

# Curriculum Vitae

## Yi Pang

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### Education

- 1991-1993 **Postdoctoral Fellow**, Ames Laboratory (USDOE), Iowa State University (mentor: Professor Thomas J. Barton)
- 1986-1990 **Ph.D.** in Organic Chemistry, Iowa State University, Ames, Iowa.  
Thesis: *Exploring Novel Silicon-Containing Polymers: From Preceramic Polymers to Conducting Polymers with Nonlinear Optical Properties.*
- 1983-1985 Chemistry Department, Shandong University. Graduate study on silicon-containing polymeric materials.
- 1977-1981 **B.S.** in Chemistry, Zhengzhou University, China

### Professional Employment

- 2013-present Professor, The Lester E. and Kathleen A. Coleman Chair, Department of Chemistry, University of Akron
- 2005-2013 Associate Professor, The Lester E. and Kathleen A. Coleman Chair, Department of Chemistry, University of Akron (with tenure).
- 2005-present The Maurice Morton Institute of Polymer Science
- 2007-2013 Haitian Scholarship, Dalian University of Technology, Dalian, P. R. China
- 2000-2005 Associate Professor, Department of Chemistry, Clark Atlanta University (with tenure)
- 1994 - 2000 Assistant Professor, Department of Chemistry, Clark Atlanta University.
- 1994-2005 Center for High Performance Polymers and Composites (Supported by National Aeronautics and Space Administration)
- 1991-1993 Postdoctoral Research Fellow at Ames Laboratory (USDOE), Iowa State University: Conducted research to develop novel polymeric precursors for silicon carbide fibers and films; Synthesized and characterized strained six-membered cyclic organometallic alkynes and six-membered organometallic cyclic allenes.
- 1982-1983 Henan Institute of Chemical Research. Research Associate. Participated the study of interaction between the cellulose-based polymers and leathers.

### Research Interests

- Develop synthetic methods for benzoxazole derivatives, and to investigate the excited-state intramolecular proton transfer.
- Develop molecular probes that emit in near infrared region (700-1000 nm) for fluorescent imaging applications.
- Design and synthesis of novel chemical probes for biologically important species including metal cations (e.g.  $Zn^{2+}$  and  $Cu^+$ ), anions (e.g. ATP, phosphates), and proteins.
- Design and synthesis of novel  $\pi$ -conjugated materials with high luminescence; Seeking hybrid materials which combine the optical stability and performance of both inorganic and organic materials.
- Modification of the polymer chain rigidity for biomedical applications, such as artificial muscle and drug delivery; Development of new polymeric fluorescent materials with reversible gelation properties.
- Correlation between the chain microstructures and physical properties of polymers; Seeking specific interaction to isolate single-walled carbon nanotubes (SWNTs) of unique chirality.
- Elucidation of electronic band structures of  $\pi$ -conjugated molecules for fundamental understanding and potential laser applications.
- Developing new polymeric materials from renewable furan-based monomers.

## Teaching

Taught the following courses since 1994:

Advanced Organic Synthesis (UA, Fall 2016)  
Spectroscopic Identification of Organic Compounds (UA, Fall 2014, 2015)  
*Mechanistic & Synthetic Organic Chemistry (UA, Graduate, since 2005-)*  
*Organic Chemistry Lecture I (UA, Undergraduate, 2009)*  
*Organic Chemistry and Laboratory (UA, Undergraduate, since 2005);*  
*Physical Chemistry Laboratory (Undergraduate at CAU);*  
*Physical Organic Chemistry (Graduate at CAU);*  
*Mechanistic Organic Chemistry (Graduate at CAU);*  
*Synthetic Organic Chemistry (Graduate at CAU);*  
*Polymer Characterization Techniques (Light scattering section, Graduate at CAU);*

