**Timothy J. White**

*Curriculum Vitae*

**Education**

Fall 2006 Ph.D. Chemical and Biochemical Engineering, The University of Iowa

Fall 2005 M.S. Chemical and Biochemical Engineering, The University of Iowa

Spring 2002 B.A. Chemistry, Central College, Pella, Iowa

**Current Assignment**

**Air Force Research Laboratory/Photonic Materials Branch:** *Team Lead* (equivalent to Branch Technology Advisor) of the 25+ member (civilian and contractor) Structured Optical Materials and Processes Research Team, facilitating a $6.0M S&T portfolio (internal/external).

**Professional Experience**

2015-present - – Senior Research Engineer (DR-III), Team Lead, Air Force Research Laboratory

2018-present – Adjunct Faculty, Case Western Reserve University

2014-present – Graduate Faculty, University of Dayton

2012-2015 – Senior Research Engineer (DR-III), Group Lead, Air Force Research Laboratory

2008-2012 – Principal Research Engineer (DR-II), Air Force Research Laboratory

2006-2008 – Post-doctoral Associate, Air Force Research Laboratory

2002-2006 – Graduate Research Assistant, University of Iowa

**Community Leadership and Service**

FiMAR Co-Chair, 2018

ACS POLY Program Chair, 2015-2017

Co-Chair, “International Liquid Crystal Elastomer Conference”, Fall 2017

Lead Organizer, “Liquid Crystals: Displays and Beyond”, Spring 2016 MRS National Meeting

Co-organizer, “Mechanically Responsive Materials”, Pacifichem 2015

Lead Organizer, “Shape Programmable Materials”, Fall 2015 MRS National Meeting

Co-organizer, “Shape Programmable Materials”, Spring 2014 MRS National Meeting

Scientific Steering Committee (four year term), International Liquid Crystal Elastomer Conference – 2011-2015

SPIE, Awards Committee – 2013-2015

SPIE, “Committee on Non-Academic Issues” – 2013

Lead Organizer, “Liquid Crystals and Polymers”, Spring 2013 American Chemical Society National Meeting

Conference Co-Chair, “Optics of Liquid Crystals”, Fall 2013

Advisory Committee, “Actively Moving Polymers”, CIMTEC 2012

Advisory Board, Stimuli-Responsive Materials Conference (2010-2011)

Lead Organizer, “Liquid Crystal Materials: Beyond Displays” Fall 2010 MRS National Meeting

**Awards**

* **Outstanding Young Investigator, Materials Research Society, 2016**
* **Early Career Award, SPIE, 2013**
* Cooperative Research Award in Polymer Science and Engineering, American Chemical Society, Polymer Materials Science and Engineering Division (PMSE), 2013. (with T.J. Bunning and N.V. Tabiryan)
* **2012 Early Career Award, U.S. Air Force**
* 2011 “Directors Jr. Force Award”, Materials and Manufacturing Directorate, Air Force Research Laboratory

**Student Achievement**

* “Outstanding Graduate Student Mentor” by the University of Iowa
* 2007 Karl Kammermeyer Research Award, Dept. of Chemical and Biochemical Engineering, University of Iowa
* 2005 Vetter Service Award, Dept. of Chemical and Biochemical Engineering, University of Iowa
* NCAA All-American (2002, golf)
* NCAA Academic All-American (2001, 2002)

**Post-Doctoral and Student Involvement**

*Post-doctoral Advisees:* Dr. Kyung Min Lee (Akron, now staff at AFRL), Dr. Michael McConney (Georgia Tech, now AFRL civilian), Dr. Jonathan Vernon (Georgia Tech, now AFRL civilian), Dr. Jeong Jae Wie (Delaware, Asst Prof at Inha University), Dr. Taylor Ware (UT Dallas, now Asst Prof at UT Dallas), Dr. Mariacristina Rumi (U. Milano, current), Dr. Suk-Kyun Ahn (UConn, now Asst Prof at Pusan National University), Dr. Clare Mahoney (Carnegie Melon, now staff at AFRL), Dr. Ben Kowalski (Colorado, current), Dr. Tyler Guin (Texas A&M, now Oak Ridge National Laboratory), Dr. Anesia Auguste (U. Mass., current), Dr. Nick Godman (Oklahoma, now AFRL civilian), Dr. Matt Mills (U. Central Florida, now AFRL civilian), Dr. Brian Donovan (U. Southern Mississippi, current), Dr. Eric Harper (U. Michigan, current), Dr. Joselle McCracken (U. Illinois, current).

