

Prof. Dr. sc. nat. Christoph Weder

Publications May 5, 2009

Original Scientific Papers (Peer Reviewed)

99. Shanmuganathan K.; Capadona, J.R.; Rowan, S.J.; Weder, C.; Biomimetic Mechanically Adaptive Nanocomposites; *Progr. Polym. Sci.* **2009**, *XX*, Submitted.
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95. Kunzelman, J.; Gupta, M.; Crenshaw, B.R.; Schiraldi, D.A.; Weder, C.; Pressure-Sensitive Chromogenic Polyesters; *Macromol. Mater. Eng.* **2009**, *294*, 244-249. **Cover Picture.**
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87. Capadona, J.R.; Shanmuganathan K.; Tyler, D.; Rowan, S.J.; Weder, C.; Bio-inspired chemo-mechanical polymer nanocomposites that mimic the sea cucumber dermis; *Science* **2008**, *319*, 1370-1374.
86. Burnworth, M.; Mendez, J.D., Schroeter, M.; Rowan, S.J.; Weder, C.; Decoupling Optical Properties in Metallo-Supramolecular Poly(*p*-phenylene ethynylene)s; *Macromolecules* **2008**, *41*, 2157-2163.
85. Kunzelman, J.; Chung, C.; Mather, T.M.; Weder, C.; Shape Memory Polymers with Built-In Threshold Temperature Sensors; *J. Mater. Chem.* **2008**, *18*, 1082 - 1086. **Hot Paper. Back Cover. Most Downloaded.**
84. Weder, C.; Hole Control in Microporous Polymers; *Angew. Chem. Int. Ed.* **2008**, *47*, 448-450. (*Angew. Chem.* **2008**, *120*, 456-458). **Invited Highlight.**
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79. Burnworth, M.; Rowan, S.J.; Weder, C.; Fluorescent Sensors for the Detection of Chemical Warfare Agents; *Chem. Eur. J.* **2007**, *13*, 7828-7836. **Invited Concept Article.**
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Other Noteworthy Scientific Publications

3. Weder, C.; Polymers React to Stress; News and Views Article; *Nature* **2009**, *459*, 45.
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Book Chapters (Peer Reviewed)

- B8. Lott, J.; Song, H.; Wu, Y.; Zhou, J.; Baer, E.; Hiltner, A.; Weder, C.; Singer, K.D.; Coextruded Multilayer All-Polymer Dye Lasers; In ACS Symposium Series XX; XXX, XXX. Ed.; ACS, Washington, **2009**, In Press.
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Editor of:

- E4. *Polymer Synthesis and Applications*; Special issue of *J. Mater. Chem.* to be published **2010**. Weder, C., Haddleton, D. Guest Editors
- E3. *Swiss Chemists Abroad*; Special issue of *Chimia* to be published **2009**. Weder, C., Guest Editor
- E2. *Poly(arylene ethynylene)s - From Synthesis to Applications*; Advances in Polymer Science Series Vol. 177; Weder, C., Ed.; Springer, Heidelberg, **2005**.
- E1. *Polymers in Display Applications*; Macromolecular Symposia Vol. 154; Weder, C.; Tervoort, T.; Bastiaansen, C. Eds.; Wiley-VCH, Weinheim, **2000**.