## Patents

1. U.S. Patent No. 5,115,062 (May 1992) "Nonlinear optical and conductive polymeric material" (T. J. Barton, S. Ijadi-Magsoodi, Yi Pang).
2. U.S. Patent No. 5,241,029 (August 1993) "Diorganosilacetylene-alt-diorganovinylene polymers" (T. J. Barton, S. Ijadi-Maghsoodi, Yi Pang).
3. U.S. Patent No. 5,254,289 (October 1993) "Nonlinear Optical and Conductive Polymeric Material" (T. J. Barton, S. Ijadi-Maghsoodi, Yi Pang).
4. U.S. Patent No. 5,312,649 (May 1994) "Diorganosilacetylene-alt-diorganosilvinylene Polymers and a Process Densifying Porous Silicon-Carbide Bodies" (T. J. Barton, S. Ijadi-Magsoodi, Yi Pang).

5. U.S. Patent No. 5,455,054 (October 10, 1995) “Diorganosilacetylene-alt-diorganosilvinylene polymers and a process of preparation” (T. J. Barton, S. Ijadi-Maghsoodi, Yi Pang).
6. U.S. Patent No. 9,023,600 (May 5, 2015) “A Highly Selective Pyrophosphate Sensor for Potential DNA Pyrosequencing Application”. (Yi Pang, Weihua Chen).
7. U.S. Patent No. 9,090,602 (June 28, 2015) “Class of Near Infrared Optical Probes for Biological Applications”. (Yi Pang, Yongqian Xu).
7. U.S. Patent No. 9,499,528 B2 (Nov. 22, 2016) “Class of Near Infrared Molecular Probes for Biological Applications.” (Yi Pang, Junfeng Wang).
8. U.S. Patent No. 9,636,021 (May 9, 2017) “Flavonoid Compounds of Low Toxicity for Biological Imaging Applications” (UA 1138, Yi Pang, Bin Liu)
9. U.S. Patent No. 9,845,318 (Dec. 19, 2017) “Class of Near Infrared Optical Probes for Biological Applications” (Yi Pang, Yongqian Xu).
10. PCT Int. Appl. (2010), WO 2010075003 A1 20100701. “Preparation of Near-infrared (NIR) Luminescent Materials” (Yi Pang, Qinghui Chu)
11. Using squaraine dyes as near infrared fluorescent sensors for protein detection. U.S. Pat. Appl. Publ. 2012, US20120276642 A1 20121101. (Yi Pang)

### Book Chapters

Y. Pang, K. Feng, and Y. Mariam “*Pyrolyzability of Preceramic Polymers*” in “Handbook of Polymer Physical Properties, Edited by J. E. Mark”. Springer, **2006**; Chapter 58, pp981-1007.

Yi Pang “*Poly(phenylenevinylenes)*” in “Design and Synthesis of Conjugated Polymers, Edited by Jean-Francois Morin.” John Wiley & Sons, **2010**; Chapter 4, pp147-174.

Yi Pang & Weihua Chen, “*Excited-State Intramolecular Proton Transfer in Benzoxazole Derivatives*” in “Excited-State Hydrogen Bonding and Hydrogen Transfer” Edited by Guang-Jiu Zhao and Ke-Li Han. John Wiley & Sons; **2011**, Chapter 32, pp741-760.

### Publications

(ISI citations~1,500; H-index: 30; Average citations per article: 21. As of September. 1, 2016)

1. G. A. Kraus, Y. Pang "The reaction of organo-cuprates with bridgehead enones" *Synthetic communications* **1988**, 18(5), 473-480.
2. J. Shinar, S. Ijadi-Maghsoodi, Q.-X. Ni, Y. Pang, and T. J. Barton "Synthesis and Study of a Polysilole", *Synthetic Metal* **1989**, 28, C593-598.
3. S. Ijadi-Magsoodi, Y. Pang, and T. J. Barton "Efficient one-pot synthesis of silylene-acetylene and disilylene- acetylene preceramic polymers from trichloroethylene", *J. Polym. Sci., Polym. Chem.* **1990**, 28, 955-965.