*PhD Committee Membership:* Davor Copic (Michigan, Mechanical Engineering), Laurens De Hans (Technical University of Eindhoven, Chemistry and Chemical Engineering), Hossein Nemati (Kent State University, Liquid Crystal Institute), Matt McBride (U. Colorado, Chemical Engineering), Michelle Leslie (Case Western Reserve U., Dept. of Macromolecular Science).

*Graduate Students Hosted at AFRL:* Angel Martinez (U. Colorado), John Gibson (Florida International), Bradley Worth (U. Dayton), Andrew Hess (U. Colorado), Michelle Leslie (Case Western, SMART Fellow).

*Undergraduate Students Hosted for Summer Research Experiences:* John Koval (Illinois), Alex Freer (Notre Dame, PhD at Purdue), Seth Cazzell (Illinois, now pursuing PhD at MIT), Aaron Zhao (Illinois), James Voss (Michigan State, PhD at Ohio State), Jack Binzer (Indiana), Kristina Hollkamp (Notre Dame), Cadet Zach Perry (USAFA), Will Brenn (Case Western), Ben Weisman (Ohio State), Cadet Chance Baxter (USAFA), Joseph Nikolai (Ohio State), Brian Schutter (Washington U. St. Louis).

*Undergraduate Student Employees (Discovery Learning):* Rebecca Bricker (Wright State, PhD at UT-San Antonio), Jennifer Hurtubise (U. Dayton, Wright State Medical School), Madeline Duning (U. Dayton, M.S.), Brandon Lynch (Wright State, M.S. at Ohio State), Chad Keister (Wright State), Andrew Harbach (U. Dayton), Aubrey Steele (U. Dayton), Claire Middleton (U. Dayton), Andreas Shick (U. Dayton), Meghan Weber (Wright State), Valentina, .

**Synopsis of Metrics**

* H index of 37.
* 119 peer-reviewed publications
  + *Science (2015)*, *Nature (2012)*, *Nature Materials (2015), Nature Communications (2016, 2016), PNAS (2013)*, *Angewandte Chemie (2012)*, and *Advanced Materials* (2011, 2011, 2011, 2012).
  + *13 papers with > 100 citations in last 10 years*
* 10+ patent awards and applications
* Interdisciplinary publication footprint spanning materials science, chemistry, optics, physics, and mechanics

**Patents (7 awarded, 3 pending)**

1. “Voxelated Liquid Crystal Elastomers”, Application US 15/135,087 (pending).
2. “Methods for Making Voxelated Liquid Crystal Elastomers”, Application US 15/135,108.
3. “Bis (Azobenzene) Containing Diamines for Syntheses of Photomechanical Polymers”, Application US 14/845,450 (pending).
4. "Bis(azobenzene) diamines and photomechanical polymers made therefrom." U.S. Patent 9,644,071 (issued May 9, 2017).
5. “Optically fixable shape memory polymers”, US Patent No. 9,475,912 (issued Oct 25, 2016).
6. “Phototropic Liquid Crystal Material and Processes”, US Patent No. 9,200,203 (issued Dec 1, 2015).
7. “Photomechanically active copolyimides derived from an azobenzenediamine, a rigid dianhydride, and a flexible dianhydride," U.S. Patent No. 9,834,644 (issued Dec, 5 2017).
8. “Photomechanically active copolyimides derived from an azobenzenediamine, a rigid dianhydride, and a flexible dianhydride”, U. S. Patent No. 9,085,661 (issued July 21, 2015).
9. “Azobenzene-Containing Glassy Polyimides Capable of Photo-Induced Large-angle Bending”, US Patent No. 8,785,589 (issued July 22, 2014).
10. “Multifunctional crosslinkers for shape-memory polyimides, polyamides and poly(amide-imides) and methods of making the same” US Patent No. 8,546,614 (issued Oct 1, 2013).

