor Memory Devices Using Nano-Floating Gate of Polymer/ZnO Nanocomposites”, *Sci. Rep.*, 6, No.20129 (2016). (SCI)
225. J. H. Wu, W. C. Chen, and G. S. Liou,* “Triphenylamine-Based Luminogens and Fluorescent Polyimides: Effects of Functional Group and Substituent on Photophysical Behaviors”, *Polym. Chem.*, 7, 1569-1576 (2016). (SCI)
226. H. S. Sun, Y. Chen, W. Y. Lee, Y. C. Chiu, T. Isono, T. Satoh*, T. Kakuchi* and W. C. Chen,* “Synthesis, Morphology, and Electrical Memory Application of Oligosaccharide-based Block Copolymers with π -Conjugated Pyrene Moiety and Their Supramolecules”, *Polym. Chem.*, 7, 1249-1263 (2016). **(Featured on issue inside front cover)** (SCI)
227. H. C. Chang, J. T. Wang, D. H. Li, C. Lu, H. W. Hsu, H. C. Wu, C. L. Liu and W. C. Chen,* “Conjugated Fluorene Moiety-Containing Comb-Like Polymers for Dispersion of Single Wall Carbon Nanotubes: Polymer Wrapping Abilities and Electrical Properties”, *Polym. J.*, 48, 421-429 (2016) **(invited paper)**. (SCI)
228. C. C. Hung, C. C. Kuo,* N. K. Weng, W. C. Wu, B. Y. Chen, C. J. Cho, I. J. Hsu,* Y. C. Chiu, and W. C. Chen, “Novel Highly Sensitive and Reversible Electrospun Nanofibrous Chemosensor-Filters Composed of Poly(HEMA-co-MNA) and bpy-F-bpy with Metal-Ion-Modulated Multicolor Fluorescence Emission”, *Polym. J.*, 48, 439-449 (2016)**(invited paper)**. (SCI)
229. C. T. Lo, Y. Watanabe, H. Oya, K. Nakabayashi, H. Mori* and W. C. Chen,* “Non-Volatile Transistor Memory Devices using Charge Storage Cross-Linked Core-Shell Nanoparticles”, *Chem. Commun.*, 52, 7269 – 7272 (2016). (SCI)

230. J. T. Wang, S. Takashima, H. C. Wu, Y. C. Chiu, Y. Chen, T. Isono, T. Kakuchi, T. Satoh*, and W. C. Chen*, “Donor-Acceptor Poly(3-hexylthiophene)-*block*-Pendent Poly(isoindigo) with Dual Roles of Charge Transporting and Storage layer for High-Performance Transistor-Type Memory Applications”, *Adv. Funct. Mater.*, 26, 2695-2705 (2016). (SCI)
231. W. Y. Tung, M. H. Li, H. C. Wu, H. Y. Liu, Y. T. Hsieh, and W. C. Chen*, “High Performance Non-volatile Transistor Memories Utilizing Functional Polyimide-based Supramolecular Electrets”, *Chem.-An Asian J.*, 11, 1631-1640 (2016) (highlighted by ChemistryViews.org) (SCI)
232. C. Lu, W. Y. Lee,* and W. C. Chen*, “Manipulation on the Electrical Characteristics of Nonvolatile Transistor-Type Memory Devices through the Acceptor Strength of Donor-Acceptor Conjugated Copolymers”, *J. Mater. Chem. C*, 4, 5702-5708 (2016). (SCI)
233. C.-C. Shih, W.-Y. Lee* and W.-C. Chen*, “Nanostructured materials for Non-volatile Organic Transistor Memory Applications”, *Mater. Horizons*, 3, 294-308 (2016, **invited review**). (SCI)
234. D. Wi, B. J. Ree, B. Ahn, J. C. Hsu, J. Kim, W. C. Chen*, and M. Ree,* “Structural details and digital memory performances of difluorene-containing diblock copolymers in nanoscale thin films”, *Euro. Polym. J.*, 81, 582-597 (2016). (SCI)
235. C. T. Lo, H. C. Wu, W. Y. Lee, and W. C. Chen*, “High-Performance Non-volatile Transistor Memory Devices using Charge-Transfer Supramolecular Electrets”, *React. Funct. Polym.*, 108, 31-38(2016, **invited paper**). (SCI)
236. M. S. Lu, H. C. Wu, Y. W. Lin, M. Ueda, and W. C. Chen*, “Low Voltage Operation of Non-Volatile Flexible OFET Memory Devices Using High-*k* P(VDF-TrFE) Gate Dielectric and Polyimide Charge Storage Layer”, *React. Funct. Polym.*, 108, 39-46 (2016, **invited paper**). (SCI)
237. H. C. Wu, C. W. Hong, and W. C. Chen*, “Biaxially Extended Thiophene-Isoindigo Donor-Acceptor Conjugated Polymers for High-Performance Flexible Field-Effect Transistors”, *Polym. Chem.*, 7, 4378-4392 (2016). (SCI)
238. C. C. Hung, H. C. Wu, Y. C. Chiu, S. H. Tung*, and W. C. Chen*, “Crosslinkable High Dielectric Constant Polymer Dielectrics for Low Voltage Organic Field-effect Transistor Memory Devices”, *J. Polym. Sci. Part A: Polym. Chem.*, 54, 3224-3236 (2016). (SCI)
239. J. T. Wang, K. Saito, H. C. Wu, H. S. Sun, C. C. Hung, Y. Chen, T. Isono, T. Kakuchi, T. Satoh* and W. C. Chen*, “High Performance Stretchable Resistive Memories Using Donor-Acceptor Block Copolymers with Fluorene Rods and Pendent Isoindigo Coils”, *NPG Asia Mater.*, 8, e298 (2016). (SCI)
240. M. C. Yang, T. Higashihara, H. W. Su, M. Ueda,* and W. C. Chen*, “Cross-linked Copolymer with Low Dielectric Constant and Dissipation Factor Based on Poly(2,6-dimethylphenol-*co*-2,6-diphenylphenol) and A Cross-linker”, *J. Polym. Sci. Part A: Polym. Chem.*, 54, 3218-3223 (2016). (SCI)
241. C. C. Shih, C. Y. Chung, J. Y. Lam, H. C. Wu, Y. Morimitsu, H. Matsuno, K. Tanaka* and W. C. Chen*, “Transparent Deoxyribonucleic Acid Substrate with High Mechanical Strength for Flexible and Biocompatible Organic Resistive Memory Devices”, *Chem. Commun.*, 52, 13463-13466 (2016). (SCI)
242. H. C. Wu,* C. C. Hung, C. W. Hong, H. S. Sun, J. T. Wang, G. Yamashita, T. Higashihara,* and W. C. Chen*, “Isoindigo-Based Semiconducting Polymers using Carbosilane Side Chains for High Performance Stretchable Field-Effect Transistors”, *Macromolecules*, 49, 8540-8548 (2016). (SCI)

-2015

243. Y. H. Chou, H. C. Chang, C. L. Liu* and W. C. Chen*, “Polymeric Charge Storage Electrets for

Nonvolatile Organic Field Effect Transistor Memory Devices”, *Polym. Chem.*, 6, 341 - 352 (2015) **(Invited review article, SCI)**.

244. Z. Zhang, F. Lin, H. C. Chen,* H. C. Wu, C. L. Chung, C. Lu, S. H. Liu, S. H. Tung, W. C. Chen, K. T. Wong,* and P. T. Chou,* “A silole copolymer containing a ladder-type heptacyclic arene and naphthobisoxadiazole moieties for highly efficient polymer solar cells”, *Energy & Environ. Sci.*, 8, 552-557 (2015). (SCI)
245. H. C. Chang, C. Lu, C. L. Liu,* and W. C. Chen,* “Single Crystal C₆₀ Needle/CuPc Nanoparticle Double Floating-Gate for Low-Voltage Organic Transistor Based Nonvolatile Memory Devices”, *Adv. Mater.*, 27, 27-33 (2015) **(Featured on issue inside cover page, SCI)**
246. Y. C. Chiu, C. C. Shih, and W. C. Chen,* “Nonvolatile Memories Using the Electrets of Conjugated Rod-Coil Block Copolymer and Its Nanocomposite with Single Wall Carbon Nanotubes”, *J. Mater. Chem. C*, 3, 551-558 (2015). (SCI)
247. L. Dong, H. S. Sun, J. T. Wang, W. Y. Lee, and W. C. Chen,* “Fluorene based Donor-Acceptor Polymer Electrets for Nonvolatile Organic Transistor Memory Device Applications”, *J. Polym. Sci. Part A. Polym. Chem.*, 53, 602-614 (2015). **(Featured on inside front cover, SCI)**
248. J. Y. Chen, H. C. Wu, Y. Chiu, C. J. Lin, S. H. Tung,* and W. C. Chen,* “Electrospun Poly(3-hexylthiophene) Nanofibers with Highly Extended and Oriented Chains through Secondary Electric Field for High-Performance Field-Effect Transistors”, *Adv. Electron Mater.*, 1, 1400028 (2015).
249. Y. H. Chou, Y. C. Chiu, W. Y. Lee, and W. C. Chen,* “Non-volatile Organic Transistor Memory Devices Using the Poly(4-vinylpyridine)-based Supramolecular Electrets”, *Chem. Commun.* 51, 2562-2564 (2015). (SCI)
250. C. C. Shih, Y. C. Chiu, W. Y. Lee, J. Y. Chen and W. C. Chen,* “Conjugated Polymer Nanoparticles as Nano Floating Gate Electrets for High Performance Non-volatile Organic Transistor Memory Devices”, *Adv. Funct. Mater.*, 25, 1511-1519 (2015). **(Featured on issue back cover, SCI)**
251. J. T. Wang, Y. C. Chiu, H. S. Sun, K. Yoshida, Y. Chen, T. Satoh, T. Kakuchi,* and W. C. Chen,* “Synthesis of Multifunctional Poly(1-pyrenemethyl methacrylate)-*b* -Poly(N-isopropylacrylamide)-*b* -Poly(N-methylolacrylamide)s and Their Electrospun Nanofibers for Metal Ion Sensory Applications”, *Polym. Chem.*, 6, 2327 – 2336 (2015). (SCI)
252. H. Y. Chen, H. P. Shen, H. C. Wu, M. S. Wang, C. F. Lee, W. Y. Chiu,* and W. C. Chen,* “Synthesis of Monodispersed Polystyrene-Silver Core-Shell Particles and Their Application for Fabrication of Stretchable Large-Scale Anisotropic Conductive Films”, *J. Mater. Chem. C*, 3, 3318-3328 (2015). (SCI)
253. H. C. Chang, C. C. Shih, C. L. Liu,* and W. C. Chen,* “One-Dimensional Electrospun Nanofiber Channel for Organic Field Effect Transistor using Donor/Acceptor Planar Heterojunction Architecture”, *Adv. Mater. Interface*, 2, 1500054 (2015).
254. C. J. Lin, C. L. Liu and W. C. Chen,* “Poly(3-hexylthiophene)/Graphene Composites based Aligned Nanofibers for High Performance Field Effect Transistors”, *J. Mater. Chem. C*, 3, 4290-4296 (2015). (SCI)
255. C. C. Chiu, H. C. Wu, C. Lu, J. Y. Chen, and W. C. Chen,* “New Poly(Selenophene -Thiophene) Bearing π -Conjugating Spacers for Polymer Field-Effect Transistors and Photovoltaic Cells”, *Polym. Chem.*, 6, 3660-3670 (2015). (SCI)
256. J. Mei, H. C. Wu, Y. Diao, A. Appleton, H. Wang, Y. Zhou, W. Y. Lee, T. Kurosawa, W. C. Chen, and