4. T. J. Barton, S. Ijadi-Maghsoodi, and Y. Pang "Thermal and Catalytic Polymerization of Diphenyldiethynylsilane" *Macromolecules* **1991**, *24*, 1257-1260.
5. X. Wei, S. G. Han, B. G. Wong, B. C. Hess, L. X. Zheng, Z. V. Vardeny, Q. X. Ni, J. Shinar, S. Ijadi-Maghsoodi, Y. Pang, T. J. Barton and S. Grigoras "Optical Properties of Polydiethynylsilanes: A Quasi (AB)<sub>x</sub> Polymer" *Synthetic Metal* **1991**, *42*, 1583-1585.
6. S. Ijadi-Maghsoodi, X. Zhang, Y. Pang, M. Meyer, M. Akinc and T. J. Barton "Silicon acetylene and silicon olefin polymers as precursor to silicon carbide", *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1991**, *32(3)*, 525-528.
7. K. S. Wong, S. G. Han, Z. V. Vardeny, J. Shinar, S. Ijadi-Maghsoodi, Y. Pang, T. J. Barton, S. Grigoras and B. Parbhoo "Femtosecond dynamics of the nonlinear optical response in polydiethynylsilane", *Appl. Phys. Lett.* **1991**, *58(16)*, 1695-1697.
8. Q. X. Ni, J. Shinar, Y. Pang, and T. J. Barton "Anomalous optical and ESR properties of doped polydiethynylsilane", *Physical Review B (Rap. Comm.)* **1991**, *44(11)*, 5939-5944.
9. S. Grigoras, G. G. Lie, T. J. Barton, S. Ijadi-Maghsoodi, J. Shinar, Q.-X. Ni, Z. V. Vardeny, K. S. Wang and S. G. Han "Polydiethynylsilane-a New Nonlinear Optical Material: Structure Elucidation Using Molecular Modeling", *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1992**, *33(1)*, 655-656.
10. S. Grigoras, G. C. Lie, T. J. Barton, S. Ijadi-Maghsoodi, Y. Pang, J. Shinar, Z. V. Vardeny, K. S. Wong and S. G. Han "Theoretical Structural Characterization of Polydiethynylsilane - a New Nonlinear Optical Material", *Synthetic Metals* **1992**, *49*, 293-304.
11. Z. V. Vardeny, X. Wei, S. G. Han, K. S. Wong, L. X. Zheng, G. S. Kanner, J. Shinar, S. Ijadi-Maghsoodi, Y. Pang, T. J. Barton, S. Grigoras and B. Parbhoo "Optical Probes of Polydiethynylsilanes", *Synthetic Metals* **1992**, *50*, 453-459.
12. Y. Pang, A. Schneider, T. J. Barton, M. T. Carroll and M. Gordon "Synthesis and structure of a tetrasilacyclohexyne", *J. Am. Chem. Soc.* **1992**, *114*, 4920-4921.
13. S. A. Petrich, Y. Pang, V. G. Young, Jr. and T. J. Barton "Synthesis and Structure of an Octasila[4,4]betweenallene," *J. Am. Chem. Soc.* **1993**, *115*, 1591-1593.
14. S. Grigoras, T. J. Barton, S. Ijadi-Maghsoodi, Y. Pang, J. Shinar, G. C. Lie, Z. V. Vardeny, K. S. Wong, S. G. Han, "Theoretical structural characterization of poly(diethynylsilane) - a new nonlinear optical material." *Annual Technical Conference - Society of Plastics Engineers (1992)*, *50th(2)*, 2265-70.
15. Y. Pang, S. A. Petrich, V. G. Young, Jr., M. S. Gordon and T. J. Barton "Synthesis and Structure of Eight-, Seven- and Six-Membered Silacycloallenes," *J. Am. Chem. Soc.* **1993**, *115*, 2534-2536.
16. J. Lin, Y. Pang, V. G. Young and T. J. Barton "Synthesis and Structure of Strained Cyclic Bisallenes" *J. Am. Chem. Soc.* **1993**, *115*, 3794-3795.
17. L. S. Swanson, P. A. Lane, J. Shinar, Y. Pang, and T. J. Barton "Optically Detected Magnetic Resonance (ODMR) Study of Poly(3-hexylthiopheneacetylene) Films", *Synthetic Metals* **1993**, *55-55*, 293-298.