Issued Patents and Patent Applications

- P9. Weder, C.; Rowan, S.J.; Capadona, J.R.; Tyler, D.J.; Shanmuganathan, K.; van den Berg, O.; Dynamic Mechanical Polymer Nanocomposites; US Provisional Patent Application filed (2008).
- P8. van den Berg, O.; Capadona, J. R.; Weder, C.; Self-Assembled Nanofiber Templates: A Versatile Approach for Polymer Nanocomposites; US Patent Applications filed (2007, 2008). US **20080242765** published 10-2-2008 Utility Application, 3/27/2008 (US 12/079,264).
- P7. Kinami, M.; Crenshaw, B.R.; Weder, C.; Time-Temperature Indicators; US Provisional Patent Application US 60/758,106 (2006); US Patent Application 2007/0158624 (2007).
- P6. Baer, E.; Hiltner, P.A.; Weder, C.; Photo-Patternable Nanomaterials; US Patent Application 2004/0175656 (2004).
- P5. Löwe, C.; Weder, C.; Photoluminescent Polymer Blends and Uses Therefore; US **7,223,988 (2007)** (to Case Western Reserve University).
- P4. Weder, C; Smith, P.; Process For Forming Photoluminescent Polarizers; EP **123 0318 B1 (2006)** (to Landqart).
- P3. Weder, C; Smith, P.; Antifalsification Paper and other Antifalsification Items; EP **1 115 949 B1 (2003)** (to Landqart); AU **754452 (2003)** (to Landqart); EP **1 233 106 B1 (2004)** (to Landqart); US **7,108,286 B1 (2007)** (to Landqart).
- P2. Weder, C.; Bastiaansen, C.; Montali, A.; Smith, P.; Efficient Photoluminescent Polarizers, Process for Forming, and Application in Display Devices; US **6,594,062 (2003)** (to Landqart); EP **1 051 646 B1 (2004)** (to Landqart).
- P1. Weder, C.; Sarwa, C.; Bastiaansen, C.; Smith, P.; Photoluminescent Display Devices having a Photoluminescent Layer with a high Degree of Polarization in its Absorption, and methods for making the Same; US **6,891,583 (2005)** (to Landqart). EP**0991976 A1**.

Conference Proceedings

43. Lott, J.; Makowski, B.; Valle, B.; Singer, K.D.; Weder, C.; Nonlinear Absorption of Extended Chromophores; *CLEO 2009*, submitted.
42. Tang, L.; Whalen, J.; Schutte, G.; Weder, C.; Stimuli-Responsive Epoxy Coatings; *Polym. Prepr. (Am. Chem. Soc., Div. Polym.Chem.)* **2008**, 49 (2), 963-964.
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40. Kunzelman, J.; Tang, L.; Sing, C.E.; Weder, C.; Excimer-Forming Fluorescent Dyes as Sensors; *Polym. Mater. Sci. Eng. Prepr.* **2008**, 98, 196.
39. Islangulov, R.R.; Singh, T.; Lott, J.; Weder, C.; Castellano, F.N.; Low-Power Upconversion In Solid Polymer Films; *Polym. Prepr. (Am. Chem. Soc., Div. Polym.Chem.)* **2008**, 49 (1), 1028-1029.
38. Singer, K.D.; Baer, E.; Hiltner, A.; Weder, C.; Kazmierczak, T.; Lott, J.; Sharpnack, L.; Song, H.; Wu, Y.; Andrews, J.; Multilayer Polymer Films for Surface-Emitting Lasers; *Polym. Mater. Sci. Eng. Prepr.* **2008**, 98, 339-340.
37. Shanmuganathan, K.; Capadona, J.R.; Tyler, D.J.; Rowan, S.J.; Weder, C.; Stimuli-Responsive Mechanically Dynamic Polymer Nanocomposites; *Polym. Prepr. (Am. Chem. Soc., Div. Polym.Chem.)* **2008**, 49 (1), 1073.
36. Capadona, J.R.; van den Berg, O.; Capadona, L.A.; Tyler, D.J.; Rowan, S.J.; Weder, C.; Do it Like the Sea Cucumber: Bio-Inspired Chemo-Mechanical Polymer Nanocomposites; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, 49 (1).
35. Sing, C.E.; Weder, C.; Time temperature indicators for long term high temperature applications; *Polym. Prepr. (Am. Chem. Soc., Div. Polym.Chem.)* **2008**, 49 (1).