- Z. Bao,* “Effect of Spacer Length of Siloxane-Terminated Side Chains on Charge Transport in Isoindigo-Based Polymer Semiconductor Thin Films”, *Adv. Funct. Mater.*, 25, 3455-3462 (2015). (SCI)
257. W. C. Wu, C. Y. Chen, W. Y. Lee, and W. C. Chen,* “Stimuli-Responsive Conjugated Rod-Coil Block Copolymers: Synthesis, Morphology, and Applications”, *Polymer*, 65, A1-A16 (2015). (**Feature article**, SCI)
258. H. S. Sun, Y. C. Chiu, W. Y. Lee, Y. Chen, A. Hirao, T. Satoh, T. Kakuchi, and W. C. Chen,* “Synthesis of Oligosaccharide-based Block Copolymers with Pendent π -Conjugated Oligofluorene Moieties and Their Electrical Device Applications”, *Macromolecules*, 48, 3907-3917 (2015). (SCI)
259. J. Y. Chen, Y. C. Chiu, C. C. Shih, W. C. Wu, and W. C. Chen,* “Electrospun Nanofibers with Dual Plasmonic –Enhanced Luminescent Solar Concentrator Effects for High-Performance Organic Photovoltaic Cells”, *J. Mater. Chem. A*, 3, 15039-15048 (2015). (**Featured on issue inside front cover**, SCI)
260. Y. C. Chiu, H. S. Sun, W. Y. Lee, S. Halila, R. Borsali,* and W. C. Chen,* “Oligosaccharide Carbohydrate Dielectrics toward High Performance Non-Volatile Transistor Memory Devices”, *Adv. Mater.*, 27, 1606161-6264 (2015, **Featured on issue frontispiece**, SCI).
261. L. N. Chen, N. K. Weng, W. C. Wu* and W. C. Chen,* “Electrospun Polymer Nanofibers of P(NIPAAm-co-SA-co-FBPY): Preparation, Structural Control, Metal Ion Sensing and Thermoresponsive Characteristics”, *Mater. Chem. Phys.*, 163, 63-72 (2015). (SCI)
262. K. Saito, T. Isono, H. S. Sun, T. Kakuchi, W. C. Chen,* and T. Satoh,* “Rod-Coil Type Miktoarm Star Copolymers Consisting of Polyfluorene and Polylactide: Precise Synthesis and Structure-Morphology Relationship”, *Polym. Chem.*, 6, 6959-6972 (2015). (SCI)
263. H. C. Wu, J. Zhang, Z. Bo* and W. C. Chen,* “Well-Defined Star-Shaped Donor-Acceptor Conjugated Molecules for Organic Resistive Memory Devices”, *Chem. Commun.*, 51, 14179 -14182 (2015). (SCI)
264. P. Y. Chao, H. C. Wu, C. Lu, C. W. Hong, and W. C. Chen,* “Biaxially Extended Conjugated Polymers with Thieno[3,2-*b*]thiophene Building Block for High Performance Field-Effect Transistor Applications”, *Macromolecules*, 48, 5596-5604 (2015). (SCI)
265. C. Lu, H. C. Chen,* W. T. Chung, Y. H. Hsu, W. C. Chen,* P. T. Chou,* “ Interplay of Molecular Orientation, Film Formation, and optoelectronic properties on Isoindigo- and Thienoisindigo-based Block Copolymers for OFET and OPV Applications”, *Chem. Mater.*, 27, 6837-6847 (2015). (SCI)

-2014

266. A. D. Yu, T. Kurosawa, M. Ueda,* and W. C. Chen,* “Polycyclic arene based D-A polyimide electrets for High Performance n-type Organic Field Effect Transistor Memory Devices“, *J. Polym. Chem. Part A: Polym. Chem.*, 52, 139-147 (2014). (SCI)
267. Y. H. Chou, S. Takasugi, R. Goseki, T. Ishizone,* and W. C. Chen,* “Nonvolatile Organic Field-Effect Transistor Memory Devices Using Polymer Electrets with Different Thiophene Chain Lengths”, *Polym. Chem.*, 5, 1063-1071 (2014). (SCI)
268. Y. C. Chiu, T. Y. Chen, C. C. Chueh, H. Y. Chang, K. Sugiyama, Y. J. Sheng, A. Hirao, and W. C. Chen,* “High Performance Nonvolatile Transistor Memories of Pentacene Using the Electrets of Star-branched P-type Polymers and Their Donor/Acceptor Blends”, *J. Mater. Chem. C*, 8, 1436-1446 (2014). (SCI)

269. L. N. Chen, Y. C. Chiu, J. J. Hung, C. C. Kuo,* and W. C. Chen,* “Multifunctional Electrospun Nanofibers Prepared from Poly((N-isopropylacrylamide) -co-(N-hydroxymethylacrylamide)) and Their Blends with 1,2-Diaminoanthraquinone for NO Gas Detection”, *Macromol. Chem. Phys.*, 215, 286-294 (2014). (SCI)
270. Y. H. Chou, Y. C. Chiu, and W. C. Chen,* “High-k Polymer/Graphene Oxide Dielectrics for Low-Voltage Flexible Nonvolatile Transistor Memories”, *Chem. Commun.*, 50, 3217-3219 (2014). (SCI)
271. I. A. Lei, D. F. Lai, T. M. Don, W. C. Chen, Y. Y. Yu, and W. Y. Chiu,* “Silicone hybrid materials useful for the encapsulation of light-emitting diodes”, *Mater. Chem. Phys.*, 144, 41-48 (2014). (SCI)
272. B. T. Liu*, P. S. Li, W. C. Chen, and Y. Y. Yu, “Ex situ synthesis of high-refractive-index polyimide hybrid films containing TiO₂ chelated by 4-aminobenzoic acid”, *Euro. Polym. J.*, 50, 54-60 (2014). (SCI)
273. H. C. Wu, Y. C. Lai, Y. C. Chiu, W. Y. Lee, and W. C. Chen,* “Biaxially Extended Octithiophene-Based Conjugated Copolymers for High Open Circuit Voltage Photovoltaic Cell Applications”, *Macromol. Chem. Phys.*, 215, 638-647 (2014). (SCI)
274. P. Z. Jian, Y. C. Chiu, H. S. Sun, T. Y. Chen, W. C. Chen,* and S. H. Tung,* “Enhancing Carrier Mobility in Organic Field-Effect Transistors toward Non-Volatile Memory by the Use of a Single Electrospun Nanofiber as Dielectric,” *ACS Appl. Mater. Interface*, 6, 5506-5515 (2014). (SCI)
275. A. D. Yu, W. Y. Tung, Y. C. Chiu, C. C. Chueh, G. S. Liou,* and W. C. Chen,* “Multilevel Nonvolatile Flexible Organic Field-Effect Transistor Memories Employing Polyimide Electrets with Different Charge Transfer Effects”, *Mater. Rapid Commun.*, 35, 1039-1045 (2014). (SCI)
276. C. T. Lo, C. J. Lin, J. Y. Lee, S. H. Tung, J. C. Tsai,* and W. C. Chen,* “Molecular Stacking Structure and Field-Effect Transistor Characteristics of Crystalline Poly(3-hexylthiophene)-*block*-Syndiotactic Polypropylene through Solvent Selectivity”, *RSC Advances*, 4, 23002-23009 (2014). (SCI)
277. J. Y. Chen, H. C. Wu, Y. C. Chiu, and W. C. Chen,* “Plasmonic –Enhanced Polymer Photovoltaic Device Performance Using Different Patterned Ag/PVP Electrospun Nanofibers”, *Adv. Energy Mater.*, 4, 1301665 (2014) **(Featured on front cover page, SCI)**.
278. W. Y. Lee, G. Giri, Y. Diao, C.J. Jassone, J. R. Matthews, M. L. Sorensen, S. Mannsfeld, W. C. Chen, H. H. Fong, J. B.-H. Tok, M. F. Toney, M. He* and Z. Bao,* “High-Performance Polymer Field-Effect Transistors Processed through Non-Chlorinated Mixed Solvents”, *Adv. Funct. Mater.*, 24, 3524-3534 (2014). (SCI)
279. Y. C. Chiu, I. Otsuka, S. Halila, R. Borsali,* and W. C. Chen,* “High-Performance Nonvolatile Transistor Memories of Pentacene Using the Green Electrets of Sugar-based Block Copolymers and Their Supramolecules”, *Adv. Funct. Mater.*, 24, 4240-4249 (2014). **(Featured on inside front cover page, SCI)**.
280. Y. C. Chiu, T. Y. Chen, Y. Chen, T. Satoh, T. Kakuchi,* and W. C. Chen,* “High-Performance Nonvolatile Organic Transistor Memory Devices Using The Electrets of Semiconducting Blends”, *ACS Appl. Mater. Interface*, 6, 12780–12788 (2014). (SCI)
281. C. Lu, J. Wang, H. C. Chang, Y. C. Chiu, H. Y. Chen, H. C. Wu, T. Higashihara,* and W. C. Chen,* “Ambipolar Field-Effect Transistors Using Conjugated Polymers with the Structures of Bilayer, Binary Blends, and Paralleled Nanofibers”, *J. Mater. Chem. C*, 2, 7489-7493 (2014). (SCI)
282. H. C. Wu, S. J. Benight, A. Chortos, W. Y. Lee, J. Mei, J. W. F. To, C. Lu, M. He, J. B.-H. Tok, W. C. Chen, and Z. Bao,* “A Rapid and Facile Soft Contact Lamination Method: Evaluation of Polymer

Semiconductors for Stretchable Transistors”, *Chem. Mater.*, 26, 4544-4551 (2014). (SCI)

283. Y. H. Chou, C. L. Tsai, W. C. Chen,* and G. S. Liou,* “Nonvolatile Transistor Memory Devices Based on High-k Electrets of Polyimide/TiO₂ Hybrids”, *Polym. Chem.*, 5, 6718-6727 (2014). (SCI)
284. L. Dong, Y. C. Chiu, C. C. Chueh, A. D. Yu and W. C. Chen,* “Semi-conjugated Acceptor Based Polyimides as the Electrets for Nonvolatile Transistor Memory Devices”, *Polym. Chem.*, 5, 6834 – 6846 (2014). (SCI)
285. Dong, G. Li, A. D. Yu, Z. Bo,* C. L. Liu, and W. C. Chen,* “Conjugated donor–acceptor -acceptor (D-A-A) molecule for organic nonvolatile resistor memory”, *Chem. Asia J.*, 9, 3403-3407 (2014). (SCI)
286. L. N. Chen, C. C. Kuo,* Y. C. Chiu, and W. C. Chen,* “Ultra Metal Ions and pH Sensing Characteristics of Thermoresponsive Luminescent Electrospun Nanofibers Prepared From Poly(HPBO-co-NIPAAm-co-SA)”, *RSC Adv.*, 4, 45345-45353 (2014). (SCI)
287. Y. Y. Yu,* C. L. Liu,* Y. C. Chen, Y. C. Chiu, and W. C. Chen, “Tunable Dielectric Constant of Polyimide-Barium Titanate Nanocomposite Materials as the Gate Dielectrics for Organic Thin Film Transistors Applications”, *RSC Advances*, 4, 62132-62139 (2014) (SCI)
288. M. S. Lu, C. Lu, M. H. Lib, C. L. Liu, and W. C. Chen,* “Nonvolatile organic transistor memory devices based on nanostructured polymeric materials” , in *SPIE Proc.* “ Organic Field Effect Transistors XIII; AND Organic Semiconductors in Sensors and Bioelectronics VII”, Vol.9185, page 91850N (2014).

-2013

289. T. Kurosawa, Y. C. Lai, A. D. Yu, H. C. Wu, T. Higashihara, M. Ueda,* and W. C. Chen* , “Effects of The Acceptor Conjugation Length and Composition on the Electrical Memory Characteristics of Random Copolyimides”, *J. Polym. Sci. Part A: Polym. Chem.*, 51, 1348-1358 (2013). (SCI)
290. J. Wang, C. Lu, T. Mizobe, M. Ueda, W. C. Chen,* and T. Higashihara*, “Synthesis and Characterization of All-conjugated Graft Copolymers Comprised of n-Type or p-Type Backbones and Poly(3-hexylthiophene) Side Chains”, *Macromolecules*, 46, 1783-1793 (2013). (SCI)
291. J. H. Syu, Y. K. Cheng, W. Y. Hong, H. P. Wang, H. F. Meng,* H. W. Zan, S. F. Horng, G. F. Chang, C. H. Hung,* Y. C. Chiu, W. C. Chen,* M. J. Tsai, and H. Cheng, , “Electrospun fibers for solid-state real-time zinc ion sensor with high sensitivity and cell medium compatibility”, *Adv. Funct. Mater.*, 23, 1566-1574(2013). (SCI)
292. H. C. Wu, W. Y. Lee, C. J. Lin, and W. C. Chen,* “Highly Air Stable Branched Octithiophene Oligomer for Organic Field Effect Transistor and pH Sensor Applications”, *Mater. Chem. Phys.*, 138, 542-552 (2013). (SCI)
293. Y. C. Chiu, C. L. Liu, W. Y. Lee, Y. Chen, T. Kakuchi,* and W. C. Chen*, “Multilevel Nonvolatile Transistor Memories Using a Star-Shaped Poly[(4-diphenylamino)benzyl methacrylate] Gate Electret”, *NPG Asia Mater.*, 5, e35 (2013). (SCI) (SCI)
294. C. C. Chou, H. C. Wu, C. J. Lin, E. Ghelichkhani, and W. C. Chen*, “Morphology and Field-Effect Transistor Characteristics of Electrospun Nanofibers Prepared from Crystalline Poly(3-hexylthiophene) and Polyacrylates Blends”, *Macromol. Chem. Phys.*, 214, 751-760(2013) (**Invited research article**). (SCI)
295. C. C. Chueh, S. C. Chien, H. L. Yip, J. F. Salinas, C. Z. Li, K. S. Chen, F. C. Chen, W. C. Chen, and A. K.-Y. Jen,* “Toward High-Performance Semi-Transparent Polymer Solar Cells: Optimization of