18. Y. Pang, S. Ijadi-Maghsoodi, and T. J. Barton "Catalytic Synthesis of Silylene-Vinylene Preceramic Polymers from Ethynylsilanes", *Macromolecules* **1993**, *26*, 5671-5675.
19. Y. Pang "Cyclopolymerization of a 3,5-Disila-1,6-Heptadiyne," *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1996**, *37*(2), 382-383.
20. Y. Pang, Z. Wang and T. J. Barton "Synthesis and Characterization of Thiophene-Containing Poly(arylene ethynylene)," *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1996**, *37*(2), 333-334.
21. J. Li, and Y. Pang "Regiocontrolled Synthesis of Poly(3-hexylthiophene ethynylenes)," *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1997**, *38*(2), 213-214.
22. J. Li, and Y. Pang "Regioregular Poly(3-hexylthienyl ethynylene): Their Synthesis and Characterizations." *Macromolecules* **1997**, *30*, 7487-7492.
23. J. Li, and Y. Pang "Structural Effects on Photoluminescence of Thiophene-Containing Poly(arylene ethynylenes)." *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1998**, *39*(1), 431-432.
24. F. Cervantes-Lee, L. Párkányi, R. N. Kapoor, A. J. Mayr, K. H. Pannell, Y. Pang, and T. J. Barton "Decamethylpentasilacycloheptyne•Mo<sub>2</sub>(CO)<sub>4</sub>( $\eta^5$ -C<sub>2</sub>H<sub>5</sub>)<sub>2</sub> and cycloheptyne•Mo<sub>2</sub>(CO)<sub>4</sub>( $\eta^5$ -C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>." *J. Organomet. Chem.* **1998**, *562*, 29-33.
25. Y. Pang, J. Li, and T. J. Barton "Processible Poly[(*p*-phenylene ethynylene)-*alt*-(2,5-thienylene ethynylene)]s of High Luminescence: Their Synthesis and Physical Properties." *J. Mater. Chem.*, **1998**, *8*, 1687-1690.
26. J. Li, and Y. Pang "Regiocontrolled Synthesis of Poly[(*p*-phenylene ethynylene)-*alt*-(2,5-thienylene ethynylene)]s: Regioregularity Effect on Photoluminescence and Solution Properties." *Macromolecules* **1998**, *31*, 5740-5745.
27. Y. Pang, J. Li, B. Hu and F. E. Karasz "A Processible Poly(phenylene ethynylene) with Strong Photoluminescence: Synthesis and Characterization of Poly[(*m*-phenylene ethynylene)-*alt*-(*p*-phenylene ethynylene)]." *Macromolecules*, **1998**, *31*, 6730-6732.
28. J. Li, and Y. Pang "Poly[(*p*-phenyleneethynylene)-*alt*-(*m*-phenyleneethynylene)]s." *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)*, **1999**, *40*(1) 57-58.
29. Y. Pang, J. Li, B. Hu and F. E. Karasz "A Highly Luminescent Poly[(*m*-phenylene vinylene)-*alt*-(*p*-phenylene vinylene)] with Defined Conjugation Length." *Macromolecules*, **1999**, *32*, 3946-3950.
30. L. Liao, Y. Pang, L. Ding and F. E. Karasz "Synthesis, Characterization and Luminescence of Poly[(*m*-phenylenevinylene)-*alt*-(1,4-dibutoxy-2,5-phenylenevinylene)] with Different Content of *cis*- and *trans*-Olefins." *Macromolecules*, **2001**, *34*, 6756-6760.
31. L. Ding, F. E. Karasz, Z. Lin, M. Zheng, L. Liao, and Y. Pang "Effect of Forster energy transfer and hole-transport layer on performance of polymer light-emitting diodes." *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)*, **2001**, *42*(2), 577-578.
32. L. Liao, Y. Pang "Synthesis and Characterization of Highly Blue-Emitting Poly(*m*-phenylenevinylene) Derivatives with Different Content of *cis*- and *trans*-olefins." *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)*, **2001**, *42*(2), 472-473.