**Edited Books, Edited Journal Issues, and Invited Book Chapters**

1. **White, Timothy J. (ed.), “Photomechanical Materials, Composites, and Systems: Wireless Transduction of Light into Work”, John Wiley & Sons, 2017.**
2. White, T. J. (2017), “Photomechanical Effects in Materials, Composites, and Systems: Outlook and Future Challenges”, in Photomechanical Materials, Composites, and Systems: Wireless Transduction of Light into Work (ed T. J. White), John Wiley & Sons, Ltd, Chichester, UK. doi: 10.1002/9781119123279.ch12
3. White, T. J. (2017) Photomechanical Effects in Liquid-Crystalline Polymer Networks and Elastomers, in Photomechanical Materials, Composites, and Systems: Wireless Transduction of Light into Work (ed T. J. White), John Wiley & Sons, Ltd, Chichester, UK. doi: 10.1002/9781119123279.ch5
4. White, T., Dickey, M. (ed.), **Materials Research Society Symposium XX Proceedings, Vol. 1710 (**<http://journals.cambridge.org/action/displayIssue?jid=OPL&volumeId=1710&iid=9270696>**)**
5. White, T.J., “Mechanical Adaptivity in Photoresponsive Liquid Crystal Elastomers, Polymer Networks, and Composites” contribution to the “Handbook of Liquid Crystals” Vol. 7 “Applications of Liquid Crystals”
6. White, T.J. (ed.), **Materials Research Society Symposium L Proceedings, Vol. 1293E (**[www.mrs.org/opl](http://www.mrs.org/opl)**)**