- Ultra-Thin Light Absorbing Layer and Transparent Cathode Architecture”, *Adv. Energy Mater.*, 4, 417-423(2013). (SCI)
296. Y. H. Chou, H. J. Yen, C. L. Tsai, W. Y. Lee, G. S. Liou,* and W. C. Chen*, “Nonvolatile Transistor Memory Devices using High Dielectric Constant Polyimides Electrets”, *J. Mater. Chem. C*, 1, 3235-3243(2013). (SCI)
 297. J. Y. Lee, C. J. Lin, C. T. Lo, J. C. Tsai,* and W. C. Chen*, “Synthesis, Morphology and Field-Effect Transistor Characteristics of Crystalline - Stereoregular Crystalline Diblock Copolymers Consisted of Poly (3-hexylthiophene) and Syndiotactic Polypropylene”, *Macromolecules*, 46, 3005-3014(2013). (SCI)
 298. X. Yang, C. C. Chueh, C. Z. Li, H. L. Yip, P. Yin, H. Z. Chen*, W. C. Chen, A. K.-Y. Jen*, “High-Efficiency Polymer Solar Cells Achieved by Doping Plasmonic Metallic Nanoparticles into Dual Charge Selecting Interfacial Layers to Enhance Light Trapping”, *Adv. Energy Mater.*, 3, 666-673(2013). (SCI)
 299. A. D. Yu, T. Kurosawa, Y. H. Chou, K. Aoyagi, Y. Shoji, T. Higashihara, M. Ueda,* C. L. Liu,* and W. C. Chen*, “Tunable Electrical Memory Characteristics Using Hybrid Materials of Polyimides:Polycyclic Aromatic Compounds on Flexible Substrates”, *ACS Appl. Mater. Interfaces*, 5, 4921-4929 (2013). (SCI)
 300. Y. C. Lai, T. Kurosawa, T. Higashihara, M. Ueda,* and W. C. Chen*, “Donor-Acceptor Oligoimides for High-Performance Memory Device Applications”, *Chemistry-An Asian J.*, 8, 1514-1522(2013). (SCI)
 301. B. Ahn, D. M. Kim, J. C. Hsu, Y. G. Ko, T. J. Shin, J. Kim, W. C. Chen* and M. Ree*, “Tunable Film Morphologies of Brush-Linear Diblock Copolymer Bearing Difluorene Moieties Yield a Variety of Digital Memory Properties”, *ACS Macro Lett.*, 2, 555-560(2013). (SCI)
 302. K. Kim, Y. K. Fang, W. Kwon, Y. G. Ko, S. Pyo, W. C. Chen*,* and M. Ree*, “Tunable Digital Memory Characteristics of Brush Copolymers Bearing Carbazole and Oxadiazole Moieties”, *J. Mater. Chem. C*, 1, 4858-4868 (2013). (SCI)
 303. H. Y. Chen, H. P. Shen, C. H. Wu, W. Y. Chiu,* and W. C. Chen*,* and H. J. Tai , “Core-shell Composite Latexes Derived from PEDOT:PSS Dispersion and Preparation of Conductive, Flexible and Transparent Films” , *J. Mater. Chem. C*, 1, 5351-5358 (2013). (SCI)
 304. Y. W. Lin, C. J. Lin, Y. H. Chou, C. L. Liu, H. C. Chang, and W. C. Chen*, ”Nonvolatile Organic Field Effect Transistor Memory Devices Using One-Dimensional Aligned Electrospun Nanofiber Channels of Semiconducting Polymers”, *J. Mater. Chem. C*, 1, 5336-5343 (2013) (SCI)
 305. H. C. Wu, C. L. Liu, and W. C. Chen* , “Donor-Acceptor Conjugated Polymers of Arylene Vinylene with Pendent Phenanthro[9,10-d]imidazole for High-Performance Flexible Resistor-type Memory Applications”, *Polym. Chem.*, 4, 5261-5269(2013). (SCI)
 306. Y. X. Xu, C. C. Chueh, H. L. Yip, C. Y. Chang, P. W. Liang, J. J. Intemann, W. C. Chen and A. K.-Y. Jen,* “Indacenodithieno[3,2-*b*]thiophene-based broad bandgap polymers for high efficiency polymer solar cells”, *Polym. Chem.*, 4, 5220-5223 (2013). (SCI)
 307. T. Kurosawa, A. D. Yu, C. L. Liu, T. Higashihara, W. C. Chen*, and M. Ueda,* “Inducing a High Twisted Conformation in the Polyimide Structure by Bulky Donor Moieties for the Development of Non-volatile Memory”, *Euro. Polym. J.*, 49, 3377-3386 (2013). (SCI)
 308. T. Higashihara*, “T. Mizobe, Chien Lu, W. C. Chen, and M. Ueda, “Synthesis of New Thiadiazole-

Containing Polythiophene Derivatives and Their Application to Organic Solar Cells”, *J. Photopolymer Sci. Technol.*, 26, 185-191(2013). (SCI)

309. C. C. Chueh, K. Yao, H. L. Yip, C. Y. Chang, Y. X. Xu, K. S. Chen, C. Z. Li, P. Liu, F. Huang, Y. Chen, W. C. Chen, and A. K.-Y. Jen*, “Non-Halogenated Solvents for Environmental Friendly Processing of High-performance Bulk-Heterojunction Polymer Solar Cells”, *Energy & Environ. Sci.*, 6, 3241-3248 (2013). (SCI)
310. C. Lu and W. C. Chen*, “Diketopyrrolopyrrole-Thiophene based Acceptor- Donor-Acceptor Conjugated Materials for High Performance Field Effect Transistors”, *Chemistry-An Asian J.*, 8, 2813-2821(2013). (SCI)
311. H. C. Chang, C. L. Liu, and W. C. Chen*, “Flexible Nonvolatile Transistor Memory Devices Based on One-dimensional Electrospun P3HT: Au Hybrid Nanofibers”, *Adv. Funct. Mater.*, 23, 4960-4968(2013). (**Featured on inside front cover page**, SCI).
312. W. T. Kuo, H. L. Chen,* R. Goseki, A. Hirao, and W. C. Chen, “ Interplay Between the Phase Transitions at Different Length Scales in the Supramolecular Comb-Coil Block Copolymers Bearing (AB)_n Multiblock Architecture”, *Macromolecules*, 46, 9333-9340 (2013). (SCI)
313. H. C. Chang, C. L. Liu,* and W. C. Chen* “Nonvolatile Organic Thin Film Transistor Memory Devices Based on Hybrid Nanocomposites of Semiconducting Polymers: Gold Nanoparticles”, *ACS Appl. Mater. Interfaces*, 5, 13180-13187 (2013). (SCI)

-2012

314. Y. C. Lai, T. Higashihara*, J. C. Hsu, M. Ueda, and W. C. Chen*, “Enhancement of Power Conversion Efficiency and Long-term Stability of P3HT/PCBM Solar Cells Using C₆₀ Derivatives with Thiophene Units as Surfactant”, *Solar Energy Materials & Solar Cells*, 97, 164-170 (2012). (SCI)
315. C. Y. Chen, Y. Ito, Y. C. Chiu, W. C. Wu, T. Higashihara, M. Ueda,* and W. C. Chen*, “Design and Synthesis of New Cationic Water-soluble Pyrene Containing Dendrimers for DNA Sensory Applications”, *J. Polym. Sci. Part A: Polym. Chem.*, 50, 297–305(2012). (SCI)
316. J. C. Chen, C. L. Liu,* Y. S. Sun,* S. H. Tung, and W. C. Chen* , “Tunable Electrical Memory Characteristics by the Morphology of Self-assembled Block Copolymers:PCBM Nanocomposite Films”, *Soft Matter*, 8, 526-535(2012). (SCI)
317. A. D. Yu, C. L. Liu,* and W. C. Chen* , “Supromolecular block copolymer : graphene oxide composites based resistive memory devices”, *Chem. Commun.*, 48, 383-385 (2012). (SCI)
318. J. C. Lin, W. Y. Lee, C. C. Kuo, C. Li, R. Mezzenga,* and W. C. Chen*, “Synthesis, Morphology and Field Effect Transistor Characteristics of New Crystalline-Crystalline Diblock Copolymers of Poly(3-hexylthiophene-*block*-styryl acrylate)”, *J. Polym. Sci. Polym. Chem.*, 50, 686-695(2012). (SCI)
319. C. Y. Chen, Y. Ito, Y. C. Chiu, W. C. Wu, T. Higashihara, M. Ueda,* and W. C. Chen* , ”pH-responsive Dendritic Gelators”, *Chem. Lett.*, 41, 92-94 (2012). (SCI)
320. P. H. Lin, W. Y. Lee, W. C. Wu,* and W. C. Chen* , “Synthesis, Properties, and Electrical Memory Characteristics of New Diblock Copolymers of Polystyrene-*block*-Poly(styrene-pyrene)”, *Polym. Bull.*, 69, 29-47(2012). (**Invited research article**, SCI)
321. A. Takahashi, C. J. Lin, K. Ohshimizu, T. Higashihara,* W. C. Chen*,* and M. Ueda*, “Synthesis and Characterization of Novel Polythiophenes with Grpahene like Structures via Intramolecular Oxidative Coupling”, *Polym. Chem.*, 3, 479-495 (2012). (SCI)
322. H. W. Lin, W. Y. Lee, C. Lu, C. J. Lin, H. C. Wu, Y. W. Lin, B. Ahn, Y. Rho, M. Ree* and W. C. Chen* , “Biaxially Extended Quaterthiophene-Thiophene and -Selenophene Conjugated Polymers for

Optoelectronic Device Applications”, *Polym. Chem.*, 3, 767-777 (2012). (SCI)

323. H. W. Lin, W. Y. Lee, and W. C. Chen*, “Selenophene-DPP Donor-Acceptor Conjugated Polymer for High Performance Ambipolar Field Effect Transistor and Nonvolatile Memory Applications”, *J. Mater. Chem.*, 22, 2120-2128 (2012). (SCI)
324. J. C. Hsu, W. Y. Lee, H. C. Wu, K. Sugiyama, A. Hirao,* and W. C. Chen*, “Non-Volatile Memory Based on Pentacene Organic Field-Effect Transistors with Polystyrene para-Substituted Oligofluorene Pendent Moieties as Polymer Electrets”, *J. Mater. Chem.*, 22, 5820-5827(2012). (SCI)
325. C. Z. Li, C. C. Chueh, H. L. Yip, K. M. O'Malley, W. C. Chen and A. K.-Y. Jen*, “Effective interfacial layer to enhance efficiency of polymer solar cells *via* solution-processed fullerene-surfactants”, *J. Mater. Chem.*, 22, 8574-8578(2012). (SCI)
326. C. Lu, H. C. Wu, Y. C. Chiu, W. Y. Lee, and W. C. Chen*, “Biaxially Extended Quaterthiophene- and Octithiophene-Vinylene Conjugated Polymers for High Performance Field Effect Transistors and Photovoltaic Cells”, *Macromolecules*, 45, 3047-3056 (2012). (SCI)
327. E. N. Chen, H. C. Yeh, Y. C. Chao, H. F. Meng,* H. W. Zan, Y. C. Liang, C. P. Huang, T. M. Chen,* C. F. Wang, C. C. Chueh, and W. C. Chen*, S. F. Hung, “Infrared Proximity Sensor using Organic Light-Emitting Diode with Quantum Dots Converter”, *Organic Electron.*, 13, 2312-2318(2012). (SCI)
328. T. Kurosawa, Y. C. Lai, T. Higashihara, M. Ueda,* C. L. Liu,* and W. C. Chen*, “Tuning the Electrical Memory Characteristics From Volatile to Nonvolatile by Perylene Imide Composition in Random Copolyimides”, *Macromolecules*, 45, 4556-4563 (2012). (SCI)
329. C. J. Chen, H. J. Yen, W. C. Chen, and G. S. Liou*, “Resistive switching non-volatile and volatile memory behavior of aromatic polyimides with various electron-withdrawing moieties”, *J. Mater. Chem.* 22, 14085-14093 (2012). (SCI)
330. J. C. Lin, W. Y. Lee, H. C. Wu, C. C. Chou, Y. C. Chiu, Y. S. Sun*, and W. C. Chen*, “Morphology and Field-Effect Transistor Characteristics of Semicrystalline Poly(3-hexylthiophene) and Poly(stearyl acrylate) Blend Nanowires”, *J. Mater. Chem.*, 12, 14682-14690 (2012). (SCI)
331. Y. C. Chiu, Y. Chen, C. C. Kuo S. H. Tung, T. Kakuchi,* and W. C. Chen*, “Synthesis, Morphology, and Sensory Applications of Multifunctional Rod-Coil-Coil Triblock Copolymers and Their Electrospun Nanofibers”, *ACS Appl. Mater. Interface*, 4, 3387-3395(2012). (SCI)
332. C. Z. Li, C. C. Chueh, H. L. Yip, J. Zou, W. C. Chen and A. K.-Y. Jen*, “Evaluation of structure–property relationships of solution-processible fullerene acceptors and their n-channel field-effect transistor performance”, *J. Mater. Chem.*, 22, 14976-14981(2012). (SCI)
333. C. L. Tsai, H. J. Yen, W. C. Chen, and G. S. Liou,* “Novel Solution-processable Optically Isotropic Colorless Polyimidothioethers/TiO₂ Hybrids with Tunable Refractive Index”, *J. Mater. Chem.*, 22, 17236-17244 (2012). (SCI)
334. H. C. Wu, A. D. Yu, W. Y. Lee, C. L. Liu, and W. C. Chen*, “Poly(fluorene-thiophene) Donor Tethered Phenanthro[9,10-d]imidazole Acceptor for Flexible Nonvolatile Flash Resistive Memory Devices”, *Chem. Commun.*, 48, 9135-9137(2012) (**Featured on inside front cover page**, SCI).
335. A. D. Yu, T. Kurosawa, Y. C. Lai, T. Higashihara, M. Ueda,* C. L. Liu,* and W. C. Chen*, “Flexible polymer memory devices derived from triphenylamine-pyrene containing donor-acceptor polyimides”, *J. Mater. Chem.*, 22, 20754-20763 (2012). (SCI)
336. Y. C. Hu, C. J. Chen, H. J. Yen, K. Y. Lin, J. M. Yeh, W. C. Chen and G. S. Liou*, “Novel triphenylamine-containing ambipolar polyimides with pendant anthraquinone moiety for polymeric

memory device, electrochromic and gas separation applications”, *J. Mater. Chem.*, 22, 20394-20402(2012). (SCI)