34. Mendez, J.; Weder, C.; Increased Electrical Conductivity in Poly(3,4-ethylenedioxythiophene) upon Cross-Linking; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, *49* (1), 499-500.
33. Kunzelman, J.; Crenshaw, B.; Kinami, M.; Weder, C.; Self-Assembly of Chromogenic Dyes: Humidity Sensing and Piezochromic Behavior; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, *48* (2), 157-158.
32. Weder, C.; Conducting Polymer-Cellulose Nanocomposites; *Polym. Mater. Sci. Eng. Prepr.* **2007**, *96*, 741.
31. van den Berg, O.; Capadona, J.R.; Weder, C.; Preparation of Electrically Conducting Nanocomposites Using Tunicate Cellulose Whiskers; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2006**, *47*(2), 130-131.
30. Crenshaw, B.; Sing, C.; Weder, C.; Effect of Glass Transition on the Threshold Temperature and Kinetics of the Phase Separation of Excimer-Forming Dyes in Amorphous Polymers; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2006**, *47*(2), 380-381.
29. Kunzelman, J.; Crenshaw, B.; Weder, C.; Self-Assembly and (De)Aggregation of Conjugated Materials in Solid Polymer Hosts: A General Approach for New Mechanochromic and Thermochromic Materials; *Polym. Mater. Sci. Eng. Prepr.* **2006**, 95.
28. Schroeter, M.; Mendez, J.D.; Weder, C.; Synthesis and Optical Properties Of New Hyperbranched Poly(*p*-Phenylene Ethynylene)s Prepared Via Different A₂ + B₃ Approaches; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2006**, *47*(2), 1051-1052.
27. Crenshaw, B.; Weder, C.; Self-Assessing Photoluminescent Polyurethanes; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2006**, *47*(2), 622-623.
26. Knapton, D.; Rowan, S.J.; Weder, C.; Metallosupramolecular Conjugated Polymers; *Polym. Mater. Sci. Eng. Prepr.* **2006**, 95.
25. Burnworth, M.; Knapton, D.; Rowan, S.J.; Weder, C.; Fluorescent Organometallic Sensors for the Detection of Chemical Warfare Agent Mimics; *Polym. Mater. Sci. Eng. Prepr.* **2006**, 95.
24. Crenshaw, B.; Kinami, M.; Weder, C.; Polyester Nanocomposite Blends For Optical Sensor Applications; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2005**, *46*(1), 35-36.
23. Weder, C.; Design of Polymer Materials with Tailored Optical Properties; *Polym. Mater. Sci. Eng. Prepr.* **2005**, 92, 242.
22. Kokil, A.; Yao, P.; Kinami, M.; Wilger, D.; Rademaker, C.; Weder, C.; Synthesis, Processing and Properties of Conjugated Polymer Networks; *Polym. Mater. Sci. Eng. Prepr.* **2005**, 92, 226-227.
21. Crenshaw, B.; Smith, K.; Weder, C.; Phase Separation of Excimer-Forming Fluorescent Dyes and Amorphous Polymers: A Versatile Mechanism for Sensor Applications; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2005**, *46*(1), 532-533.
20. Crenshaw, B.; Burnworth, M.; Kunzelman, J.; Mendez, J.; Smith, K.; Weder, C.; Creating Polymer Chameleons – Smart Blends with Self-Assessing Capabilities; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2005**, *46*(1), 506-507.
19. Kokil, A.; Hittinger, E.; Weder, C.; Synthesis, Processing and Properties of Conjugated Polymer Networks; *Proc. PPS-20* **2004**.
18. Schroers, M.; Kokil, A.; Weder, C.; Polymer Electrolytes with Improved Mechanical Properties; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2004**, *45*(1), 54.
17. Zimmermann, S.; Steinhart, M.; Senz, S.; Gösele, U.; Schaper, A.K.; Weder, C.; Wendorff, J.H.; Polymer-Dispersed Liquid Crystal Nanotubes; *Polym. Mater. Sci. Eng. Prepr.* **2004**, *90*, 52-53.
16. Crenshaw, B.; Weder, C.; Excimers as Molecular Probes: Deformation-Induced Color Changes in Photoluminescent Polymer Blends; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2003**, *44*(2), 886-887.
15. Hittinger, E.; Kokil, A.; Weder, C.; Synthesis of Cross-Linked Conjugated Polymers; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2003**, *44*(2), 331-332.