**Publications**

1. Lee, K.M., Tondiglia, V.P., and White, T.J.\*, “Electrically Reconfigurable Mirrors”, ACS Omega, submitted.
2. Plucinsky, P., Kowalski, B.A., White, T.J., and Bhattacharya, K.\*, “Shape Assembly via Nonisometric Origami Building Blocks”, Soft Matter, submitted. (Arxiv: <https://arxiv.org/pdf/1712.04585.pdf>)
3. Mills, M.S.\*, Kowalski, B., Tondiglia, V.P., Lee, K.M., Steele, A.M., White, T.J., and Evans, D.R., “Spectrally selectable Airy beam generation”, Optics Letters, submitted.
4. Kowalski, B.A., Mastajeran, C., Warner, M., and White, T.J.\*, “Curvature by design and on demand in liquid crystal elastomers”, Physical Review E, 97 (1), 012504. (Arxiv: <https://arxiv.org/abs/1711.08308>)
5. Kotikian, A., Truby, R.L., Boley, J.W., White, T.J., and Lewis, J.A.\*, “3D Printing of Liquid Crystalline Elastomer Actuators with Spatially Programmed Nematic Order”, Advanced Materials, 2018, 30, 1706164. (<https://doi.org/10.1002/adma.201706164>) **(cover, March 8, 2018 issue)**
6. Serak, S., Nersisyan, S., Tabiryan, N., Steeves, D., Kimball, B.R., White, T.J., and Bunning, T.J., “High-contrast, low-voltage variable reflector for unpolarized light”, Molecular Crystals Liquid Crystals, 2018, 657 (1), 156-166.
7. White, T.J.\*, “Photomechanical Effects in Liquid Crystalline Polymer Networks and Elastomers”, Journal of Polymer Science: Polymer Physics, in press. (review)
8. Guin, T. Kowalski, B.A., Rao, R., Auguste, A.D., Grabowski, C.A., Lloyd, P.F., Tondiglia, V.P., Maruyama, B., Vaia, R.A., and White, T.J.\*, “Electrical Control of Shape in Voxelated Liquid Crystalline Polymer Nanocomposites”, ACS Applied Materials & Interfaces, 10 (1), 1187–1194. (<http://dx.doi.org/10.1021/acsami.7b13814>)
9. Baczkowki, M.L., Wang, D.H., Lee, D.H., Lee, K.M., Smith, M.L., White, T.J.\*, and Tan, L.-S.\*, “Photomechanical Deformation of Azobenzene-Functionalized Polyimides Synthesized with Bulky Substituents”, ACS Macro Lett., 2017**,** 6 (12), 1432–1437. (<http://dx.doi.org/10.1021/acsmacrolett.7b00854>)
10. Skandani, A.A., Chatterjee, S., Wang, D.H., Tan, L.-S., White, T.J., Shankar, M.R.\*, and Smith, M.L.\*, “Relaxation dynamics and strain persistency of azobenzene-functionalized polymers and actuators”, Macromolecular Materials and Engineering, 2017, 302, 1700256. (<https://dx.doi.org/10.1002/mame.201700256>)
11. Lee, K.M., Tondiglia, V.P., Godman, N.P., Middleton, C.M., and White, T.J.\*, “Blue-shifting tuning of the selective reflection of polymer stabilized cholesteric liquid crystals”, Soft Matter, 13 (35), 5842-5848. (<https://dx.doi.org/10.1039/C7SM01190C>) (**cover art**)
12. Godman, N.P., Kowalski, B.A., Auguste, A.D., Koerner, H.A., and White, T.J.\*, “Synthesis of Elastomeric Liquid Crystalline Polymer Networks via Chain Transfer”, ACS Macro Letters, 2017, 6, 1290-1295. (<http://dx.doi.org/10.1021/acsmacrolett.7b00822>)
13. Smith, M.J., Malak, S.T., Jung, J., Yoon, Y.J., Lin, C.H., Kim, S., Lee, K.M., Ma, R., White, T.J., Bunning, T.J. and Lin, Z.\*, “Robust, Uniform, and Highly Emissive Quantum Dot–Polymer Films and Patterns Using Thiol–Ene Chemistry”, ACS Applied Materials & Interfaces, 2017, 9(20), 17435-17448. (<http://dx.doi.org/10.1021/acsami.7b03366>)
14. White, T. and Verduzco, R., “Liquid crystal elastomers: emerging trends and applications”, Soft Matter, 2017, 13, 4320-4320. (<https://dx.doi.org/10.1039/C7SM90086D>) (**editorial accompanying special issue on Liquid Crystal Elastomers**)