337. Y. H. Chou, N. H. You, T. Kurosawa, W. Y. Lee, T. Higashihara, M. Ueda,* and W. C. Chen,* “Thiophene and Selenophene Donor-Acceptor Polyimides as Polymer Electrets for Nonvolatile Transistor Memory Devices”, *Macromolecules*, 45 6946-6856(2012). (SCI)
338. T. Higashihara,* H. C. Wu, T. Mizobe, C. Lu, M. Ueda, and W. C. Chen,* “Synthesis of Thiophene-based $\square$ -Conjugated Polymers Containing Oxadiazole or Thiadiazole Moieties and Their Application to Organic Photovoltaics”, *Macromolecules*, 45, 9046-9055 (2012). (SCI)
339. Y. X. Xu, C. C. Chueh, H. L. Yip, F. Z. Ding, Y. X. Li, C. Z. Li, X. Li, W. C. Chen, and A. K.-Y. Jen,* “Improved Charge Transport and Absorption Coefficient in Indacenodithieno[3,2-b] thiophene-based Ladder-Type Polymer Leading to Highly Efficient Polymer Solar Cells”, *Adv. Mater.*, 24, 6356-6361 (2012). (SCI)
340. H. C. Chang, W. Y. Lee, Y. Tai,* K. W. Wu, and W. C. Chen,* “Improving the Characteristics of an Organic Nano Floating Gate Memory by Self-assembled Monolayer”, *Nanoscale*, 4, 6629-6636 (2012). (SCI)
341. Y. H. Chou, W. Y. Lee, and W. C. Chen,* “Self-Assembled Nanowires of Organic N-type Semiconductor for Nonvolatile Transistor Memory Devices”, *Adv. Funct. Mater.*, 22, 4352-4359 (2012). (SCI)

-2011

342. K. K. Huang, Y. K. Fang, J. C. Hsu, C. C. Kuo, W. H. Chang, and W. C. Chen*, “Synthesis, Micellar Structures, and Multifunctional Sensory Properties of Poly(3-hexylthiophene)-*block*-poly (2-(dimethylamino)ethyl methacrylate) Rod-Coil Diblock Copolymers”, *J. Polym. Sci. Polym. Chem.*, 49, 147-155 (2011). (SCI)
343. D. H. Li, C. H. Lin, C. Y. Chen, J. C. Hsu, Y. C. Chiu, W. T. Chang, and W. C. Chen,* “Poly[2,7-(9,9-dihexylfluorene)]-*block*-Poly(2-vinylpyridine) Rod-Coil Star-Block Copolymers: Synthesis, Micellar Structures and Photophysical Properties”, *Macromol. Chem. Phys.*, 212, 297-304 (2011). (SCI)
344. Y. W. Wang, and W. C. Chen*, “New Photosensitive Colorless Polyimide-Silica Hybrid Optical Materials: Synthesis, Properties and Patterning”, *Mater. Chem. Phys.*, 126, 24-30 (2011). (SCI)
345. J. C. Hsu, C. L. Liu, W. C. Chen*, K. Sugiyama, and A. Hirao,* “A Supramolecular Approach on using Poly(fluorenylstyrene)-*block*-poly(2-vinylpyridine):PCBM Composite Thin Films for Non-Volatile Memory Device Applications”, *Macromol. Rapid Commun.*, 32, 528-533 (2011). (SCI)
346. T. Higashihara*, C. L. Liu, W. C. Chen, and M. Ueda, “Synthesis of Novel $\square$ -Conjugated Rod-Rod-Rod Triblock Copolymers Containing Poly(3-hexylthiophene) and Polyacetylene Segments by Combination of Quasi-Living GRIM and Living Anionic Polymerization”, *Polymers* (Switzerland), 3, 236-251 (2011). (SCI)
347. Y. K. Fang, C. L. Liu, and W. C. Chen,* “New Random Copolymers with Pendant Carbazole Donor and 1,3,4-Oxadiazole Acceptor for High Performance Memory Device Applications”, *J. Mater. Chem.*, 21, 4778-4786(2011). (**Featured on back cover page**, SCI)
348. C. L. Liu, C. H. Lin, C. C. Kuo, S. T. Lin, and W. C. Chen,* “Conjugated Rod-Coil Block Copolymers: Synthesis, Morphology, Photophysical Properties, and Stimuli-Responsive Application”, *Prog. Polym. Sci.*, 36, 603-637(2011).(**Invited review article**, SCI)
349. J. H. Oh, W. Y. Lee, T. Noe, W. C. Chen, M. Konemann, Z. Bao,* “Solution-Shear-Processed

- Quaterrylene Diimide Thin-Film Transistors Prepared by Pressure-Assisted Thermal Cleavage of Swallow Tails”, *J. Am. Chem. Soc.*, 133, 4204-4207 (2011). (SCI)
350. H. S. Sun, C. H. Lee, C. S. Lai, H. L. Chen, S. H. Tung,* and W. C. Chen,* “Self-Assembled Structures in Rod-Coil Block Copolymers with Hydrogen-Bonded Amphiphiles”, *Soft Matter*, 7, 4198-4206 (2011). (SCI)
 351. C. L. Liu, T. Kurosawa, A. D. Yu, T. Higashihara, M. Ueda,* and W. C. Chen,* “New Dibenzothiophene-Containing Donor-Acceptor Polyimides For High Performance Memory Device Applications”, *J. Phys. Chem. C*, 115, 5930-5939 (2011). (SCI)
 352. J. Y. Chen, C. C. Kuo, C. S. Lai, W. C. Chen,* and H. L. Chen,* “Manipulation on The Morphology and Electrical Properties of Poly(3-hexylthiophene) Aligned Electrospun Nanofibers For High Performance Field-Effect Transistors”, *Macromolecules*, 44, 2883-2892 (2011). (SCI)
 353. Y. K. Fang, C. L. Liu, G. Y. Yang, P. C. Chen, and W. C. Chen,* “New Donor-Acceptor Random Copolymers with Pendent Triphenylamine and 1,3,4-Oxadiazole for High Performance Memory Device Applications”, *Macromolecules*, 44, 2604-2612 (2011). (SCI)
 354. C. C. Kuo, C. H. Lin, P. Tzeng, and W. C. Chen,* “Morphology and Photophysical Properties of Luminescent Electrospun Fibers Prepared from Diblock and Triblock Polyfluorene-block-Poly (2-vinylpyridine) /PEO Blends”, *J. Polym. Res.*, 18, 1091-1100 (2011). (SCI)
 355. Y. C. Lai, K. Ohshimizu, A. Takahashi, J. C. Hsu, T. Higashihara,* M. Ueda,* and W. C. Chen,* “Synthesis of All-Conjugated Poly(3-hexylthiophene)-*block*-Poly (3-(4’-(3’’,7’’-dimethyloctyloxy)-3’-pyridinyl)thiophene) and Its Blend for Photovoltaic Applications:”, *J Polym. Sci. Part A: Polym. Chem.*, 49, 2577-2587 (2011). (SCI)
 356. E. C. Chen, S. R. Tseng, Y. C. Chao, H. F. Meng*, C. F. Wang, W. C. Chen,* C. S. Hsu, S. F. Horng, “Polymer Infrared Photo-detector with High Sensitivity Up to 1100 nm”, *Synth. Met.*, 161, 1618-1622(2011) (**Featured on front cover page**, SCI)
 357. C. L. Liu* and W. C. Chen,* “Donor-Acceptor Polymers for Advanced Memory Device Applications” *Polym. Chem.*, 2, 2169-2174(2011). (**Invited review article**, SCI)
 358. C. J. Chen, H. J. Yen, W. C. Chen, and G. S. Liou,* “Novel High Performance Polymer Memory Devices Containing O(Me)₂-Tetraphenyl-*P*-Phenylene diamine Moieties”, *J. Polym. Sci. Part A: Polym. Chem.*, 49, 3709-3718 (2011). (SCI)
 359. J. C. Hsu, Y. Chen, T. Kakuchi,* and W. C. Chen,* “Synthesis of Linear and Star-shaped Poly[4-(diphenylamino)benzyl methacrylate]s by Group Transfer Polymerization and Their Electrical Memory Device Applications”, *Macromolecules*, 44, 5168-5177 (2011). (SCI)
 360. J. C. Hsu, C. Li, K. Sugiyama, R. Mezzenga,* A. Hirao* and W. C. Chen,* “Synthesis and Morphology of New Asymmetric Star Polymers of poly[4-(9,9-dihexylflorene-2-yl)styrene]-*block*-poly(2-vinylpyridine) and Their Non-Volatile Memory Device Applications”, *Soft Matter*, 7, 8440-8449 (2011). (SCI)
 361. Y. C. Chiu, C. C. Kuo, C. J. Lin, and W. C. Chen,* “Highly Ordered Luminescent Microporous Films Prepared From Crystalline Conjugated Rod-Coil Diblock Copolymers of PF-*b*-PSA and Their Superhydrophobic Characteristics,” *Soft Matter*, 7, 9350-9358 (2011). (SCI)
 362. Y. C. Lai, K. Ohshimizu, T. Higashihara,* M. Ueda,* and W. C. Chen,* ”Electrically Bistable Memory Devices Based on Poly(3- hexylthiophene)-*block* -poly(3-phenoxythiophene) and Its PCBM composite film”, *J. Mater. Chem.*, 21, 14502-14508 (2011). (SCI)

363. C. J. Lin, J. C. Hsu, J. H. Tsai, C. C. Kuo, W. Y. Lee, and W. C. Chen,* “Electrospun Aligned Nanofibers Based High Performance Field Effect Transistors Prepared from Two-Dimensional Polythiophene Derivative of P4TDPP”, *Macromol. Chem. Phys.*, 212, 2459-2466(2011) (**Featured on front cover page**, SCI)
364. W. Y. Lee, J. H. Oh, S. Suraru, W. C. Chen, F. Würthner, and Z. Bao,* “High Mobility Air-Stable Solution-Shear-Processed n-Channel Organic Transistors Based on Core-Chlorinated Naphthalene Diimides”, *Adv. Funct. Mater.*, 21, 4173-4181 (2011). (SCI)
365. W. Y. Lee, T. Kurosawa, S. T. Lin, T. Higashihara, M. Ueda* and W. C. Chen,* “New Donor-Acceptor Oligoimides for High Performance Nonvolatile Memory Devices”, *Chem. Mater.*, 23, 4487-4497 (2011). (SCI)
366. S. L. Lian, C. L. Liu, and W. C. Chen*, “Conjugated Fluorene Based Rod-Coil Block Copolymers and Their PCBM Composites for Resistive Memory Switching Devices”, *ACS Appl. Mater. & Interfaces*, 3, 4504-4511 (2011). (SCI)
367. C. J. Lin, W. Y. Lee, C. Lu, H. W. Lin, and W. C. Chen,* “New Two-Dimensional Thiophene-Fused Thiophene Conjugated Copolymers for High Performance Field Effect Transistors”, *Macromolecules*, 44, 9565-9573 (2011). (SCI)