14. Tangirala, R.; Baer, E.; Hiltner, A.; Weder, C.; Design and Applications of Photopatternable Nanomaterials; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2003**, *44*(2), 883-884.
13. Kokil, A.; Huber, C.; Shiyonovskaya, I.; Caseri, W.R.; Singer, K.D.; Weder, C.; Synthesis And Properties Of Conjugated Polymer Networks Formed By Non-Covalent Interactions; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2003**, *44*(1), 665-666.
12. Crenshaw, B.; Löwe, C.; Weder, C.; Oligo(*p*-phenylene vinylene) Excimers as Molecular Probes: Deformation-Induced Color Changes in Photoluminescent Polymer Blends; *Polym. Mater. Sci. Eng. Prepr.* **2003**, *88*, 505-506.
11. Montali, A.; Palmans, A.R.A.; Eglin, M.; Weder, C.; Smith, P.; Trabesinger, W.; Renn, A.; Hecht, B.; Wild, U.P.; Phase Behavior And Anisotropic Optical Properties Of Photoluminescent Polarizers; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1999**, *40* (2), 1169-1170.
10. Palmans, A.R.A.; Montali, A.; Weder, C.; Smith, P.; Photoluminescent Polymer Films for Display Applications; *Luminescent Materials*, J. McKittrick, A. Kitai, K. Mishra, C. Ronda, Eds.; *Mat. Res. Soc. Symp. Proc.* **1999**, *560*, 265-270.
9. Steiger, D.; Ehrenstein, M.; Weder, C.; Smith, P.; Synthesis and Properties of Poly(*p*-phenylene alkylene); *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1998**, *39* (1), 628-629.
8. Montali, A.; Bastiaansen, C.; Smith, P.; Weder, C.; New Photoluminescent Display Devices; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1998**, *39* (1), 107-108.
7. Sarwa, C.; Montali, A.; Bastiaansen, C.; Weder, C.; Smith, P.; Novel Liquid Crystal Displays Based on Highly Polarized Photoluminescent Polymer Films; *Electrical, Optical & Magnetic Properties of Organic Materials IV*, J. Reynolds, Ed.; *Mat. Res. Soc. Symp. Proc.* **1998**, *488*, 435-439.
6. Weder, C.; Sarwa, C.; Bastiaansen, C.; Smith, P.; Polarized Photoluminescence from Oriented Films Based on Blends of Polyethylene and Conjugated Polymers; *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1997**, *38*(1), 404-405.
5. Döbler, M.; Weder, C.; Ahumada, O.; Neuenschwander, P.; Suter, U.W.; Follonier, S.; Bosshard, C.; Günter, P.; Local Motion in NLO Main-Chain Polymers with Enhanced Orientational Stability; *Polym. Mater. Sci. Eng. Prepr.* **1997**, *76*, 308-309.
4. Montali, A.; Weder, C.; Smith, P.; Electroluminescence in Poly(*p*-phenylene ethynylene)-based Devices; *Proc. SPIE-Int. Soc. Opt. Eng.* **1997**, *3148*, 298-305.
3. Weder, C.; Wagner, M.J.; Wrighton, M.S.; Solid State Structure and Photoluminescence Properties of Poly(2,5-dialkoxy-*p*-phenylene ethynylene)s; *Organic Solid State Materials III*, L.R. Dalton, Ed.; *Mat. Res. Soc. Symp. Proc.* **1996**, *413*, 77-84.
2. Günter, P.; Prêtre, P.; Kaatz, P.; Weder, C.; Neuenschwander, P.; Suter, U.W.; Novel electro-optic polyimide and polyamide side chain and main chain polymers; *Polymers and other Advanced Materials: Emerging Technologies and Business Opportunities*; Prasad, P.N.; Mark, J.E.; Tung, J.F. Eds.; *Proc. Int. Conf. Front. Polym. Adv. Mater. III* **1995**, 485-491, Plenum, New York, NY.
1. Lang, F.R.; Franzreb, K.; Pitton, Y.; Xanthopoulos, N.; Landolt, D.; Mathieu, H.J.; Döbler, M.; Weder, C.; Neuenschwander, P.; Suter, U.W.; Investigation of a NLO-Polymer by XPS and TOF-SIMS; *Proc. 6th Europ. Conf. on Application of Surface and Interface Analysis*, October 9th - 13th **1995**, Montreux, Switzerland.

