

Chen, Wen-Chang (陳文章)

Professor

Education

B.S. in Chemical Engineering
National Taiwan University, 1985
Ph.D. in Chemical Engineering
University of Rochester, 1993

Research and Professional Interests

Polymers for Electronics

- Conjugated Polymers for Optoelectronics
LED, Transistors, Solar Cells, Memory

Optical Polymers

-Luminescent Polymer Nanofibers
-Organic-Inorganic Hybrid Thin Films

Amiphilic Block Copolymers

-Living anionic polymerization and ATRP
-Nanostructured Materials

Projects

1. 不同構形電子施體-受體共軛嵌段高分子系統:合成、形態、光電性質及元件應用, sponsored by 國科會, NTD 2286000, 8/1/2009~7/31/2010.
2. 高分子學門研究發展及推動規劃小組計畫(2/3), sponsored by 國科會, NTD 1149000, 12/1/2009~11/30/2010.
3. 紡織品尖端應用技術研發計畫分項計畫:高導電定向性之靜電紡絲奈米纖維於智慧型紡織品之應用 (II), sponsored by 紡綜所, NTD 600000, 4/1/2009~12/31/2009.

Journal Papers

1. 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.*, Chapter 23. (2005) (EI)
2. 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) (合著)
3. 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, 1598-1966 (2005). (SCI)
4. 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)
5. 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, EI)
6. Y. Y. Yu and **W. C. Chen**, "Morphology and Properties of MEH-PPV /silica nanoparticle hybrid films", *Polym. Int.*, 54, 500-505 (2005). (SCI, EI)

7. 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)
8. 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, EI) (工合著)
9. Y. Chang, **W. C. Chen**, Y. J. Sheng, S. Jiang, H. K. Tao, "Intramolecular Janus Segregation of a Heteroarm Star Copolymer", *Macromolecules*, 38, 6201-6209 (2005). (SCI, EI) (合著)
10. 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, EI)
11. C. T. Yen, Y. W. Wang, and **W. C. Chen**, "Low Volume Shrinkage Photo-patternable Polyimide/Silica Hybrid Materials for Optical Waveguides", *Polymer*, 46, 6959-6967(2005). (SCI, EI)
12. 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)
13. 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, EI)
14. 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). (SCI, EI) (**feature on issue cover page**)
15. 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, EI)
16. 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, EI)
17. 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, EI)
18. 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) (SCI, EI) (feature on issue cover page)
19. 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, EI)
 20. G.-S. Liou, S.-H. Hsiao, **W. C. Chen**, and H.-J. Yen, “A New Class of High Tg 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, EI)
 21. 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, EI)
 22. 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, EI)
 23. 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. Part B: Polym. Phys.*, 45, 67-78(2007). (SCI, EI)
 24. 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, EI) (合著)
 25. 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, EI)
 26. 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, EI)
 27. H. W. Su, **W. C. Chen**, W. C. Lee, J. S. King, “ New Photocurable Acrylic/Silsesquioxane Hybrid Optical Materials: Synthesis, Properties, and Patterning”, *Macromol. Mater. Eng.*, 292, 666-673 (2007). (SCI, EI)
 28. H. L. Chen, J. S. Lu, C. H. Yu, C. L. Yeh, U. S. Jeng, **W. C. Chen**, “Tetragonally Packed Cylinder Structure via Hierarchical Assembly of Comb-Coil Diblock Copolymer”, *Macromolecules*, 40, 3271-3276 (2007). (SCI, EI)
 29. G. S. Liou, Y. L. Yang, **W. C. Chen**, 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, EI)

30. 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, EI)
31. 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, EI)
32. 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, EI)
33. 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). (SCI, EI) (**Highlighted by "Heart Cut" of ACS, Sept. 10, 2007**)
34. 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, EI) (工合著)
35. 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, EI)
36. H. W. Su and **W. C. Chen**, "High Refractive Index Polyimide-Nanocrystalline Titania Hybrid Optical Materials", *J. Mater. Chem.*, 38, 1139-1145(2008). (SCI, EI)
37. 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, EI)
38. 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, EI)
39. 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, EI) (合著)
40. 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, EI) (合著)
41. 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). (SCI, EI) (**feature on issue cover page**)
42. 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, EI)
43. S. T. Lin, Y. C. Tung, **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, EI)
 44. 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, EI)
 45. 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). (**Feature on issue cover**) (SCI, EI)
 46. 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, EI)(合著)
 47. 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, EI)
 48. 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, EI)
 49. 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, EI)
 50. 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, EI)
 51. 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, EI)
 52. . 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, EI)
53. 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, 736-741 (2009). (SCI, EI)
54. 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, EI)
55. H. W. Su, and **W. C. Chen**, “Nanoporous Poly(Methyl Silsesquioxane) Films using Core-Shell Silsesquioxane as Porogen”, *Mater. Chem. Phys.*, 114, 63-68(2009). (SCI, EI)
56. 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, EI) (工合著)
57. 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, EI)
58. 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). (EI)
59. Yi-Chih Tung and **Wen-Chang 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). (SCI, EI)(invited research article)
60. 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-ethylenedioxy pyrrole)”, *Polymer J.*, 41, 363-369 (2009). (SCI, EI)
61. 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, EI)
62. 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, EI)
63. 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, EI)
64. 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, EI)
 65. 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, EI)
 66. H. W. Chang, K. H. Lin, C. C. Chueh, G. S. Liou, and **W. C. Chen**, “New P-type of Poly(4-methoxy-triphenylamine)s Derived by Coupling Reactions: Synthesis, Electrochromic Behaviors, and Hole Mobility”, *J. Polym. Sci. Polym. Chem.*, 47, 4037-4050(2009) (SCI, EI)
 67. 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, EI)
 68. 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, EI)
 69. C. Li, J. H. Hsu, K. Sugiyama, A. Hirao, **W. C. Chen**, and 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(2009) (SCI, EI)
 70. 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, EI)
 71. 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, EI)
 72. 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*, 37, article no.: 375604 (2009) (SCI, EI)
 73. 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).

74. 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, EI)
75. 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, EI)
76. 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, EI)
77. 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, EI)
78. 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, EI)
79. Y. Tian, C. Y. Chen, H. L. Yip, W. C. Wu, **W. C. Chen**, and Alex K.-Y. Jen, "Synthesis, Nanostructure, Functionality, and Application of Polyfluorene-block -Poly(Nisopropylacrylamide)", *Macromolecules*, in press (2010). (SCI, EI)
80. 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 Alex 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*, in press (2010).(SCI, EI)
81. 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*, in press (2010). (SCI, EI)(工合著)
82. 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 Alex K.-Y. Jen, "Enhancement of Aggregation-Induced Emission in Dye-encapsulated Polymeric Micelles for Bioimaging", *Adv. Funct. Mater.*, in press (2010). (SCI, EI)
83. 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"-vinyl-triphenylamine) Host Material for Single-Layer Ir-complex Phosphorescent Light Emitting Devices", *Polym. J.*, in press (2010).
84. 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*, in press (2010) (SCI, EI)