-2010

368. C. C. Chueh, M. H. Lai, J. H. Tsai, C. F. Wang, and W. C. Chen*, “Syntheses, Properties, and Field Effect Transistors of Small Band Gap Quinoxaline- and Thienopyrazine -Vinylene/Ethynylene Conjugated Polymers”, *J. Polym. Sci. Polym. Chem.*, 48, 74-81 (2010). (SCI)
369. C. C. Kuo, Y. C. Tung, and W. C. Chen,* “Morphology and pH Sensing Characteristics of New Luminescent Electrospun Fibers Prepared From Poly(phenylquinoline) -*block* - Polystyrene/Polystyrene Blends”, *Macromol. Rapid Commun.*, 31, 65-70 (2010). (SCI)
370. Y. Tian,* C. Y. Chen, H. L. Yip, W. C. Wu, W. C. Chen, and A. K.-Y. Jen,* “Synthesis, Nanostructure, Functionality, and Application of Polyfluorene- *block*-Poly(Nisopropylacrylamide)”, *Macromolecules*, 43,282-291 (2010). (SCI)
371. G. S. Liou, P. H. Lin, H. J. Yen, Y. Y. Yu, T. W. Tsai and W. C. Chen, “Highly flexible and optical transparent 6F-PI/TiO₂ optical hybrid films with tunable refractive index and excellent thermal stability”, *J. Mater. Chem.*, 20, 531-536 (2010). (SCI)
372. Y. Tian,* W C. Wu, C. Y. Chen, S. H. Jang, M. Zhang, T. Strovas, J. Anderson, B. Cookson, Y. Li, D. Meldrum, W. C. Chen, and A. K.-Y. Jen*, “Utilization of micelles formed from poly(ethylene glycol)-block-poly(ϵ -caprolactone) block copolymers as nanocarriers to enable hydrophobic red two-photon absorbing (2PA) emitters for cells imaging”, *J. Biomed. Mater. Res. Part A*, 93A, 1068-1079(2010). (SCI)
373. W. Y. Lee, K. F. Cheng, T. F. Wang, W. C. Chen*, and F. Y. Tsai,* “Photovoltaic properties of low-band-gap fluorene-based donor-acceptor copolymers”, *Thin Solid Films*, 518, 2119-2123 (2010). (SCI)
374. W. C. Wu, C. Y. Chen, Y. Tian, S. H. Jang, Y. Hong, Y. Liu, R. Hu, B. Z. Tang, C. T. Chen, W. C. Chen, and A. K.-Y. Jen,* “Enhancement of Aggregation-Induced Emission in Dye-encapsulated Polymeric Micelles for Bioimaging”, *Adv. Funct. Mater.*, 20, 1413-1423(2010). (**Featured on front cover page**, SCI)
375. Y. K. Fang, W. Y. Lee, C. S. Tuan, L. H. Lu, W. J. Teng, and W. C. Chen,* “New Poly(4,4'-dicyano-4"-vinyltriphenylamine) Host Material for Single-Layer Ir-complex Phosphorescent Light Emitting

Devices”, *Polym. J.*, 42, 327-335 (2010). (SCI)

376. T. Kuorosawa, C. C. Chueh, C. L. Liu, T. Higashihara, M. Ueda* and W. C. Chen,* “High Performance Volatile Polymeric Memory Devices Based on Novel Triphenylamine-based Polyimides Containing Mono- or Dual-mediated Phenoxy Linkages”, *Macromolecules*, 43, 1236-1244 (2010). (SCI)
377. Y. Y. Wang and W. C. Chen,* “Synthesis, properties, and antireflective applications of new colorless polyimide-inorganic hybrid optical materials”, *Composite Sci. Technol.*, 70, 769-775 (2010). (SCI)
378. G. S. Liou, P. H. Lin, H. J. Yen, Y. Y. Yu, and W. C. Chen,” Flexible Nanocrystalline -Titania/Polyimide Hybrids with High Refractive Index and Excellent Thermal Dimensional Stability” *J. Polym. Sci. Part A: Polym. Chem.*, 48, 1433–1440 (2010). (SCI)
379. J. H. Tsai, C. C. Chueh, W. C. Chen,* C. Y. Yu, G. W. Hwang, and C. Ting,* E. C. Chen, and H. F. Meng, "New Thiophene-Phenylene-Thiophene (TPT)–Acceptor Random Conjugated Copolymers For Optoelectronic Applications", *J. Polym. Sci. Part A: Polym. Chem.*, 48, 2351-2360 (2010). (SCI)
380. J. H. Tsai, W. Y. Lee, W. C. Chen,* C. Y. Yu, G. W. Hwang, and C. Ting,* “New Two-Dimensional Thiophene-Acceptor Conjugated Copolymers For Field Effect Transistor and Photovoltaic Cell Applications”, *Chem. Mater.*, 22, 3290-3299 (2010). (SCI)
381. P. Tzeng, C. C. Kuo, S. T. Lin, Y. C. Chiu, and W. C. Chen,* “New Thermoresponsive Luminescent Electrospun Nanofibers Prepared From Poly[2,7-(9,9-dihexylfluorene)] -*block*-poly(*N*-isopropylacrylamide)/PMMA Blends”, *Macromol. Chem. Phys.*, 211, 1408-1416 (2010). (SCI)
382. C. D. Liu, D. Y. Shu, C. T. Tsao, J. L. Han, F. Y. Tsai, F. C. Chen, W. C. Chen, and K. H. Hsieh*, “Synthesis and characterization of well-dispersed multi-walled carbon nanotube/low-bandgap poly(3,4-alkoxythiophene) nanocomposites”, *Comp. Sci. Technol.*, 70, 1242-1248(2010). (SCI)
383. J. H. Tsai, Y. C. Lai, T. Higashihara, C. J. Lin, M. Ueda,* and W. C. Chen,* “Enhancement of P3HT/PCBM Photovoltaic Efficiency using the Surfactant of Triblock Copolymer Containing Poly(3-hexylthiophene) and Poly(4-vinyltriphenylamine) Segments”, *Macromolecules*, 43, 6085-6091 (2010). (SCI)
384. W. H. Chang, S. H. Chou, J. J. Lin,* W. C. Chen,* and Y. J. Sheng,* “Thin film morphologies of $\square$ conjugated rod-coil block copolymers with thermoresponsive properties”, *J. Chem. Phys.*, 312, art no. 214901 (2010). (SCI)
385. J. H. Oh, S.-L. Suraru, W.-Y. Lee, M. Könemann, H. W. Höffken, C. Röger, R. Schmidt, Y. Chung, W.-C. Chen, F. Würthner,* and Z. Bao,* “High-Performance Air-Stable n-Type Organic Transistors Based on Core-Chlorinated Naphthalene Tetracarboxylic Diimides”, *Adv. Funct. Mater.*, 20, 2148-2156 (2010). (SCI)
386. J. C. Hsu, K. Sugiyama, Y. C. Chiu, A. Hirao,* and W. C. Chen,* “Synthesis of New Star-Shaped Polymers with Styrene-Fluorene Conjugated Moieties and Their Multicolor Luminescent Ordered Microporous Films”, *Macromolecules*, 43, 7151-7158 (2010). (SCI)
387. Y. K. Fang, C. L. Liu, C. Li, C. J. Lin, R. Mezzenga,* and W. C. Chen,* “Synthesis, Morphology and Properties of New Poly(3-hexylthiophene)-block-poly(vinylphenyl oxadiazole) Donor-Acceptor Rod-Coil Block Copolymers and Their Memory Device Applications”, *Adv. Funct. Mater.*, 20, 3012-3024 (2010). (SCI)
388. M. H. Lai, J. H. Tsai, C. C. Chueh, C. F. Wang and W. C. Chen,* “Syntheses of New 3,6-Carbazole based Donor-Acceptor Conjugated Copolymers for Optoelectronic Device Applications”, *Macromol. Chem. Phys.*, 211, 2017-2025 (2010). (SCI)

389. Y. C. Chiu, C. C. Kuo, and W. C. Chen,* “Thermo-responsive Luminescent Electrospun Fibers Prepared From Poly(DMAEMA-co-SA-co-StFl) Multifunctional Random Copolymers”, *ACS Appl. Mater. Interfaces*, 2, 3340-3347 (2010). (SCI)

-2009

390. N. Somanathan, C. K. Pandiyarajan, W. A. Goedel and W. C. Chen,* “Physico-Mechanical Studies on the Langmuir-Blodgett films of Polythiophene containing Mesogenic Side chains”, *J. Polym. Sci. Polym. Phys.*, 47, 173-182 (2009). (SCI)
391. M. H. Lai, C. C. Chueh, W. C. Chen* J. L. Wu, and F. C. Chen, “Synthesis and Properties of New Dialkoxyphenylene Quinoxaline based Donor-Acceptor Conjugated Polymers and Their Applications on Thin Film Transistors and Solar Cells”, *J. Polym. Sci. Polym. Chem.*, 47, 973-985 (2009). (SCI)
392. Y. C. Sheen, W. C. Chang, W. C. Chen, Y. H. Chang, Y. C. Huang, and F. C. Chang*, “Non-Fluorinated Superamphiphobic Surfaces Through Sol–Gel Processing of Methyltriethoxysilane and Tetraethoxysilane”, *Mater. Chem. Phys.*, 114, 63-68 (2009). (SCI)
393. K. F. Cheng, M. H. Lai, C. F. Wang, W. C. Wu, and W. C. Chen,* “New Fluorene- Pyrazino[2,3-g]quinoxaline Conjugated Copolymers: Synthesis, Optoelectronic Properties, and Electroluminescence Characteristics”, *J. Appl. Polym. Sci.*, 112, 2094-2101 (2009). (SCI)
394. H. W. Su, and W. C. Chen,* “Nanoporous Poly(Methyl Silsesquioxane) Films using Core-Shell Silsesquioxane as Porogen”, *Mater. Chem. Phys.*, 114, 736-741 (2009). (SCI)
395. W. Y. Lee, K. F. Cheng, C. L. Liu, S. T. Lin, C. C. Chueh, F.-Y. Tsai, and W. C. Chen*, “High Hole Mobility From Thiophene-Thienopyrazine Copolymer based Thin Film Transistors”, *J. Polym. Res.*, 16, 239-244 (2009). (SCI)
396. H. C. Chen, C. T. Wang, C. C. Bai, and W. C. Chen*, “Full Color Light-Emitting Electrospun Nanofibers Prepared From PFO/MEH-PPV/PMMA Ternary Blends”, *J. Polym. Sci. Polym. Phys.*, 47, 463-470 (2009). (SCI)
397. C. C. Kuo, C. T. Wang, and W. C. Chen*, “Poly(3-hexylthiophene)/Poly(methyl methacrylate) Core-Shell Electrospun Fibers for Sensory Applications”, *Macromolecular Symp.* 210, 918-925 (2009).
398. Y. C. Tung and W. C. Chen,* “Poly[2,7-(9,9-dihexylfluorene)]-*block*-poly [3-(trimethoxysilyl)propyl methacrylate] (PF-*b*-PTMSPMA) Rod-Coil Block Copolymers: Synthesis, Morphology and Photophysical Properties in Mixed Solvents”, *React Funct. Polym.*, 69, 507-518 (2009). (**Invited research article**, SCI).
399. J. H. Tsai, W. R. Tu, C. L. Liu, W. C. Wu, and W. C. Chen,* “Synthesis and Properties of New Small Band gap Conjugated Polymers: Methine Bridged Poly(3,4-ethylenedioxythiophene)”, *Polymer J.*, 41, 363-369 (2009). (SCI)
400. W. S. Chiang, C. H. Lin, C. L. Yeh, B. Nandan, P. N. Hsu, C. W. Lin, H. L. Chen,* and W. C. Chen,* ” Tetragonally Packed Cylinder Structure of Comb-Coil Block Copolymer Bearing Hetero-arm Architecture” *Macromolecules*, 42, 2304-2308 (2009). (SCI)
401. J. H. Tsai, C. C. Chueh, M. H. Lai, C. F. Wang, W. C. Chen,* B. T. Ko, and C. Ting, “Synthesis of New Indolocarbazole–Acceptor Alternating Conjugated Copolymers and Their Applications to Thin Film Transistors and Photovoltaic Cells”, *Macromolecules*, 42, 1897-1905 (2009). (SCI)
402. Y. F. Huang, C. W. Chang, D.-M. Smilgies, U. S. Jeng, A. R. Inigo, J. D. White,* K. C. Li, T. S. Lim, T. D. Li, H. Y. Chen, S. A. Chen, W. C. Chen and W. S. Fann, “Correlating Nano-morphology with Charge Transport Anisotropy in Conjugated Polymer Thin Films”, *Adv. Mater.*, 21, 2988-2992 (2009). (SCI)