15. Kowalski, B., Tondiglia, V., Guin, T., and White, T.J.\*, “Voxel Resolution in the Directed Self-Assembly of Liquid Crystal Polymer Networks and Elastomers”, Soft Matter, 2017, 13, 4335-4340. (<http://dx.doi.org/10.1039/C7SM00663B>) **(cover art)**
16. Kowalski, B., Guin, T., Auguste, A., Godman, N., and White, T.J.\*, “Pixelated Polymers: Directed Self Assembly of Liquid Crystalline Networks and Elastomers”, ACS Macro Letters, 2017, 6, 436. (<http://dx.doi.org/10.1021/acsmacrolett.7b00116>) **(cover art)**
17. Bregar, A., White, T.J. and Ravnik, M.\*, “Refraction of light on flat boundary of liquid crystals or anisotropic metamaterials”, Liquid Crystals Reviews, 2017, 5(1), 53-68. (<http://dx.doi.org/10.1080/21680396.2017.1341353>)
18. Rumi, M., White, T. J.\*, and Bunning, T. J.\*, “Phototropic guest-host liquid crystal systems: environmental effect on naphthopyrans kinetics”, J. Phys. Chem. B, 2016,120 (49), 12755-12767. (<http://dx.doi.org/10.1021/acs.jpcb.6b10053>)
19. Wie, J.J., Shankar, M.R., and White, T.J.\*, “Photomotility of polymers”, Nature Communications, 2016, 7, 13260. (<http://dx.doi.org/10.1038/ncomms13260>) **(featured in numerous online newsites and technical blogs, including phys.org)**
20. Skandani, A., Chatterjee, S., Smith, M.L., Baranski, J., Wang, D.H., Tan, L.-S., White, T.J., and Shankar, M.R., "Discrete-state photomechanical actuators", Extreme Mechanics Letters, 2016, 9 (1), 45-54. (<http://dx.doi.org/10.1016/j.eml.2016.05.002>.)
21. Lee, K.M., Ware, T.H., Tondiglia, V.P., McBride, M.K., Zhang, X., Bowman, C.N., and White, T.J.\*, “Initiatorless Photopolymerization of Liquid Crystal Monomers”, ACS Applied Materials & Interfaces, 2016, 8 (41), 28040-28046. (<http://dx.doi.org/10.1021/acsami.6b09144>)
22. Kim, D.-Y., Nah, C., Kang, S.-W., Lee, S.H., Lee, K.M., White, T.J., and Jeong, K.-U., “Free-Standing and Circular-Polarizing Chirophotonic Crystal Reflectors: Photopolymerization of Helical Nanostructures”, ACS Nano, 2016, 10 (10), 9570-9576. (<http://dx.doi.org/10.1021/acsnano.6b04949>)
23. Worth, B., Lee, K.M., Tondiglia, V.P., Myers, J., Mou, S., and White, T.J., “Dynamic, infrared bandpass filters prepared from polymer-stabilized cholesteric liquid crystals”, Applied Optics, 2016, 55 (25), 7134-7137. (<http://dx.doi.org/10.1364/AO.55.007134>)
24. Ahn, S., Ware, T.H., Lee, K.M., Tondiglia, V.P., and White, T.J.\*, “Photoinduced topographical feature development in blueprinted azobenzene-functionalized liquid crystalline elastomers”, Advanced Functional Materials, 2016, 26 (32), 5819-5826. (<http://dx.doi.org/10.1002/adfm.201601090>) **(frontispiece)**
25. Skandana, A., Chatterjee, S., Smith, M.L., Baranski, J., Wang, D.H., Tan, L.-S., White, T.J., and Shankar, M.R., “Discrete-state photomechanical actuators”, Extreme Mechanics Letters, 2016, 9 (1), 45-54. (<http://dx.doi.org/10.1016/j.eml.2016.05.002>.)
26. Mostajeran, C., Warner, M.\*, Ware, T.H., and White, T.J., “Encoding Gaussian curvature in glassy and elastomeric liquid crystal solids." Proc. R. Soc. A, 2016, 472.2189. (<http://dx.doi.org/10.1098/rspa.2016.0112>)
27. Rumi, M., Cazzell, S.A., Kosa, T., Sukhomlinova, L., Taheri, B., White, T.J., and Bunning, T.J.\*, “Quantification of photoinduced order increase in liquid crystals with naphthopyran guests”, Phys. Rev. E, 2016, 93 (3), 032701. (<http://dx.doi.org/10.1103/PhysRevE.93.032701>)
28. Ware, T.H., Biggins, J.S., Shick, A.F., Warner, M., and White, T.J.\*, “Localized soft elasticity in liquid crystal elastomers”, Nature Communications, 2016, 7. (<http://dx.doi.org/10.1038/ncomms10781>)
29. Khandelwal, H., Debije, M.G., White, T.J., and Schenning, A.P.H.J.\*, “Electrically tunable infrared reflector with adjustable bandwidth broadening up to 1100 nm”, J. Mater. Chem. A, 2016, 4, 6064-6069. (<http://dx.doi.org/10.1039/C6TA01647B>)
30. Lee, K.M., Tondiglia, V.T., and White, T.J.,\* “Photosensitivity of reflection notch tuning and broadening in polymer stabilized cholesteric liquid crystals”, Soft Matter, 2016, 12(4), 1256-1261.
31. White, T.J.\*, Broer, D.J.\*, “Programmable and Adaptive Mechanics with Liquid Crystal Polymer Networks and Elastomers”, Nature Materials, 2015, 14 (11), 1087-1098. **(review)** ([http://dx.doi.org/ 10.1038/nmat4433](http://dx.doi.org/%2010.1038/nmat4433))
32. Ware, T.H., Perry, Z.P., Middleton, C.M., Iacono, S.T., and White, T.J., “Programmable Liquid Crystal Elastomers Prepared by Thiol–Ene Photopolymerization”, ACS Macro Letters, 2015, 4 (9), 942-946. ([http://dx.doi.org/ 10.1021/acsmacrolett.5b00511](http://dx.doi.org/%2010.1021/acsmacrolett.5b00511))
33. Lee, K.M., Tondiglia, V.T., and White, T.J.,\* “Bistable Switching of Polymer Stabilized Cholesteric Liquid Crystals between Transparent and Scattering Modes”, MRS Communications, 2015, 5 (02), 223-227. (invited special issue on Polymers/Soft Matter) (<http://dx.doi.org/10.1557/mrc.2015.40>)
34. Ware, T.H., McConney, M.E., Wie, J.J., Tondiglia, V.P., and White, T.J.\*, “Voxelated Liquid Crystal Elastomers”, Science, 2015, 347, 982-984. (<http://dx.doi.org/10.1126/science.1261019>) (**featured in Popular Science, New Scientist, Chem and Engineering News, MRS Bulletin, Physics Today, and various international news outlets**)
35. Wie, J.J., Lee, K.M., Ware, T.H., and White, T.J.\*, “Twists and Turns in Glassy Liquid Crystalline Polymer Networks”, Macromolecules, 2015**,** 48 *(4),* pp 1087–1092. (<http://dx.doi.org/10.1021/ma502563q>)
36. Fuchi, K., Ware, T.H., Buskohl, P.R., Reich, G.W., Vaia, R.A., White, T.J., and Joo, J.J., “Topology optimization for the design of folding liquid crystal elastomer actuators”, Soft Matter, 2015, 11 (37), 7288-7295. (<http://dx.doi.org/10.1039/C5SM01671A>)
37. Ware, T.H., and White, T.J.\*, “Programmed Liquid Crystal Elastomers with Tunable Actuation Strain”, Polymer Chemistry, **2015**, 2015,6, 4835-4844. (<http://dx.doi.org/10.1039/C5PY00640F>)
38. Lee, K.M., Tondiglia, V.P., Lee, T., Smalyukh, I.I., and White, T.J.\*, “Large Range Electrically-induced Reflection Notch Tuning in Polymer Stabilized Cholesteric Liquid Crystals”, J. Mater. Chem. C, 2015, 3 (34), 8788-8793. ([http://dx.doi.org/ 10.1039/C5TC01320H](http://dx.doi.org/%2010.1039/C5TC01320H))
39. Nemati, H., Liu, S., Zola, R., White, T., Bunning, T., and Yang, D.-K.\*, “Mechanism of Electrically Induced Photonic Band Gap Broadening in Polymer Stabilized Cholesteric Liquid Crystals with Negative Dielectric Anisotropies”, Soft Matter, **2015**, 11, 1208-1213. (<http://dx.doi.org/10.1039/C4SM02283A>)
40. Ouskova, E., De Sio, L.\*, Vergara, R., White, T.J., Tabiryan, N., and Bunning, T.J., “Liquid Crystalline Polymer Dispersed Liquid Crystals”, Applied Physics Letters, **2014**, 105, 231122. (<http://dx.doi.org/10.1063/1.4904214>) (**featured in Nanowerk**, <http://www.nanowerk.com/spotlight/spotid=38669.php>)
41. Wie, J.J., Wang, D.H., Tondiglia, V.P., Tabiryan, N.V., Vergara-Toloza, R., Tan, L.-S., and White, T.J.\*, “Photopiezoelectric Composites of Azobenzene-Functionalized Polyimides and Polyvinylidene Fluoride”, Macromolecular Rapid Communications, 2014, 35, 2050-2056. (<http://dx.doi.org/10.1002/marc.201400455>) **(cover illustration) (Best of Macromolecular Journals 2014)**
42. Lee, K.M., Tondiglia, V.P., McConney, M.E., Natarajan, L.V., Bunning, T.J., and White, T.J.\*, “Color-Tunable Mirrors Based on Electrically Regulated Bandwidth Broadening in Polymer-Stabilized Cholesteric Liquid Crystals”, ACS Photonics, 2014, 1, 1033–1041. (<http://dx.doi.org/10.1021/ph500259h>)
43. Iocozzia, J., Xu, H., Pang, X., Xia, H., Bunning, T., White, T.\*, and Lin, Z.\*, “Starlike polymer click-functionalized with small capping molecules: an initial investigation into properties and improving solubility in liquid crystals”, RSC Advances, 2014, 4, 50212-50219. (<http://dx.doi.org/10.1039/C4RA09597A>)
44. Wie, J.J., Wang, D.H., Lee, K.M., Tan, L.-S.\*, and White, T.J.\*, “Molecular Engineering of Azobenzene-Functionalized Polyimides to Enhance Both Photomechanical Work and Motion”, Chemistry of Materials, 2014, 26, 5223-5230. (<http://dx.doi.org/10.1021/cm5018757>)
45. Liu, Q., Tang, J., Zhang, Y., Martinez, A., Wang, S., He, S., White, T.J., and Smalyukh, I.I.\*, “[Shape-dependent dispersion and alignment of nonaggregating plasmonic gold nanoparticles in lyotropic and thermotropic liquid crystals](http://scholar.google.com/citations?view_op=view_citation&hl=en&user=i9ul7IkAAAAJ&pagesize=100&sortby=pubdate&citation_for_view=i9ul7IkAAAAJ:wuYnf3tzzDUC)”, Phys. Rev. E, 2014, 89, 052525. (<http://dx.doi.org/10.1103/PhysRevE.89.052505>)
46. Tondiglia, V.P., Natarajan, L.V., Bailey, C.A., McConney, M.E., Lee, K.M., Bunning, T.J., Zola, R., Nematic, H., Yang, D.-k., and White, T.J.\*, “Bandwidth Broadening Induced by Ionic Interactions in Polymer Stabilized Cholesteric Liquid Crystals”, Optical Materials Express, 2014, 7, 1465-1472. (<http://dx.doi.org/10.1364/OME.4.001465>)
47. Rumi, M., White, T.J., and Bunning, T.J.\*, “Reflection spectra of distorted cholesteric liquid crystal structures in cells with interdigitiated electrodes”, Optics Express, 2014, 22, 16510-16519. (<http://dx.doi.org/10.1364/OE.22.016510>)
48. White, T.J.\*, Lee, K.M., McConney, M.E., Tondiglia, V.P., Natarajan, L.V., and Bunning, T.J., “Stimuli-Responsive Cholesteric Liquid Crystal Composites for Optics and Photonics”, SID Symposium Digest of Technical Papers 2014, 45, 555-558. (<http://dx.doi.org/10.1002/j.2168-0159.2014.tb00145.x>) **(invited paper)**
49. Wie, J.J., Chatterjee, S., Wang, D.H., Tan, L.-S.\*, Shankar, M.R.\*, and White, T.J.\*, “Azobenzene-functionalized Polyimides as Wireless Actuators”, Polymer, 2014, 55, 5915-5923. (<http://dx.doi.org/10.1016/j.polymer.2014.06.084>) **(invited special issue on Shape Changing Polymers)**
50. Rumi, M., Tondiglia, V.P., Natarajan, L.V., White, T.J., and Bunning, T.J.\*, “Local Optical Spectra and Texture for Chiral Nematic Liquid Crystals in Cells with Interdigitated Electrodes”, Mol. Crys. Liq. Crys., 2014, 595, 123-135, 2014. (<http://dx.doi.org/10.1080/15421406.2014.917825>)
51. Wie, J.J., Lee, K.M., and White, T.J.\*, “Thermally and Optically Fixable Shape Memory in Azobenzene-Functionalized Glassy Liquid Crystalline Polymer Networks”, Mol. