

## Prof. Dr. sc. nat. Christoph Weder

Publications November 13, 2017

### Peer Reviewed Papers

226. Sagara, Y.; Karman, M.; Verde-Sesto, E.; Matsuo, K.; Kim, Y.; Tamaoki, N.; Weder, C.; Rotaxanes as mechanochromic fluorescent force transducers in polymers; *Submitted*.
225. Calvino, C.; Weder, C.; Schrettl, S.; Self-Calibrating Mechanochromic Fluorescent Polymers Based on Encapsulated Excimer-Forming Dyes; *Advanced Materials* **2017**, *In Press*.
224. Zimmermann, S.T.; Balkenende, D.W.R.; Lavrenova, A.; Weder, C.; Brugger, J.; Nanopatterning of a stimuli-responsive fluorescent supramolecular polymer by thermal scanning probe lithography; *ACS Applied Materials and Interfaces* **2017** *In Press*. **ACS Editor's Choice**. DOI: 10.1021/acsami.7b13672
223. Shirole, A.; Nicharat, A.; Weder, C.; Tailoring the Properties of a Shape-Memory Polyurethane via Nanocomposite Formation and Nucleation; *Macromolecules* **2017** *In Revision*.
222. Herbert, K.M.; Schrettl, S.; Rowan, S.J.; Weder, C.; Solid-state Multi-stimuli, Multi-responsive Polymeric Materials; *Macromolecules* **2017**, *In Press*. Invited Perspective Article. **Cover Picture**. DOI: 10.1021/acs.macromol.7b01607
221. Lehner, R.; Weder, C.; Petri-Fink, A.; Rothen-Rutishauser B.; Plastic nanoparticles and their impact on human health; *Environmental Science & Technology* **2017** *In Revision*.
220. Natterodt, J.C.; Shirole, A.; Sapkota, J.; Zoppe, J.; Weder, C. Polymer Nanocomposites with Cellulose Nanocrystals Made by Co-precipitation; *J. Appl. Polym. Sci.* **2017**, *134*, 45648. DOI: 10.1002/app.45648
219. Zoppe, J.; Dupire, A.; Lachat, T.; Lemal, P.; Rodriguez-Lorenzo, L.; Petri-Fink, A.; Weder, C.; Klok, H.A.; Cellulose nanocrystals with tethered polymer chains: chemically patchy versus uniform decoration; *ACS Macro Letters* **2017**, *6*, 892–897. DOI: 10.1021/acsmacrolett.7b00383.
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217. Sagara, Y.; Weder, C.; Tamaoki, N.; Asymmetric Cyclophanes Permit Access to Supercooled Nematic Liquid Crystals with Stimuli-responsive Luminescence; *Chem. Mater.* **2017**, *29*, 6145-6152. DOI: 10.1021/acs.chemmater.7b02220
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215. Natterodt, J.; Weder, C.; Zoppe, J.O.; Cellulose Nanocrystals: Surface Modification, Applications and Opportunities at Interfaces; *Chimia* **2017**, *71*, 376-383.
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## Lectures and Seminars

*Invited (199 total):*

“Create, study and apply (stimuli-responsive) polymers with new functions”

PlaMatSu Annual Meeting, September 29, 2017; Fribourg

“Stimuli-Responsive Supramolecular Polymer Systems”

SMYLE Symposium, September 28, 2017; Besancon, France

“Polymer nanocomposites with cellulose nanocrystals”

254<sup>st</sup> American Chemical Society National Meeting, August 22, 2017; Washington DC, USA

“Polymer Mechanochemistry with Supramolecular Mechanophores”

254<sup>st</sup> American Chemical Society National Meeting, August 21, 2017; Washington DC, USA

“Healable Supramolecular Polymers”

Plenary Lecture 6<sup>th</sup> International Conference on Self-Healing Materials, June 28, 2017; Friedrichshafen, DE

“Stimuli-Responsive Supramolecular Polymer Systems”

Seminar Institute for Molecular Engineering, University of Chicago, March 30, 2017; Chicago, IL

“Stimuli-Responsive Supramolecular Polymer Systems”

Solvay Seminar in Macromolecular Science & Engineering, Macromolecules Innovation Institute, Virginia Tech, March 29, 2017; Blacksburg, VA

“Polymer Nanocomposites for Biomedical Uses”

Department of Medicine Research Day, University of Fribourg, March 15, 2017; Fribourg

“Polymer Composites with Cellulose Nanocrystals”

Frontiers in Green Materials Meeting, December 12, 2016; London, GB

“Bio-Inspired, Mechanically Adaptive and Adapting Polymer Systems”

MRS Fall Meeting, November 29, 2016; Boston, MA

“Stimuli-Responsive Supramolecular Polymers”

Plenary Lecture, International Symposium on Stimuli-Responsive Materials, October 25, 2016; Santa Rosa, CA

“Stimuli-Responsive Supramolecular Polymers”

GdCH Seminar, Universität Potsdam, June 20, 2016; Golm, Germany

“Functional Materials Made with Cellulose Nanocrystals”

Keynote, International Conference on nanotechnology for Renewable Materials (TAPPI Nano), June 15, 2016; Grenoble, France

“Bio-Inspired, Mechanically Adaptive and Responsive Polymer Systems”

GRC Bio-Inspired materials, June 9, 2016; Les Diablerets

“Stimuli-Responsive Supramolecular Polymers”

251<sup>st</sup> American Chemical Society National Meeting, March 14, 2016; San Diego, CA, USA

“Low-power photon upconversion through triplet-triplet annihilation in nanostructured polymers”

251<sup>st</sup> American Chemical Society National Meeting, March 13, 2016; San Diego, CA, USA

“Bio-inspired nanocomposites for biomedical applications”

EMPA St. Gallen, January 18, 2016; St. Gallen

“Mechanically Adaptive Nanocomposites for Biomedical Applications”

Pacificchem 2015, December 19, 2015; Honolulu HI

“Low-power photon upconversion through triplet-triplet annihilation in polymeric materials”

Pacificchem 2015, December 15, 2015; Honolulu HI

“Stimuli-Responsive Metallosupramolecular Polymers”

Pacificchem 2015, December 15, 2015; Honolulu HI

“Stimuli-Responsive Materials Made with Cellulose Nanocrystals”

Plenary Lecture, International Symposium on Stimuli-Responsive Materials, October 26, 2015; Santa Rosa, CA

“Stimuli-Responsive Supramolecular Polymers”

Pirelli SA, October 22, 2015; Milan, Italy

“High-Added-Value Materials with Cellulose Nanocrystals”  
BEPS 2015, October 12, 2015; Karlsruhe, Germany

“Stimuli-Responsive Supramolecular Polymers”  
The Petroleum and Petrochemical College, Chulalongkorn University, June 12, 2015; Bangkok, Thailand

“Stimuli-Responsive Supramolecular Polymers”  
Department of Chemistry, Chulalongkorn University, June 10, 2015; Bangkok, Thailand

“Bio-Inspired Materials based on Cellulose Nanocrystals”  
Swiss Nanoconvention, May 28, 2015; Neuchatel, Switzerland

“Stimuli-Responsive Supramolecular Polymers”  
Seminar, BASF, May 13, 2015; Ludwigshafen, Germany

“Processing and Properties of Polymer Nanocomposites with Cellulose Nanocrystals”  
ACS 2015 Spring Meeting, April 25, 2015; Denver, CO, USA

“High-Added-Value Materials with Cellulose Nanocrystals”  
ACS 2015 Spring Meeting, April 24, 2015; Denver, CO, USA

“Stimuli-Responsive Hydrogen-Bonded Supramolecular Polymers”  
Plenary Lecture, International Symposium on Stimuli-Responsive Materials, October 27, 2014; Santa Rosa, CA

2nd Biomimicry Europe Innovation and Finance Summit”  
September 4, 2014; Zürich, Switzerland

“Mechanically (And Other) Responsive Polymers”  
ERC Grantees Conference, August 28, 2014; Berlin, Germany

“Stimuli-Responsive Hydrogen-Bonded Supramolecular Polymers”  
ACS Fall Meeting 2014, August 12, 2014; San Francisco, CA, USA

“Stimuli-Responsive Metallosupramolecular Polymers”  
ACS Fall Meeting 2014, August 11, 2014; San Francisco, CA, USA

“Stimuli-Responsive (Metallo)Supramolecular Polymers”  
MACRO 2014, July 10, 2014, Chiang Mai, Thailand

“Polymere Nanoverbundswerkstoffe mit Zellulose Nanofasern”  
6. Wädenswiler Chemietag, June 26, 2014; Wädenswil,

“Hydrogen-Bonded Stimuli-Responsive Supramolecular Polymers”  
PolyColl Meeting, June 20, 2014; Dübendorf,

“Hydrogen-Bonded Stimuli-Responsive Supramolecular Polymers”  
Chulalongkorn University, May 20, 2014; Bangkok, Thailand

“Stimuli-Responsive Metallosupramolecular Polymers”  
Makromolekulares Kolloquium Freiburg, February 27, 2014; Freiburg, Germany

“Stimuli-Responsive (Metallo)Supramolecular Polymers”  
Seminar, Department of Chemistry, University of Liverpool, January 29, 2014; Liverpool, UK

“Stimuli-Responsive Metallosupramolecular Polymers”  
Seminar, University of Mons, November 28, 2013; Mons, Belgium

“Stimuli-Responsive Metallosupramolecular Polymers”  
Seminar, Institute of Inorganic Chemistry, University of Zürich, November 1, 2013; Zürich

“Stimuli-Responsive Metallosupramolecular Polymers”  
International Symposium on Stimuli-Responsive Materials, October 20, 2013; Santa Rosa, CA

“Bio-Inspired, Stimuli-Responsive, Mechanically Adaptive Polymer Nanocomposites”  
Swiss-Japanese Workshop on “NANOSCIENCE: Materials Phenomena at Small Scale”, October 11, 2013; Tsukuba, Japan

“Stimuli-Responsive Supramolecular Polymers”  
 2<sup>nd</sup> Precision Polymer Materials (P2M) Conference, August 27, 2013; Ghent, Belgium

“Exploiting Non-Covalent Interactions for the Design of Stimuli-Responsive Polymers”  
 Invited IRTG Seminar, University of Freiburg, June 26, 2013; Freiburg, Germany

“Healing Polymers with Light and other Stimuli”  
 Chulalongkorn University, May 20, 2013; Bangkok, Thailand

“Stimuli-Responsive Polymers based on Noncovalent Interactions”  
 Jiao Tong University, May 8, 2013; Shanghai, China

“Stimuli-Responsive Polymers based on Noncovalent Interactions”  
 48<sup>th</sup> Bürgenstock Conference, May 2, 2013; Brunnen, Switzerland

“Mechanically Adaptive Nanocomposites”  
 ACS 2013 Spring Meeting, April 9, 2013; New Orleans, LA, USA

“From Light-Polarizing Films and Semiconducting Polymer Networks to Mechano-Healable Polymers”  
 ACS 2013 Spring Meeting, April 8, 2013; New Orleans, LA, USA

“Bio-Inspired, Stimuli-Responsive, Mechanically Adaptive Polymer Nanocomposites for Cortical Electrodes”  
 MRS Spring Meeting 2013, April 3, 2013; San Francisco, CA, USA

“Exploiting Non-Covalent Interactions for the Design of Stimuli-Responsive Polymers”  
 Invited GDCh Seminar, University of Bayreuth, January 24, 2013; Bayreuth, Germany

“Exploiting Non-Covalent Interactions for the Design of Stimuli-Responsive Polymers”  
 Invited Seminar, Nolax AG, January 14, 2013; Sempach, Switzerland

“Stimuli-Responsive Polymers based on Noncovalent Interactions”  
 Invited Lecture, IPC 2012, December 11-14, 2012; Kobe, Japan

“Exploiting Supramolecular Interactions for the Design of Functional Polymers”  
 Invited Seminar, Waseda University, Department of Chemistry, December 10, 2012; Tokyo, Japan

“Bio-Inspired, Stimuli-Responsive, Mechanically Adaptive Polymer Nanocomposites”  
 Plenary Lecture, GFP Grenoble, November 19-22, 2012; Grenoble, France

“Mechanically Adaptive Polymer Nanocomposites”  
 Jülich Soft Matter Days, November 14-16, 2012; Jülich, Germany

“Stimuli-Responsive Polymers Based on Non-Covalent Interactions”  
 DPI Annual Meeting, November 13, 2012; Zeist, The Netherlands

“Exploiting Noncovalent Interactions for the Design of Stimuli-Responsive Polymers”  
 Henkel, European Scientific Advisory Board Meeting, October 15, 2012; Düsseldorf, Germany

“Mechanically Adaptive Polymer Nanocomposites for Biomedical Applications”  
 Plenary Lecture, Smart Polymers, Biannual Meeting of the GDCh Division of Macromolecular Chemistry, October 7-9, 2012; Mainz, Germany

“Stimuli-Responsive Polymers Based on Non-Covalent Interactions”  
 BASF Research Seminar, September 23-26, 2012; St. Martin, Germany

“Nanocomposites with Cellulose Nanocrystals”  
 SAMPE SETEC 2012, September 19 2012; Lucerne

“Polymer Nanocomposites with Cellulose Nanocrystals”  
 IUPAC World Polymer Congress, June 25, 2012; Blacksburg, VA, USA

“Exploiting Noncovalent Interactions for the Design of Stimuli-Responsive Polymers”  
 IUPAC World Polymer Congress, June 25, 2012; Blacksburg, VA, USA

“Exploiting Noncovalent Interactions for the Design of Functional Polymers”  
 Invited Seminar, University of Pisa, June 15, 2012; Pisa, Italy

“Mechanically Adaptive Polymer Nanocomposites for Biomedical Implants and Other Applications”  
CIMTEC 2012, June 14, 2012; Montecatini, Italy

“Polymer Nanomaterials with Unusual Optical Properties”  
Chulalongkorn University, May 24, 2012; Bangkok, Thailand

“Bio-Inspired, Mechanically Adaptive Nanocomposites for Biomedical Implants”  
ACS 2012 Spring Meeting, March 25-29, 2012; San Diego, CA, USA

“Controlling the Properties of Mechanically Adaptive Polymer/Nanocellulose Composites”  
ACS 2012 Spring Meeting, March 25-29, 2012; San Diego, CA, USA

“Noncovalent Interactions as a Design Tool for Smart Polymers”  
Seminar, Technical University of Eindhoven, November 23, 2011; Eindhoven, NL

“Bio-Inspired, Mechanically Adaptive Nanocomposites”  
International Symposium on Stimuli-Responsive Materials, October 24-26, 2011; Hattiesburg, MS

“Interdisziplinarität in Forschung und Lehre”  
Keynote Lecture, Kick-off Meeting for all Teachers, Lycée St. Croix, September 5, 2011; Fribourg

“Polymer Nanocomposites with Cellulose Nanocrystals”  
ACS 2011 Fall Meeting, September 1, 2011; Denver, Co, USA

“Optically Responsive Metal-Containing Polymers”  
ACS 2011 Fall Meeting, August 29, 2011; Denver, Co, USA

“Noncovalent Interactions as a Design Tool for Functional Polymers”  
Gordon Research Conference Polymers, June 12, 2011; South Hadley, MA, USA

“Noncovalent Interactions as a Design Tool for Functional Polymers”  
Keynote Lecture 60th SPSJ Meeting, May 26, 2011; Osaka, Japan

“Stimuli-Responsive Nanomaterials through Integration of Functional Organic Dyes into Nanostructured Environments”  
Seminar, University of Tokyo, Dept. of Chemistry; May 24, 2011; Tokyo, Japan

“Supramolecular Interactions as a Design Tool for Functional Polymers”  
Chulalongkorn University, May 16, 2011; Bangkok, Thailand

“Exploiting Supramolecular Interactions for the Design of Smart Polymers”  
Jahrestagung Ehemaliger Chemie- und Biochemiestudenten; May 7, 2011; Fribourg

“Exploiting Noncovalent Interactions for the Design of Functional Polymers”  
PolyColl 2011; April 29, 2011; Geneva

“Bio-inspired mechanically-adaptive polymer/cellulose nanofiber nanocomposites”  
ACS 2011 Spring Meeting; March 28, 2011; Los Angeles, CA, USA

“Funktionelle Polymere und Nanocomposite”  
Swiss Engineering, Fachgruppe Kunststofftechnik, Seminar Funktionalisierte Kunststoffe, March 22, 2011, Fribourg, Switzerland

“Bio-inspired, mechanically adaptive polymer nanocomposites”  
Makromolekulares Kolloquium Freiburg, February 24-26 2011, Freiburg, Germany

“How to teach polymers new tricks”  
Micronarc Industrial Forum, November 10, 2010, Fribourg, Switzerland

“Stimuli-Responsive Nanomaterials through Integration of Dyes into Nanostructured Environments”  
International Symposium on Stimuli-Responsive Materials, October 26-27, 2010; Hattiesburg, MS

“Les matériaux intelligents du futur”  
Friburgissima, September 27, 2010, Fribourg, Switzerland

“Bio-inspired mechanically-adaptive polymer/cellulose nanocomposites”  
BiMaC Innovation, KTH Stockholm, September 26, 2010, Stockholm, Sweden

“New Functional Polymers”  
Sika; September 14, 2010, Zürich, Switzerland

“Bio-inspired mechanically-adaptive polymer/cellulose nanocomposites”  
TechConnect World, June 22, 2010, Anaheim, CA, USA

“Current Trends in Polymer-Based Nanomaterials”  
Firmenich; June 14, 2010; Geneva, Switzerland

“Bio-Inspired Mechanically-Adaptive Nanocomposites”  
Chulalongkorn University, May 17, 2010; Bangkok, Thailand

“Polymer Nanomaterials for Biomedical Applications”  
Kantonsspital Fribourg; May 6, 2010; Fribourg

“Current Trends in Polymer-Based Nanomaterials”  
BASF; April 8, 2010; Ludwigshafen, Germany

“Bio-Inspired Mechanically-Adaptive Nanocomposites”  
ACS 2010 Spring Meeting; March 22, 2010; San Francisco, CA, USA

“Funktionelle Polymere für Biomedizinische Anwendungen”  
Swiss Plastics 2010; January 19, 2010; Luzern, Switzerland

“Functional Polymer Blends and Nanocomposites”  
Keynote Lecture, Assemblée Generale Reseau Plasturgie, November 18, 2009 ; Fribourg Switzerland

“Mechanically Adaptive Polymer Nanocomposites”  
University of Marburg; November 16, 2009; Marburg, Germany

“Mechanically Adaptive Polymer Nanocomposites”  
Keynote Lecture, Bayer MaterialScience Symposium 2009; November 6, 2009; Pittsburg, PA

“Polymer Chameleons”  
International Symposium on Stimuli-Responsive Materials, October 28, 2009; Hattiesburg, MS

“Mechanically Adaptive Polymer Nanocomposites”  
CSEM; September 18, 2009; Neuchatel, Switzerland

“Mechanically Adaptive Polymer Nanocomposites”  
Trends in Nanotechnology TNT 2009; September 10, 2009; Barcelona, Spain

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

“Cellulose-Polymer Nanocomposites: Processing Self-Assembled Templates”  
ACS 2009 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

“Metallosupramolecular 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

“Metallosupramolecular 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

“Metallosupramolecular 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”  
16<sup>th</sup> 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 (12 total):*

“Understanding the reinforcement of polymers with a combination of cellulose nanocrystal types with different aspect ratios”  
251<sup>st</sup> American Chemical Society National Meeting, March 16, 2016; San Diego, CA, USA

“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

**Other Speeches** (*Since 2014*):

“Nanomaterialien”

Rotarier Club Freiburg-Sense, March 22, 2017; Düringen

“Faszinierende Welt der Nanomaterialien”

Volkshochschule Zürich, February 7, 2017; Zürich

“Nano?!”

Kickoff speech, panel discussion « Nano », Expo Nano / NRP 64, January 14, 2016; High School Enge, Zurich

“Patent it!”

Interdisciplinary Training for Young Scientists »Basic Research and Translational Approaches leading to Industrial Application», NRP 64, November 4, 2015; Berne

“En quoi et comment les études gymnasiales peuvent-elles le mieux préparer les futurs universitaires, les futurs chercheurs?”

Conférence des directeurs de gymnases de Suisse romande et du Tessin, September 17, 2015; Fribourg

“Innovation and Academic Research”

Innovation et créativité, Cérémonie de départ pour Recteur Guido Vergauwen, May 18, 2015; Fribourg

“Reise ins Herz der Materie”

Plenary Lecture, Apéro of the Alumni of the University of Fribourg, October 23, 2014; St. Gallen

“Reise ins Herz der Materie”

Plenary Lecture, 125 Jubilee of the University of Fribourg, September 28, 2014, Fribourg