403. K. Sugiyama, A. Hirao,* J. C. Hsu, Y. C. Tung, and W. C. Chen*, “Living Anionic Polymerization of Styrene Derivatives p-Substituted with π -Conjugated Oligo(fluorene) Moieties”, *Macromolecules*, 42, 4053-4062 (2009). (SCI)
404. H. C. Chen, C. L. Liu, C. C. Bai, N. H. Wang, C. S. Tuan, and W. C. Chen*, “Morphology and Photophysical Properties of DB-PPV/PMMA Luminescent Electrospun Fibers”, *Macromol. Chem. Phys.*, 210, 918-925 (2009)(**Invited research article**, SCI).
405. H. W. Chang, K. H. Lin, C. C. Chueh, G. S. Liou,* and W. C. Chen*, “New P-type of Poly(4-methoxytriphenylamine)s Derived by Coupling Reactions: Synthesis, Electrochromic Behaviors, and Hole Mobility”, *J. Polym. Sci. Polym. Chem.*, 47, 4037-4050 (2009). (SCI)
406. F. C. Chen,* J. L. Wu, C. L. Lee, W. C. Huang, H. M. P. Chen, and W. C. Chen, ”Flexible Polymer Photovoltaic Devices Prepared with Inverted Structures on Metal Foils”, *IEEE Electro. Dev. Lett.*, 30, 727-729 (2009). (SCI)
407. N. H. You, C. C. Chueh, C. L. Liu, M. Ueda* and W. C. Chen*, “Synthesis and Memory Device Characteristics of New Sulfur- Donor Containing Polyimides”, *Macromolecules*, 42, 4456-4463 (2009). (SCI)
408. C. Li, J. C. Hsu, K. Sugiyama, A. Hirao, W. C. Chen*, R. Mezzenga,* “Synthesis and self-assembly behaviour of poly(fluorenyl styrene)-block-poly(2-vinyl pyridine) block copolymers and their blends with single wall carbon nanotubes (SWCNTs)”, *Macromolecules*, 42, 5793-5801(2009). (SCI)
409. S. T. Lin, K. Fuchise, Y. Chen, R. Sakai, T. Satoh, T. Kakuchi* and W. C. Chen*, “Synthesis, Thermomorphic Characteristics, and Fluorescent Properties of Poly[2,7-(9,9-dihexylfluorene)]-block-poly(N-isopropylacrylamide)-block -poly(N-hydroxyethylacrylamide) Rod-Coil-Coil Triblock Copolymers”, *Soft Matter*, 5, 3761-3770 (2009). (SCI)
410. W. L. Chang, H. W. Su, and W. C. Chen*, “Synthesis and Properties of Photosensitive Polyimide-Nanocrystalline Titania Optical Thin Films”, *Euro. Polym. J.*, 45, 2749-2759 (2009). (SCI)
411. C. T. Wang, C. C. Kuo, H. C. Chen, and W. C. Chen*, “Nonwoven and Aligned Electrospun Multicomponent Luminescent Polymer Nanofibers: Effects of Aggregated Morphology on the Photophysical Properties”, *Nanotechnology*, 20, article no.: 375604 (2009)(**highlighted by nanotechweb, 2009/9/24**, SCI)
412. C. L. Liu, J. C. Hsu, W. C. Chen*, K. Sugiyama, and A. Hirao,* “Non-volatile Memory Devices Based on Poly(styrene) Derivatives with Electron-Donating Oligofluorene Pendent Moieties”, *ACS Appl. Mater. & Interface*, 1, 1974-1979(2009). (SCI)
413. K. Fuchise, R. Kakuchi, S. T. Lin, R. Sakai, S. I. Sato, T. Satoh, W. C. Chen, and T. Kakuchi,* “Control of Thermoresponsive Property of Urea End-Functionalized Poly(N-isopropylacrylamide) Based on the Hydrogen Bond Assisted Self-Assembly in Water”, *J. Polym. Sci. Polym. Chem.*, 47, 6259-6268(2009). (SCI)
414. C. C. Chueh, T. Higashihara, J. H. Tsai, M. Ueda,* and W. C. Chen*, “All-Conjugated Diblock Copolymer of Poly(3-hexylthiophene)-block -poly(3-phenoxyethylthiophene) For Field-Effect Transistor and Photovoltaic Applications”, *Org. Electron.*, 10, 1541-1548 (2009). (SCI)

-2008

415. H. W. Su and W. C. Chen,* “High Refractive Index Polyimide- Nanocrystalline Titania Hybrid Optical Materials”, *J. Mater. Chem.*, 18, 1139-1145 (2008). (SCI)
416. W. Y. Lee, C. W. Chen, C. C. Chueh, C. C. Yang, and W. C. Chen*, “Synthesis of New Fluorene-

- Indolocarbazole Alternating Copolymers for Light-Emitting Diodes and Field Effect Transistors”, *Polymer J.*, 40, 249-255 (2008). (SCI)
417. Y. Tian, C. Y. Chen, C. C. Yang, A. C. Young, S. H. Jang, W. C. Chen, and A. K. Y. Jen,* “2-(2'-Hydroxyphenyl) benzoxazole-containing Two-Photon Absorbing Chromophores as Sensors for Zinc and Hydroxide Ions”, *Chem. Mater.*, 20, 1977-1987 (2008). (SCI)
418. C. S. Li, W. C. Wu, Y. J. Sheng,* and W. C. Chen,* “Effects of Chain Architectures on the Surface Structures of Conjugated Rod-Coil Block Copolymer Brushes”, *J. Chem. Phys.*, 128, 154908 (2008). (SCI)
419. F. C. Chen,* J. L. Wu, S. S. Yang, K. H. Hsieh, W. C. Chen, “Cesium Carbonate as a Functional Interlayer for Polymer Photovoltaic Devices”, *J. Appl. Phys.*, 103, 103721 (2008). (SCI)
420. H. W. Su and W. C. Chen,* “Photosensitive High Refractive Index Poly(acrylic acid)-graft-Poly(ethylene glycol methacrylate)-Nanocrystalline Titania Hybrid Films”, *Macromol. Chem. Phys.*, 209, 1778-1786(2008). (**Featured on front cover page**, SCI)
421. K.-F. Cheng, C. C. Chueh, C. H. Lin, and W. C. Chen,* “Synthesis, Properties, and Field Effect transistor Characteristics of New Thiophene-[1,2,5]thiadiazolo[3,4-g]-quinoxaline -Thiophene based Conjugated Polymers”, *J. Polym. Sci. Part A: Polym. Chem.*, 46, 6305-6316 (2008). (SCI)
422. S. T. Lin, Y. C. Tung, and W. C. Chen,* “Synthesis, Structures and Multifunctional Sensory Properties of Poly[2,7-(9,9-dihexylfluorene)]-*block*-poly[2-(dimethylamino)ethyl methacrylate] Rod-Coil Diblock Copolymers”, *J. Mater. Chem.*, 18, 3985-3992 (2008). (SCI)
423. C. L. Liu, J. H. Tsai, W. Y. Lee, W. C. Chen,* and S. A. Jenekhe,* “New Didecyloxyphenylene-Acceptor Alternating Conjugated Copolymers: Synthesis, Properties, and Optoelectronic Device Applications”, *Macromolecules*, 41, 6952-6959 (2008). (SCI)
424. C. C. Kuo, Y. C. Tung, C. H. Lin, and W. C. Chen,* “Novel Luminescent Electrospun Fibers Prepared From Conjugated Rod-Coil Block Copolymer of Poly[2,7-(9,9-dihexylfluorene)]-*block*-Poly(methylmethacrylate)”, *Macromol. Rapid Commun.*, 29, 1711-1715 (2008). (**Featured on front cover page**, SCI)
425. F. C. Chen,* J. L. Wu, K. H. Hsieh, W. C. Chen, and S. W. Lee, “Polymer photovoltaic devices with highly transparent cathodes”, *Org. Electron.*, 9, 1132-1135 (2008). (SCI)
426. W. S. Chiang, C. H. Lin, B. Nandan, C. L. Yeh, M. H. Rahman, W. C. Chen, and H. L. Chen,* “Molecular Architecture Effect on the Self-Assembly Behavior of Comb-Coil Block Copolymers displaying Lamellae-within-with Lamellae Morphology“, *Macromolecules*, 41, 8138-8147 (2008). (SCI)
427. C. H. Lin, W. C. Chen,* and H. L. Chen*, “Hetero-arm Star Polystyrene-*block* -Poly(4-vinylpyridine) (PS-*b*-P4VP) :Multiple Morphologies in Dilute Solutions”, *Macromol. Chem. Phys.*, 209, 2349-2358(2008). (SCI)
428. C. C. Kuo, C. T. Wang, and W. C. Chen,* Highly Aligned Luminescent Electrospun Nanofibers Prepared From Polyfluorene/PMMA Blends: Fabrication, Morphology, Photophysical Properties, and Sensory Applications”, *Macromol. Mater. Eng.*, 293, 999-1008 (2008). (SCI)
429. C. H. Lin, Y. C. Tung, J. Ruokolainen, R. Mezzenga,* and W. C. Chen,* “Poly[2,7-(9,9-dihexylfluorene)]-*block*-Poly(2-vinylpyridine) Rod-Coil and Coil-Rod-Coil Block Copolymers: Synthesis, Morphology and Photophysical Properties in Methanol/THF Mixed Solvents”, *Macromolecules*, 41, 8759-8769 (2008). (SCI)

-2007

430. W. C. Wu, W. Y. Lee, C. L. Pai, W. C. Chen^{*}, C. S. Tuan, and J. L. Lin, "Photophysical and Electroluminescent Properties of Fluorene Based Binary and Ternary Donor-Acceptor Polymer Blends", *J. Polym. Sci. B: Polym. Phys.*, 45, 67-78 (2007). (SCI)
431. W. C. Wu, Y. Tian, C. Y. Chen, C. S. Lee, Y. J. Sheng, W. C. Chen^{*} and Alex K.-Y. Jen,^{*} "Theoretical and Experimental Studies on the Surface Structures of Conjugated Rod-Coil Block Copolymer Brushes", *Langmuir*, 23, 2805-2814 (2007). (SCI)
432. H. Y. Lin, G. S. Liou,^{*} W. Y. Lee, and W. C. Chen^{*}, "Poly(triarylamine):Synthesis, Properties, and Its Blend with Polyfluorene for White-Light Electroluminescence", *J. Polym. Sci. Polym. Chem.*, 45, 1727-1736 (2007). (SCI)
433. C. C. Yang, Y. Tian, C. Y. Chen, Alex K.-Y. Jen^{*} and W. C. Chen^{*}, "A Novel Benzoxazole-containing Poly(*N*-isopropylacrylamide) Copolymer as Multifunctional Sensing Materials", *Macromol. Rapid Commun.* 28, 894-899(2007). (SCI)
434. H. W. Su, W. C. Chen^{*} W. C. Lee, and J. S. King, "New Photocurable Acrylic/Silsesquioxane Hybrid Optical Materials: Synthesis, Properties, and Patterning", *Macromol. Mater. Eng.*, 292, 666-673 (2007). (SCI)
435. H. L. Chen,^{*} J. S. Lu, C. H. Yu, C. L. Yeh, U. S. Jeng, and W. C. Chen, "Tetragonally Packed Cylinder Structure via Hierarchical Assembly of Comb-Coil Diblock Copolymer", *Macromolecules*, 40, 3271-3276 (2007). (SCI)
436. G. S. Liou,^{*} Y. L. Yang, W. C. Chen, and Y. L. Oliver Su, "4-Methoxy-substituted Poly(triphenylamine):A P-type Polymer with Highly Photoluminescence and Reversible Oxidative Electrochromic Characteristics", *J. Polym. Sci. Polym. Chem.*, 45, 3292-3302(2007). (SCI)
437. C. H. Lee, W. C. Chen^{*} J. Y. Hsu, and H. L. Chen^{*}, "Effect of Molecular Architecture of Copolymer Template on the Morphology of Mesoporous Methylsilsesquioxane", *Polymer*, 48, 3546-3554 (2007). (SCI)
438. W. Y. Lee, K. F. Cheng, T. F. Wang, C. C. Chueh, W. C. Chen^{*} C. S. Tuan, and J. L. Lin, "Effects of Acceptors on the Electronic and Optoelectronic Properties of Fluorene Based Donor-Acceptor-Donor Copolymers", *Macromol. Chem. Phys.*, 208, 1919-1927 (2007). (SCI)
439. A. Babel, Y. Zhu, K. F. Chen, W. C. Chen, and S. A. Jenekhe,^{*} "Morphology, High electronic Mobility, and Ambipolar Charge Transport in Binary Blend of Donor and Acceptor Conjugated Polymers", *Adv. Funct. Mater.*, 17, 2542-2549 (2007). (SCI)
440. C. C. Kuo, C. H. Lin, and W. C. Chen^{*}, "Morphology and Photophysical Properties of Light-Emitting Electrospun Nanofibers Prepared From Poly(fluorene) Derivative/PMMA Blends", *Macromolecules*, 40, 6959-6966 (2007). (**Highlighted by "Heart Cur" of ACS, Sept. 10, 2007**, SCI)
441. S. T. Lin, C. W. Chiu, W. C. Chen,^{*} and J. J. Lin,^{*} "Thermoresponsive Behaviors of Poly(oxypropylene)-Amidoamine Functionalized Carbon Nanotubes", *J. Phys. Chem. C*, 111, 13016-13021(2007). (SCI)
442. K.-F. Cheng, C. L. Liu, and W. C. Chen^{*}, "Small Band Gap Conjugated Polymers Based on Thiophene-Thienopyrazine Copolymers", *J. Polym. Sci. Polym. Chem.*, 45, 5872-5883(2007). (SCI)

-2006

443. Y. C. Tung, W. C. Wu, and W. C. Chen^{*}, "Morphological Transformation and Photophysical Properties of Rod-Coil Poly[2,7-(9,9-dihexylfluorene)]-*block*-poly(acrylic acid) (PF-*b*-PAA) in Solution",

Macromol. Rapid Commun., 27, 1838-1844 (2006). (SCI)

444. W. C. Wu, C. L. Liu, and W. C. Chen,* “Synthesis and Characterization of New Fluorene-Acceptor Alternating and Random Copolymers for Light-Emitting Applications”, *Polymer*, 47, 527-538(2006). (SCI)
445. C. L. Pai, C. L. Liu, W. C. Chen,* and S. A. Jenekhe, “Electronic Structure and Properties of Alternating Donor-Acceptor Conjugated Copolymers: 3,4-Ethylenedioxythiophene (EDOT) Copolymers and Model Compounds”, *Polymer*, 47, 699-708(2006). (SCI)
446. B Nandan, C. H. Lee, H. L. Chen,* and W. C. Chen, “Molecular Architecture Effect on Microphase Separation in Supramolecular Comb-Coil Complexes of Polystyrene-*block*-Poly(2-vinylpyridine) with Dodecylbenzene Sulfonic Acid: A_nB_n Hetero-Arm Star Copolymer”, *Macromolecules*, 39, 4460-4468(2006). (SCI)
447. W. C. Wu, W. Y. Lee, and W. C. Chen*, “New Fluorene-Acceptor Random Copolymers: Toward Pure White Light Emission from a Single Polymer”, *Macromol. Chem. Phys.*, 207, 1131-1138 (2006) **(Featured on front cover page, SCI)**
448. C. C. Yang, Y. Tian, Alex K.-Y. Jen,* and W. C. Chen,* “New Environmental-Responsive Fluorescent NIPAA Copolymer and Its Application on DNA Sensing”, *J. Polym. Sci. Polym. Chem.*, 44, 5495-5504 (2006). (SCI)
449. G. S. Liou,* S. H. Hsiao, W. C. Chen, and H. J. Yen, “A New Class of High T_g and Organosoluble Aromatic Poly(amine-1,3,4-oxadiazole)s Containing Donor and Acceptor Moieties for Blue Light-Emitting Materials”, *Macromolecules*, 39, 6036-6045.(2006). (SCI)
450. W. C. Wu, and W. C. Chen*, “Theoretical Electronic Structure and Properties of Alternating Fluorene-Acceptor Conjugated Copolymers and Their Model Compounds”, *J. Polym. Res.*, 13, 441-449(2006). (SCI)

-2005

451. F. C. Tsai, C. C. Chang, C. L. Liu, W. C. Chen,* and S. A. Jenekhe*, “New Thiophene-Linked Conjugated Poly(azomethine)s: Theoretical Electronic Structure, Synthesis, and Properties”, *Macromolecules*, 38, 1958-1966 (2005). (SCI)
452. L. H. Lee and W. C. Chen,* “Organic-Inorganic Hybrid Materials from a New Octa(2,3-epoxypropyl)silsesquioxane with Diamines”, *Polymer*, 46, 2163-2174 (2005). (SCI)
453. C. L. Liu, F. C. Tsai, C. C. Chang, K. H. Hsieh, J. L. Lin, and W. C. Chen,* ” Theoretical Analysis on the Electronic Properties of Coplanar Conjugated Poly(azomethines)”, *Polymer*, 46, 4950-4957(2005). (SCI)
454. J. P. Hsu,* S.-H. Hung, and W. C. Chen, “ A Theoretical Model on Pore Size Distribution in Low Dielectric Constant Nanoporous Silica Films”, *Thin Solid Films*, 473, 185-190 (2005). (SCI)
455. M. S. Wei, C. H. Lee, and W. C. Chen,* “Tunable Near Infrared Optical Properties from Trialkoxycapped Poly(methyl methacrylate)-Silica Waveguide Materials “, *ACS Symp. Ser.*, 888, 307-319(2005).
456. Y. Y. Yu and W. C. Chen,* “Morphology and Properties of MEH-PPV /silica nanoparticle hybrid films”, *Polym. Int.*, 54, 500-505 (2005). (SCI)
457. C. C. Chang, C. L. Pai, W. C. Chen,* and S. A. Jenekhe,* “Spin Coating of Conjugated Polymers for Electronic and Optoelectronic Applications”, *Thin Solid Films*, 479, 254-260 (2005). (SCI)
458. Y. Chang, H.-Y. Hsueh, W. C. Chen, and C. I. Huang,* , “Effects of Solvent Addition on Body -

Centered Cubic Spheres of Block Copolymers: 1. Neutral Solvent”, *Polymer*, 46, 3942-3951 (2005). (SCI)

459. Y. Chang, W. C. Chen, Y. J. Sheng, S. Jiang, and H. K. Tao,* “Intramolecular Janus Segregation of a Heteroarm Star Copolymer”, *Macromolecules*, 38, 6201-6209 (2005). (SCI)
460. M. S. Wei, L. H. Lee, C. C. Chang, and W. C. Chen*, “Tunable Near Infrared Optical Properties from PMMA-Inorganic Oxide Waveguide Materials”, *J. Appl. Polym. Sci.*, 98, 1224-1228 (2005). (SCI)
461. Y. W. Wang, C. T. Yen, and W. C. Chen*, “Photosensitive Polyimide/Silica Hybrid Optical Materials: Synthesis, Properties, and Patterning”, *Polymer*, 2005, 46, 6959-6967. (SCI)
462. C. L. Liu, and W. C. Chen*, “Fluorene Based Conjugated Poly(azomethine)s: Synthesis, Photophysical Properties, and Theoretical Electronic Structures”, *Macromol. Chem. Phys.*, 206, 2212-2222(2005). (SCI)
463. B. Nandan, C. H. Lee, H. L. Chen,* and W. C. Chen* , “Molecular Architecture Effect on the Microphase Separations in Supramolecular Comb-Coil Complexes of Polystyrene-*block*- Poly(2-vinylpyridine) with Dodecylbenzene Sulfonic Acid: (AB)_nA_n Block-Arm Star Copolymer”, *Macromolecules*, 38, 10117-10126 (2005). (SCI)
464. R. D. Champion, K. C. Cheng, C. L. Pai, W. C. Chen,* and S. A. Jenekhe,* “ Electronic Properties and Field Effect Transistors of Thiophene Based Donor-acceptor Conjugated Copolymers”, *Macromol. Rapid Commun.*, 26, 1835-1840 (2005). **(Featured on front cover page, SCI)**

-2004

465. W. C. Chen*, W. C. Liu, and P. F. Chen, “Synthesis and Characterization of Oligomeric Phenylsilsesquioxane- -Titania Hybrid Optical Thin Films”, *Mater. Chem. Phys.*, 83, 71-77 (2004). (SCI)
466. W. C. Liu, Y. Y. Yu, and W. C. Chen,* “Structural Control and Properties of Low Dielectric Constant Poly(hydrogen silsesquioxane) (PHSSQ) Precursors and Their Thin Films”, *J. Appl. Polym. Sci.*, 91, 2653-2660 (2004). (SCI)
467. W.-J. Lin, W. C. Chen*, W. C. Wu, Y.-H. Niu, and A. K. Y. Jen, “ Synthesis and Properties of Star-like Polyfluorenes with a Silsesquioxane Core”, *Macromolecules*, 37, 2335-2341 (2004). (SCI)
468. K.-H. Hsieh,* C. H. Kuo, C. A. Dai, W. C. Chen, T. C. Peng, G. H. Ho, “Synthesis and Kinetic Studies of UV-Curable Urethane-acrylates”, *J. Appl. Polym. Sci.*, 91, 3162-3166 (2004). (SCI)
469. W. C. Chen,* C.-L. Liu, C.-T. Yen, F.-C. Tsai, C. J. Tonzola, N. Olsen, and S. A. Jenekhe, “Theoretical and Experimental Characterization of Small Band Gap Poly(3,4-ethylenedioxythiophene methines)”, *Macromolecules*, 37, 5959-5964 (2004). (SCI)
470. W. J. Lin and W. C. Chen,* “Synthesis and Characterization of Poly(PMDA-ODA)-Methyl Silsesquioxane Hybrid Optical Thin Films”, *Polym. Int.*, 53, 1245-1252 (2004). (SCI)
471. C. T. Yen, Y. Chang, and W. C. Chen,* “ Effect of Substitution on the Near Infrared Optical Properties of Benzene Derivatives”, *Jpn. J. Appl. Phys.*, 43, No.8A, 5297-5301 (2004). (SCI)
472. C. C. Yang, P. T. Wu, W. C. Chen,* and H. L. Chen, “Low Dielectric Constant Nanoporous Poly(methyl silsesquioxane) By The Tempating of Amphiphilic Block Copolymer, PS-*b*-P2VP”, *Polymer*, 45, 5691-5702 (2004). (SCI)
473. Y. J. Sheng, W. J. Lin, and W. C. Chen,* “Network Structures of Polyhedral Oligomeric Silsesquioxane based Nanocomposites: A Monte Carlo Study”, *J. Chem. Phys.*, 121, 9693-9701 (2004). (SCI)

474. Y. Chang, C. Y. Chen, and W. C. Chen,* “ Poly(Methyl silsesquioxane) (MSSQ)/ Amphiphilic Block Copolymer Hybrids and Their Porous Derivatives: PS-*b*-PAA and PS-*b*-PMSMA”, *J. Polym. Sci. Polym. Phys.*, 42, 4466-4477 (2004). (SCI)
475. Y. Zhu, C.-T. Yen, S. A. Jenekhe,* and W. C. Chen, “ Poly(pyrazinoquinoxaline)s: New n-Type Conjugated Polymers with Highly Reversible Reduction and High Electron Affinity”, *Macromol. Rapid Commun.*, 25, 1829-1834 (2004). (SCI)

-2003

476. C.-T. Yen and W. C. Chen,* “Effect of Bridged Group on The Near Infrared Optical Properties of Polyimide Derivatives”, *Macromolecules*, 36, 3315 (2003). (SCI)
477. C. C. Yang, K. H. Hsieh, and W. C. Chen,* “A New Interpretation of The Kinetic Model for The Imidization Reaction of PMDA-ODA and BPDA-PDA Poly(amic acid)s”, *Polyimides and Other High Temperature Polymers*, Vol.2, Ed. By K. L. Mittal., 37-45 (2003).
478. Y. Y. Yu, C.-Y. Chen, and W. C. Chen,* “Synthesis and Characterization of Organic-inorganic Hybrid Thin Films Form Poly(acrylic) and monodispersed Colloidal Silica” *Polymer*, 593-601 (2003). (SCI)
479. C. H. Lee and W. C. Chen,* “Synthesis and Optical Characteristics of Trialkoxycapped Poly(methyl methacrylate)-Silica Hybrid Films”, *Tamkang J. Sci. Technol.*, 6, 73-80 (2003).
480. M. S. Wei and W. C. Chen,* “Theoretical Analysis on the Bandwidth of Gradient -index Polymeric Rods Prepared by a Centrifugal Field”, *Appl. Opt.*, 42, 2174-2180 (2003). (SCI)
481. C. C. Chang, G. S. Wei, and W. C. Chen,* “Spin Coating of Polyimide-Silica Optical Thin Films”, *J. Electrochem. Soc.*, 150, F147-F150 (2003). (SCI)
482. C. C. Chang, K. H. Wei, Y. L. Chang, and W. C. Chen,* “Synthesis and Optical Properties of Poly(BPDA-ODA)/Silica Hybrid Thin Films”. *J. Polym. Res.*, 10, 1-6 (2003). (SCI)
483. W. C. Chen,* J.-H. Liu, Y. Chang, M. H. Wei, and H.-W. Su, “Gradient-index Polymer Optical Fibers (GI POFs): Analysis of fabrication Techniques“ in “*Polymer Optical Fibers*“, Ed. By H. S. Nalwa, Chapter 2, (2003). (Invited book chapter)
484. Y. Y. Yu and W. C. Chen,* “Synthesis and Characterization of Organic-inorganic Hybrid Thin Films Form Acrylic Polymers and water Based Colloidal Silica”, *Mater. Chem. Phys.*, 82, 388-395 (2003). (SCI)
485. W. J. Lin, C. L. Liu, and W. C. Chen,* “ A General Model for Predicting the Baking Behavior of a Polymer Thin Films form Poly(vinyl acetate)/Methanol”, *J. Chin. Inst. Chem. Engr.*, 34, 471-479 (2003). (SCI)
486. W. C. Liu, Y. Y. Yu, and W. C. Chen,* “Nanoporous Silica Films Derived From Structurally Controllable Poly(Silsesquioxanes) Oligomers By Templating”, *Mat. Res. Soc. Symp. Proc.*, 776, E.7.10 (2003).
487. C. T. Yen, W. C. Chen,* D. J. Liaw, H. Y. Lu, “Synthesis and Properties of New Organosoluble Polyimide/Silica Hybrid Thin Films Through Both Intrachain and Interchain Bonding”, *Polymer*, 44, 7079-7087 (2003). (SCI)
488. C. T. Yen, and W. C. Chen,* “Effects of Molecular Structures on The Properties of Polyimides and Photopatternable Polyimide/Silica for Optical Waveguide Applications”, *Proc. SPIE* 5212, 163-170 (2003).

-2002

489. C. C. Yang, and W. C. Chen,* “The Structures and Properties of Hydrogen Silsesquioxane (HSQ) By

Thermal Curing”, *J. Mater. Chem.*, 12, 1138-1141 (2002). (SCI)

490. L. H. Lee, W. C. Chen,* and W. C. Liu, “Structural Control of Oligomeric Methyl Silsesquioxane Precursors and Their Thin Film Properties”, *J. Polym. Sci. Polym. Chem.*, 40, 1560-1571 (2002). (SCI)
491. C. C. Chang, and W. C. Chen*, “Synthesis and Optical properties of Polyimide-Silica Hybrid Thin Films”, *Chem. Mater.*, 14, 4242-4248 (2002). (SCI)
492. W. C. Chen,* L. H. Lee, B.-F. Chen, and C.-T. Yen, “ Synthesis and Characterization of Poly(methyl silsesquioxanes)-titania Hybrid Optical Thin Films”, *J. Mater. Chem.*, 12, 3644-3648 (2002). (SCI)
493. W. C. Liu, C. C. Yang, W. C. Chen*, B.-T. Dai, and M. S. Tsai, “The Structural Transformation and Properties of Spin-on Poly(silsesquioxane) Films By Thermal Curing” *J. Non. Cryst. Solids.*, 311, 233-240 (2002). (SCI)

-2001

494. L. H. Lee, and W. C. Chen,* “High Refractive Index Thin Films Prepared From Trialkoxysilane-capped Poly(methyl methacrylate)-Titania Hybrid Materials”, *Chem. Mater.*, 13, 1137-1142 (2001). (SCI)
495. W. C. Chen, Y Chung, and W. T. Chiu, “Synthesis and Characterization of An Acrylic Tetrapolymer for 193 nm Deep UV Photoresists”, *J. Appl. Polym. Sci.*, 79, 853-863 (2001). (SCI)
496. J.-P. Hsu,* S.-H. Lin, W. C. Chen, and S. Tseng, “Mathematical Analysis on Soft Baking in Photolithography”, *J. Appl. Phys.*, 89, 1861-1865 (2001). (SCI)
497. Y. Chang, W. C. Wu, and W. C. Chen,* “Theoretical Analysis on Spin Coating of Polyimide Precursor Solutions”, *J. Electrochem. Soc.*, 148(4), F77-F81 (2001). (SCI)
498. W. J. Lin, C. J. Yang, and W. C. Chen,* “Processing, Properties, and CMP Characteristics of A Spin-On Polymer: HSQ”, *Mat. Res. Soc. Symp. Proc.*, 612, D5.1(2001).
499. W. J. Lin, and W. C. Chen,* “ Theoretical Analysis on the Soft baking Process of various Polymer Solutions”, *J. Electrochem. Soc.*, 148(11), G620-G626 (2001). (SCI)
500. C. C. Chang, and W. C. Chen,* “High Refractive Index Thin Films Prepared From Aminoalkoxysilane Capped Pyromellitic Dianhydride-Titania Hybrid Materials”, *J. Polym. Sci. Polym. Chem.*, 39, 3419-3427 (2001). (SCI)
501. Y. Chang, W. C. Chen,* M.-S. Wei, and W.-C. Wu, “Analysis of A Coextrusion Process for Preparing Gradient-index Polymer Optical Fibers”, *ACS Symp. Ser.*, 795, 165-175 (2001).
502. C. C. Yang, W. C. Chen,* L. M. Chen, and C. J. Wang, “Characterization of Poly(silsesquioxanes) by Thermal Curing” *Proc. NSC A*, 25, 339-343 (2001).

-2000

503. W. C. Chen* and S.-J. Lee, “Synthesis and Characterization of Poly(methyl methacrylate)-Silica Hybrid Optical Thin Films”, *Polym. J.*, 32, 67-72 (2000). (SCI)
504. W. C. Chen,* and C. T. Yen, “Effect of Slurry Chemistry on Chemical-Mechanical Polishing of Low Dielectric Constant Polysiloxanes: HOSP and MSQ”, *J. Vac. Sci. Technol. B*, 18, 201-207 (2000). (SCI)
505. W. C. Chen* and W. J. Wang, “Analysis of Thermosetting Acrylic Polymer Light Conduits”, *J. Appl. Polym. Sci.*, 76, 2098-2104 (2000). (SCI)
506. W. C. Chen,* C. T. Yen, B.-T. Dai, and M. S. Tsai, “Properties and Chemical-Mechanical Polishing Characteristics of Low Dielectric Constant Polymer Films: PAE-2 and Flare 2.0”, *J. Chin. Inst. Chem. Eng.*, 31(2), 253-260 (2000). (SCI)
507. W. C. Chen,* Y. Chang, and M.-S. Wei, “Theoretical Analysis of Gradient-index Polymeric Rods

Prepared by A Centrifugal Field”, *J. Polym. Sci. Polym. Phys.*, 38, 1764-1772 (2000). (SCI)

-1999

508. W. C. Chen,* S. C. Lin, B.-T. Dai, and M.-S. Tsai, “Chemical-Mechanical Polishing of Low Dielectric Constant Materials: HSQ and MSQ”, *J. Electrochem. Soc.*, 146(8), 3004-3009 (1999). (SCI)
509. B.-T. Liu, W. C. Chen, and J.-P. Hsu, “Mathematical Modeling of a Co-extrusion Process for Preparing Gradient-index Polymer Optical Fibers”, *Polymer*, 40, 1451-1457 (1999). (SCI)
510. B. T. Liu, M.-Y. Hsieh, W. C. Chen, and J.-P. Hsu, “Gradient-Index Polymer Optical Fiber Preparation through a Co-Extrusion Process”, *Polym. J.*, 31, 233-237 (1999). (SCI)
511. W. C. Chen,* and C. C. Chang, “Synthesis and Characterization of Large Diameter Polymer Light Conduits”, *J. Mater. Chem.*, 9, 2307-2312 (1999). (SCI)
512. W. C. Chen,* Y. Chang, and J. P. Hsu, “Theoretical Analysis on a Multi-layer Co-extrusion Process for Preparing Gradient-index Polymer Optical Fibers”, *J. Phys. Chem. B*, 103(36), 7584-7590(1999). (SCI)
513. W. C. Chen* and C.-T. Yen, “Chemical-Mechanical Polishing of Low Dielectric Constant Poly(silsesquioxane): HSQ, *J. Polym. Res.*, 6(3), 197-202 (1999). (SCI)
514. W. C. Chen,* W. J. Wang, and C. Y. Liao, “Synthesis and Characterization of Three-Component Thermosetting Acrylic Polymer Light Conduits”, *J. Polym. Res.*, 6, 161-165 (1999). (SCI)
515. W. C. Chen,* S.-J. Lee, L.-H. Lee, and J.-L. Lin, “Synthesis and Characterization of Trialkoxysilane-capped Poly(methyl methacrylate)-Titania Hybrid Optical Thin Films”, *J. Mater. Chem.*, 9, 2999-3003 (1999). (SCI)

-1998

516. W. C. Chen* and S. A. Jenekhe, “Model Compound Studies of Small bandgap Conjugated Poly(Heteroarylene Methines).”, *Macromol. Chem. Phys.*, 199, 655-666 (1998) (SCI)
517. W. C. Chen,* B. C. Ho, C. C. Chang, and S. J. Lee, (1998), “Study on the Preparation of Gradient-index Polymer Optical Fibers”, *Bull. Coll. Eng. NTU*, 72, 33-44 (1998).
518. W. C. Chen,* S. J. Lee, and B. C. Ho, “Diffusion of Acrylic Monomers in Poly(methyl methacrylate)”, *J. Polym. Res*, 5, 187-191 (1998). (SCI)
519. S.-H. Lin, B.-T. Liu, W. C. Chen, and J.-P. Hsu,* “Mathematical Modeling of Soft-Baking in Photoresist Processing”, *J. Electrochem. Soc*, 145, 4256-4259 (1998). (SCI)

-1997

520. W. C. Chen,* C. C. Chang, and N. H. Wang, “Characterization of Polymer Light Conduits from Different Manufacturing Processes”, *J. Appl. Polym. Sci.*, 66, 2103-2109 (1997). (SCI)
521. W. C. Chen,* H. Y. Lin, “Synthesis and Characterization of Polymer Light Conduits”, *Polym. Bull.*, 36, 51-58 (1996). (SCI)
522. W. C. Chen,* J. H. Chen, S. Y. Yang, J. Y. Cherng, Y. H. Chang, and B. C. Ho, “Preparation of Gradient-Index (GRIN) Polymer Fibers for Imaging Applications”, *J. Appl. Polym. Sci.*, 60, 1379-1383(1996). (SCI)

-1995

523. W. C. Chen and S. A. Jenekhe,* , “Small Bandgap Conducting Polymers Based on Conjugated Poly(Heteroarylene Methines). 1. Precursor Poly(Heteroarylene Methylenes)”, *Macromolecules*, 28, 454-464 (1995). (SCI)
524. W. C. Chen and S. A. Jenekhe,* , “Small Bandgap Conducting Polymers Based on Conjugated

Poly(Heteroarylene Methines). 2. Synthesis, Structure, and Properties”, *Macromolecules*, 28, 465-480 (1995). (SCI)

525. W. C. Chen* and S. A. Jenekhe, “The Electrochemical Properties of Polyaniline Derivatives: Poly(4,4’-diphenylamine methylenes) and Poly(4, 4’-diphenylimine methines)”, *Polym. Bull.*, 34, 63-69 (1995). (SCI)
526. T. Wu, S. Lee, and W. C. Chen, “Acetone Absorption in Irradiated Polycarbonate”, *Macromolecules*, 28, 5751-5757 (1995). (SCI)
527. B. C. Ho, J. H. Chen, W. C. Chen*, S. Y. Yang, J. J. Chen, and T. W. Tseng, “Gradient-Index Polymer Fibers Prepared by Extrusion”, *Polymer J.*, 27, 310-313 (1995).
528. S. Y. Yang, Y. H. Chang, B. C. Ho, W. C. Chen*, T. W. Tseng, “A Novel Method for Preparing Gradient Index (GI) Plastic Rods - Initiator Diffusion Technique”, *Polym. Bull.*, 34, 87-91 (1995). (SCI)
529. S. Y. Yang, Y. H. Chang, B. C. Ho, W. C. Chen*, T. W. Tseng, “Studies on The Preparation of Gradient-Index Polymeric Rods by Interfacial-Gel Copolymerization”, *J. Appl. Polym. Sci.*, 56, 1179-1182 (1995). (SCI)
530. W. C. Chen*, J. H. Chen, S. Y. Yang, J. J. Chen, Y. H. Chang, B. C. Ho, and T. W. Tseng, “Preparation and Characterization of Gradient-Index Polymer Fibers”, in *Photonic and Optoelectronic Polymers*, Ed. by S. A. Jenekhe, and K. J. Wynne, *ACS Symposium Series*, Vol. 672, 71-78 (1995).

-1994

531. W. C. Chen, S. A. Jenekhe,* J. S. Meth, and H. Vanherzeele, “Refractive Index and Nonlinear Optical Properties of Polyanilines Derivative”, *J. Polym. Sci. Polym. Phys.*, 32, 195-200 (1994). (SCI)

-1992

532. W. C. Chen and S. A. Jenekhe,* , “New polyaniline derivatives: poly(4,4'-diphenylamine methylenes) and poly(4,4'-diphenylimine methines)”, *Macromolecules*, 25, 5919-5926 (1992). (SCI)
533. J. S. Meth, H. Vanherzeele, W. C. Chen, and S. A. Jenekhe,* “Interpreting The Dispersion of $\chi^{(3)}(-3\omega; \omega, \omega, \omega)$ of polythiophenes”, *Synth. Met.*, 49-50, 59-69 (1992). (SCI)

-1990

534. S. A. Jenekhe,* W. C. Chen, S. K. Lo, and S. R. Flom, “ Large Third-Order Optical Nonlinearities in Organic Polymer Superlattices”, *Appl. Phys. Lett.*, 57, 126-128 (1990). (SCI)
535. S. A. Jenekhe,* and W. C. Chen, “Organic Polymeric Semiconductor Superlattices”, *Mat. Res. Soc. Symp. Proc.*, 173, 589-594 (1990).
536. S. A. Jenekhe,* and W. C. Chen, “Large Cubic Nonlinear Optical Properties of Organic Polymeric Semiconductor Superlattices”, *Mat. Res. Soc. Symp. Proc.*, 173, 595-600 (1990).