Lectures and Seminars

Invited (98 total):

“Supramolecular Metallopolymers”

Chulalongkorn University, May 20, 2009; Bangkok, Thailand

“Temperature and Deformation Sensors for Polymer Films”

TAPPI Place Symposium on Nanomaterials for Flexible Packaging, April 30, 2009; Columbus OH

“Mechanically-Dynamic (Adaptive, Mechanomutable, Stimuli-Responsive) Polymer Nanocomposites”

ACS 2008 Spring Meeting; March 25, 2009; Salt Lake City, UT, USA

“Cellulose-Polymer Nanocomposites: Processing Self-Assembled Templates”

ACS 2008 Spring Meeting; March 25, 2009; Salt Lake City, UT, USA

“Mechanically-Dynamic Polymer Nanocomposites”

Smart Coatings 2009, February 25-27, 2009; Orlando, FL

“Mechanically-Dynamic Polymer Nanocomposites”

University of Akron, Department of Polymer Engineering, February 6, 2009; Akron, OH

“Noncovalent Interactions as a Design Tool for Functional Polymers”

University of Southern Mississippi, Department of Polymer Science and Engineering, January 29, 2009; Hattiesburg, MS

“Stimuli-Responsive Polymer Nanocomposites”

Université de Fribourg, November 13, 2008; Fribourg, Switzerland

“Stimuli-Responsive Polymer Nanocomposites”

International Symposium on Stimuli-Responsive Materials, November 28, 2008; Hattiesburg, MS

“Stimuli-Responsive Epoxy Coatings”

Alcoa Technical Center, July 2, 2008; Pittsburgh, PA

“Excimer-Forming Fluorescent Dyes as Sensors”

Chulalongkorn University, May 16, 2008; Bangkok, Thailand

“Excimer-Forming Fluorescent Dyes as Sensors”

ACS 2008 Spring Meeting; April 6 – 10, 2008; New Orleans, LA

“Stimuli-Responsive Polymer Nanocomposites”

IIMM3, Santa Rosa, CA; March 27, 2008

“Noncovalent Interactions as a Design Tool for Functional Polymers”

University of Tokyo, Dept. of Chemistry; December 14, 2007; Tokyo, Japan

“Metallo-supramolecular Conjugated Polymers”

The Third International Symposium on Chemistry of Coordination Space ISCCS 2007; December 9 – 12, 2007; Awaji, Hyogo, Japan

“Noncovalent Interactions as a Design Tool for Functional Polymers”

Princeton University, Dept. of Chemistry; November 29, 2007; Princeton, NJ

“Cellulose-Based Nanocomposites”

Composites at Lake Louise; October 28 – November 2, 2007; Lake Louise, Canada

“Stimuli-Responsive Photoluminescent Polymer Blends”

Valspar; October 18, 2007; Pittsburgh, PA

“Stimuli-Responsive Photoluminescent Polymer Blends”

MAF 10; September 9 – 12, 2007; Salzburg, Austria

“Nanocomposites based on conjugated polymers and rodlike nanoparticles”

ACS 2007 Fall Meeting; August 19 – 23, 2007; Boston, MA

“Metallo-supramolecular Conjugated Polymers”

ACS 2007 Fall Meeting; August 19 – 23, 2007; Boston, MA

“Polymer Nanocomposites with Rod-Like Nanoparticles”
Chulalongkorn University, May 16, 2007; Bangkok, Thailand

“Functional Polymer Design: Creating Materials with Tailored Opto/Electronic Properties”
Special VINSE Seminar, Vanderbilt University, April 16, 2007; Nashville, TN

“Nanocomposites based on Cellulose Whiskers and (Semi)Conducting Polymers”
MRS 2007 Spring Meeting; April 9 – 13, 2007; San Francisco, CA

“Conducting Polymer-Cellulose Nanocomposites”
ACS 2007 Spring Meeting; March 25 – 29, 2007; Chicago, IL

“Polymers and Dyes”
Emerging Technology Forum; March 1, 2007; Mt. Vernon, OH

“Polymer Chameleons: Smart Materials with Built-In Deformation and Temperature Sensors”
Smart Coatings 2007, February 21-23, 2007; Orlando, FL

“Polymer Chameleons: Smart Materials with Built-In Deformation and Temperature Sensors”
University of Rhode Island, February 12, 2007; Kingston, RI

“Functional Polymer Design: Creating Materials with Tailored Opto/Electronic Properties”
TOYOBO Research Center, February 1, 2007; Katata, Japan

“Polymer Chameleons: Materials with Built-In Deformation and Temperature Sensors”
NASA Glenn Research Center; November 29, 2006; Cleveland, OH

“Metallo-supramolecular Conjugated Polymers”
ACS 2006 Fall Meeting; September 10 – 14, 2006; San Francisco, CA

“New Polymers with Tamper-Evidencing and Time-Temperature Sensing Capabilities”
Procter and Gamble Co., August 23, 2006; Cincinnati, OH

“Supramolecular Metallopolymers”
Chulalongkorn University, May 16, 2006; Bangkok, Thailand

“Functional Polymer Design: Creating Materials with Tailored Opto/Electronic Properties”
Montanuniversität Leoben, May 2, 2006; Leoben, Austria

“New Packaging Materials with Tamper-Evidencing and Time-Temperature Sensing Capabilities”
Honeycomb Internet Presentation, April 10, 2006

“Self-Assessing Photoluminescent Polyurethanes and other Polymer Chameleons”
Bayer MaterialScience, March 1, 2006; Pittsburgh, PA

“Functional Polymer Design: Creating Materials with Tailored Opto/Electronic Properties”
Wright State University, February 3, 2006; Dayton, OH

“Polymer Chameleons: Materials with Built-In Deformation and Temperature Sensors”
Alcoa; February 1, 2006; Pittsburgh, PA

“Polymer Chameleons: Materials with Built-In Deformation and Temperature Sensors”
Nanoapp Summit; October 17 – 19, 2005; Cleveland, OH

“Supramolecular Conjugated Organic/Inorganic Hybrid Polymers”
Army Research Laboratory, Aberdeen Proving Grounds; October 12, 2005; Aberdeen, MD

“Smart Polymers with Built-In Deformation and Temperature Sensors”
ACS 2005 Fall Meeting; August 28 – September 1, 2005; Washington, DC

“Synthesis and Properties of Conjugated Polymer Networks”
Chulalongkorn University, May 18, 2005; Bangkok, Thailand

“Functional Polymer Design: Creating Materials with Tailored Opto/Electronic Properties”
Carnegie Mellon University, April 28, 2005; Pittsburgh, PA

“Smart Polymers – Illuminating Solutions”
Panel Discussion at Research Showcase; April 7, 2005; CWRU, Cleveland, OH

“Synthesis, Processing and Properties of Conjugated Polymer Networks”

ACS 2005 Spring Meeting; March 13 - 17, 2005; San Diego, LA

“Functional Polymer Design: Creating Polymers with Tailored Opto/Electronic Properties”
University of Basel, February 7, 2005; Basel, Switzerland

“Deformation and Temperature Sensors based on Blends of Excimer-Forming Fluorescent Dyes and Polymers”
16th Inter-American Photochemical Society Winter conference, January 6-9, 2005; Clearwater Beach, FL; USA

“Deformation and Temperature Sensors based on Blends of Excimer-Forming Fluorescent Dyes and Polymers”
OPSC Emerging Technology Forum, November 17, 2004; Cleveland, OH; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Opto/Electronic Properties”
SUNY Fredonia, September 16, 2004; Fredonia, NY; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Opto/Electronic Properties”
Rochester Institute of Technology, September 15, 2004; Rochester, NY; USA

“Synthesis, Processing, and Properties of Conjugated Polymer Networks”
Keynote Address, Symposium on Conductive Polymers and Electro-Optics (PPS 20), June 20-24, 2004; Akron, OH; USA

“Designing Functional Pi-Electron Systems”
Plenary Lecture, Sixth International Symposium on Functional Pi-Electron Systems, June 14-18, 2004; Cornell University, Ithaca, NY; USA

“Functional Polymer Blends: Creating Polymer Materials with Tailored Properties”
Chulalongkorn University, May 14, 2004; Bangkok, Thailand

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
Bowling Green State University, November 19, 2003; Bowling Green, OH; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
University of Akron, October 30, 2003; Akron, OH; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
Swiss Federal Institute for Materials Testing and Research (EMPA), October 15, 2003; Dübendorf; Switzerland

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
Ciba Specialty Chemicals, October 1, 2003; Tarrytown, NY; USA

“Synthesis and properties of carbon-rich organometallic polymer networks”
ACS 2003 Fall Meeting; September 7 - 11, 2003; New York, NY

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
Chulalongkorn University, May 14, 2003; Bangkok, Thailand

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
Kent State University, May 1, 2003; Kent, OH; USA

“Functional Polymer Blends: A General Approach for the Design of Optical Materials with Tailored Properties”
NSF Workshop on Photonic Materials Synthesis and Processing at the Interface, University of Rochester, April 28-30, 2003; Rochester, NY; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
Young Professor Lecture, DuPont Experimental Station, February 25, 2003; Wilmington, DE; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
U. Michigan, Igert Lecture, Dept. of Chemistry, January 17, 2003; Ann Arbor, MI; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
3M Corporation, December 11, 2002; St. Paul, MN; USA

“High Charge Carrier Mobility in Conjugated Organometallic Polymer Networks”

ACS 2002 Southeast Regional Meeting; November 13 - 16, 2002; Charleston, SC; USA

“Functional Polymer Design: Creating Polymer Materials with Tailored Properties”
Case Western Reserve University, Department of Physics, Condensed Matter Seminar, October 28, 2002; Cleveland, OH; USA

“Functional Polymer Design: Creating Electro-Optic Polymer Materials with Tailored Properties”
Case Western Reserve University, Department of Materials Science, Faculty Seminar Series, January 29, 2002; Cleveland, OH; USA

“Functional Polymer Design: Creating Electro-Optic Polymer Materials with Tailored Properties”
Promerus Corporation, November 29, 2001; Brecksville OH; USA

“Functional Polymer Design: Creating Electro-Optic Polymer Materials with Tailored Properties”
Wright Patterson Air Force Base, October 23, 2001; USA

“Light-Emitting Polymer Displays and More”
Hitachi Ltd. Research Laboratory; March 7, 2001; Hitachi-shi, Japan

“Polarizing Light with Polymers: Synthesis, Processing and Application of Oriented Conjugated Polymers”
First International Conference on Molecular Electronics and Bioelectronics; March 6, 2001; Hyogo, Japan

“Neue Licht polarisierende Polymersysteme”
Makromolekulares Kolloquium, February 24, 2001 Freiburg, Germany

“Functional Polymer Synthesis: Past present and Future”
DSM Research, July 4, 2000; Geleen, The Netherlands

“Functional Polymer Synthesis: Creating Polymer Materials with Tailored Properties”
Dept. of Pharmacy, ETH Zürich; June 30, 2000; Zürich, Switzerland

“Functional Polymer Synthesis: Past present and Future”
Dept. of Macromolecular Science, Case Western University; May 4, 2000; Cleveland, OH

“Synthese, Verarbeitung und Anwendung orientierter konjugierter Polymersysteme”
Dept. of Chemistry University of Mainz; April 13, 2000; Mainz, Germany

“Functional Polymer Synthesis: Creating Polymer Materials with Tailored Properties”
Dept. of Chemistry University of Chicago; March 31, 2000; Chicago, IL

“Functional Polymer Synthesis: Creating Polymer Materials with Tailored Properties”
Dept. of Macromolecular Science, Case Western University; March 29, 2000; Cleveland, OH

“Oriented Conjugated Polymers: Processing and Application”
ACS 2000 Spring Meeting; March 26 - 31, 2000; San Francisco, CA

“Synthese Neuer Funktionspolymere: Design und Herstellung von Materialien mit massgeschneiderten Eigenschaften”
Dept. of Chemistry University of Düsseldorf; February 16, 2000; Düsseldorf, Germany

“Oriented Conjugated Polymers: Processing and Application in Display Devices”
23rd Asilomar Conference on Polymers; February 6-9, 2000; Pacific Grove, CA

“Functional Polymer Synthesis: Creating Polymer Materials with Tailored Properties”
Melville Lecture, Dept. of Chemistry University of Cambridge; January 20, 2000; Cambridge, United Kingdom

“Synthese Neuer Funktionspolymere: Design und Herstellung von Materialien mit massgeschneiderten Eigenschaften”
Dept. of Chemistry University of Marburg; December 6, 1999; Marburg, Germany

“Oriented Conjugated Polymers: Processing and Application in Display Devices”
Gordon Research Conference; Organic Thin Films; July 11-16, 1999; Newport, RI

“Polarizing Energy Transfer in Photoluminescent Polymer Systems: Materials and Applications”
The European Material Conference, EMRS 1999 Spring Meeting; June 1-4, 1999; Strasbourg, France

“Polymer-Based Systems for Advanced Optical Applications”

Bayreuth Polymer & Materials Research Symposium; April 11-13, 1999; Bayreuth, Germany

“Polarizing Light with Polymers”

CEA Grenoble, February 16, 1999

“Polarizing Light with Polymers: Application of Oriented Conjugated Polymers in Photoluminescent Display Devices”

EID 1998, November 17-19 1998; Esher, United Kingdom

“Oriented Conjugated Polymers: Processing and Application in Photoluminescent Display Devices”

Keynote Lecture; Polymer 1998; September 11, 1998; Brighton, United Kingdom

“Polarizing Light with Polymers”

Ciba Specialty Chemicals; June 2, 1998; Basel, Switzerland

“New Photoluminescent Display Devices”

Depts. of Mat. Sci. Eng. and Chemistry UCLA; April 10, 1998; Los Angeles, CA

“Polarizing Energy Transfer in Photoluminescent Materials for Display Applications” MIT, Dept. of Mat. Sci. Eng.; April 6, 1998; Cambridge, MA

“New Photoluminescent Display Devices”

Dept. of Mat. Sci. Eng. Northwestern University; April 3, 1998; Chicago, IL

“Incorporation of Photoluminescent Polarizers into Liquid Crystal Displays”

Dept. of Mat. Sci. Eng. University of Delaware; March 25, 1998; Wilmington, DE

“Nylons with Extended Aliphatic Segments”

Solutia Inc.; March 23, 1998; Pensacola, FL

“Photo- and Electroluminescence in Poly(*p*-phenylene ethynylene)s”

Bayreuth Polymer & Materials Research Symposium; April 7-9, 1997; Bayreuth, Germany

Contributed (11 total):

“Synthesis, Processing and Properties of Conjugated Polymer Networks”

ACS 2005 Spring Meeting; March 13 - 17, 2005; San Diego, LA

“Creating Polymer Chameleons – Smart Blends with Self-Assessing Capabilities”

ACS 2005 Spring Meeting; March 13 - 17, 2005; San Diego, LA

“Synthesis and properties of cross-linked conjugated polymers”

ACS 2003 Fall Meeting; September 7 - 11, 2003; New York, NY

“Synthesis and properties of cross-linked conjugated polymers”

ACS 2003 Fall Meeting; September 7 - 11, 2003; New York, NY

“Synthesis and properties of conjugated polymer networks formed by non-covalent interactions”

ACS 2003 Spring Meeting; March 23 - 27, 2003; New Orleans, LA

“Oligo(*p*-phenylene vinylene) excimers as molecular probes: Deformation-induced color changes in photoluminescent polymer blends”

ACS 2003 Spring Meeting; March 23 - 27, 2003; New Orleans, LA

“Efficient Photoluminescent Polarizers based on Polarizing Energy Transfer”

MRS 1998 Spring Meeting; April 13-17, 1998; San Francisco, CA

“New Photoluminescent Display Devices”

ACS 1998 Spring Meeting; March 29 - April 2, 1998; Dallas, TX

“Novel Liquid Crystal Display Devices Based on Highly Polarized Photoluminescent Polymer Films”

MRS 1997 Fall Meeting; December 1-5, 1997; Boston, MA

“Solid State Structure and Photoluminescence Properties of Poly(2,5-dialkoxy-*p*-phenylene ethynylene)s”

MRS 1995 Fall Meeting; November 27-December, 1995; Boston, MA

“A New Approach to the Design of Polymers with Large and Stable Nonlinear Optical Properties”
MRS 1994 Fall Meeting; November 28 - December 2, 1994; Boston, MA