33. E. E. Gürel, Y. Pang, and F. E. Karasz "Electroluminescence and Photoluminescence of Poly(*m*-phenylenevinylene)-*alt*-(*p*-phenylenevinylene) Green Light Emitting Copolymers." *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)*, **2001**, 42(2), 185-186.
34. L. Liao, Y. Pang, L. Ding, and F. E. Karasz "Blue-Emitting Soluble Poly(*m*-phenylenevinylene) Derivatives." *Macromolecules*, **2001**, 34 (21), 7300-7305.
35. L. Liao, Y. Pang "A Study on the Vibration Structure of Poly(phenylenevinylene)s via Low-Temperature UV-vis and Fluorescence Spectroscopy." *J. Mater. Chem.*, **2001**, 11(12), 3078-3081.
36. L. Ding, F. E. Karasz, Z. Lin, M. Zheng, L. Liao, and Y. Pang "Effect of Förster Energy Transfer and Hole Transport Layer on Performance of Polymer Light-Emitting Diodes." *Macromolecules*, **2001**, 34, 9183-9188.
37. J. Li, L. Liao, Y. Pang "A Study of Vibronic Structures in the Optical Spectra of Oligo(thienylene ethynylene)s." *Tetrahedron Lett.*, **2002**, 43(3), 391-394.
38. L. Liao, Y. Pang, L. Ding, F. E. Karasz "A New Family of Highly Blue-Emitting and Soluble Poly(*m*-phenylenevinylene) Derivatives with Different Content of *cis*- and *trans*-olefins." *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)*, **2002**, 43(1), 634-635.
39. L. Liao, Y. Pang, L. Ding, F. E. Karasz "Green-Emitting Poly[(2-alkoxy-5-methyl-1,3-phenylenevinylene)-*alt*-(1,4-phenylenevinylene)s]: Effect of Substitution Patterns on the Optical Properties." *Macromolecules*, **2002**, 35, 3819-3824.
40. Q. Chu, Y. Pang "Synthesis and Optical Properties of Poly[(2-alkoxy-5-methyl-1,3-phenyleneethynylene)-*alt*-(1,3-phenyleneethynylene)s]," *Synthesis*, **2002**, 1261-1267 (special issue on Materials Science).
41. L. Liao, Y. Pang, F. E. Karasz "Comparison of Optical Properties between Blue-Emitting Poly(*m*-phenylene vinylene) and PPV Block-co-polymer." *Macromolecules* **2002**, 35, 5720-5723.
42. L. Liao, Y. Pang, L. Ding, F. E. Karasz "Effect of Iodine-Catalyzed Isomerization on the Optical Properties of Poly[(1,3-phenylenevinylene)-*alt*-(2,5-dialkoxy-1,4-phenylene vinylene)s]." *Macromolecules* **2002**, 35, 6055-6059.
43. E. E. Gürel, Y. Pang, and F.E. Karasz "Luminescence Properties of Modified Poly(*m*-phenylenevinylene)-*alt*-(*p*-phenylenevinylene): Effects of Side-Chain Length, Blending and Device" *Thin Solid Films*, **2002**, 417, 147-150.
44. Q. Chu, Y. Pang, L. Ding, F. E. Karasz "Synthesis, Chain Rigidity, and Luminescent Properties of Poly[(1,3-phenylene-ethynylene)-*alt*-tris(2,5-dialkoxy-1,4-phenyleneethynylene)s]" *Macromolecules* **2002**, 35, 7569-7574.
45. Q. Chu, Y. Pang, L. Ding, F. E. Karasz "Green-Emitting PPE-PPV Hybrid Polymers: Efficient Energy Transfer across *meta*-Phenylene Bridge." *Macromolecules*, **2003**, 36, 3848-3853.
46. Q. Chu, Y. Pang, "Synthesis, Energy Transfer, and Luminescent Properties of Novel PPE-*m*-PPV Hybrid Polymers" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)*, **2003**, 44(1), 827-828.

47. Q. Chu, Y. Pang “Molecular Aggregation of Poly[(1,3-phenylethynylene)-*alt*-oligo(2,5-dialkoxy-1,4-phenyleneethynylene)]: Effect of Solvent, Temperature, and Polymer Conformation.” *Macromolecules*, **2003**, *36*, 4614-4618.
48. L. Liao, Y. Pang, L. Ding, F. E. Karasz “Blue-Emitting Poly[(*m*-phenylene vinylene)-*alt*-(*o*-phenylene vinylene)]s: Effect of Regioregularity on the Optical Properties.” *J. Polym. Sci. Part A: Polym. Chem.*, **2003**, *41*, 2650-2658.
49. L. Liao, Y. Pang “Yellow-/Orange-Emitting Poly[tris-(2,5-dihexyloxy-1,4-phenylenevinylene)-*alt*-(1,3-phenylenevinylene)]s: Synthesis and Characterizations.” *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)*, **2003**, *44*(2), 430-431.
50. L. Liao, Y. Pang, L. Ding, F. E. Karasz “Yellow Light-Emitting Cyano-Substituted Poly[(1,3-phenylenevinylene)-*alt*-(1,4-phenylenevinylene)] Derivative: Its Synthesis and Optical Properties” *J. Polym. Sci. Part A: Polym. Chem.* **2003**, *41*, 3149-3158.
51. L. Ding, F. E. Karasz, Y. Lin, L. Liao, Y. Pang “Photoluminescence and Electroluminescence Study of Violet-Blue and Green-Emitting Polymers and Their Blend.” *Macromolecules*, **2003**, *36*, 7301-7307.
52. Q. Chu, Y. Pang “Vibronic Structures in the Electronic Spectra of Oligo(phenylene ethynylene): Effect of *m*-Phenylene to the Optical Properties of Poly(*m*-phenylene ethynylene)” *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, **2004**, *60*(7), 1459-1467.
53. J. Li, Y. Pang, “Synthesis and optical properties of poly[(*p*-phenyleneethynylene)-*alt*-(*m*-phenyleneethynylene)]s: Evidence of Intramolecular Energy Transfer across *m*-Phenylene.” *Synthetic Metals*, **2004**, *140* (1), 43-48.
54. L. Liao, L. Ding, F. E. Karasz, Y. Pang, “Poly[(2-alkoxy-5-methyl-1,3-phenylene vinylene)-*alt*-(phenylene vinylene)] Derivatives with Different Content of *cis*- and *trans*-Olefins: Effect of Olefin Bond Geometry and Conjugation Length to Luminescence.” *J. Polym. Sci. Part A: Polym. Chem.* **2004**, *42*(2), 303-316.
55. L. Liao, Y. Pang, L. Ding, F. E. Karasz “Green-Emitting Poly[(1,3-phenylenevinylene)-*alt*-(1,4-phenylenevinylene)]s: Effect of Substitution Patterns on the Optical Properties.” *J. Polym. Sci. Part A: Polym. Chem.* **2004**, *42*(8), 1820-1829.
56. M. Tong, X. S. Sheng, C. Yang, Z. V. Vardeny, Y. Pang “Photoexcitation dynamics and laser action in solutions and films of PPE-PPV copolymer” *Phys. Rev. B: Condens. Matter*, **2004**, *69*, 155211.
57. L. Liao, Y. Pang, L. Ding, F. E. Karasz, “A Highly Efficient Light-Emitting Poly[5-(diphenylamino)-1,3-phenylene vinylene]-*alt*-(2,5-dihexyloxy-1,4-phenylene vinylene)]: Synthesis and Optical Properties.” *Macromolecules*, **2004**, *37*, 3970-3972.
58. L. Liao, Y. Pang “Poly[(1,4-phenylenevinylene)-*alt*-(1,3-phenylenevinylene)]s with Different Length of Side Chain: Their Synthesis and Optical Properties.” *Synthetic Metals*, **2004**, *144*(3), 271-277.
59. L. Liao, Y. Pang, L. Ding, F. E. Karasz, P. R. Smith, and M. A. Meador, “Synthesis and Luminescence of Yellow/Orange-Emitting Poly[tris(2,5-dihexyloxy-1,4-phenylenevinylene)-*alt*-(1,3-phenylenevinylene)]s” *J. Polym. Sci. Part A: Polym. Chem.*, **2004**, *42*, 5853-5862.

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61. L. Liao, Y. Pang, L. Ding, F. E. Karasz, "Impact of Cyano-Functional Group on Luminescence of Poly(*m*-phenylenevinylene) Derivatives: Its Dependence on Conjugation Length." Korugic-Karasz, L. S., MacKnight, W. J., Martuscelli, E., Eds.; ACS Symposium Series 916: American Chemical Society: Washington, DC, **2005**; Chapter 7 (pp76-89).
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63. L. Liao, Y. Pang, L. Ding, F. E. Karasz, "Optical Properties of Poly[(1,4-phenylenevinylene)-*alt*-(1,3-phenylenevinylene)]s with *cis*-Vinylene Structure and Short Side Chain." *Thin Solid Films*, **2005**, 479 (1-2), 249-253.
64. L. Liao, Y. Pang, L. Ding, F. E. Karasz "Blue-Emitting Poly(1,3-phenylenevinylene) Derivatives: Effect of Substitution Patterns on the Optical Properties." *J. Polym. Sci. Part A: Polym. Chem.*, **2005**, 43, 2800-2809.
65. Tong, M. H.; Vardeny, Z. V.; Pang, Y. "Linear and nonlinear optical spectroscopies of PPE/PPV copolymer semiconductors." AIP Conference Proceedings (**2005**), 772 (Physics of Semiconductors, Part B), 1077-1078.
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#### Since arriving at University of Akron

67. L. Liao, A. Cirpan, L. Ding, F. E. Karasz, and Y. Pang "Efficient Poly[(5-diphenylamino-1,3-phenylenevinylene)-*alt*-(2,5-dihexyloxy-1,4-phenylenevinylene)] Derivatives: Synthesis and Optical Properties" *J. Polym. Sci. Part A. Polym. Chem.*, **2006**, 44, 2307-2315.
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69. L. Ding, Z. Bo, Q. Chu, J. Li, L. Dai, Y. Pang, F. E. Karasz, and M. Durstock "Photophysical and Electroluminescent Properties of Hyperbranched Polyfluorenes" *Macromolecular Chemistry and Physics*, **2006**, 207 (10), 870-878. (Cover Picture: *Macromol. Chem. Phys.* 10/2006)
70. L. Liao, A. Cirpan, Q. Chu, F. E. Karasz, and Y. Pang "Synthesis and Optical Properties of Light-Emitting  $\pi$ -Conjugated Polymers Containing Biphenyl and Dithienosilole." *J. Polym. Sci. Part A: Polym. Chem.* **2007**, 45 (10), 2048-2058.
71. Q. Chu, D. A. Medvetz, Y. Pang "A Polymeric Sensor with Excited-State Intramolecular Proton Transfer: Its Response to Anionic Species." *Chem. Mater.*, **2007**, 19(26), 6421-6429.



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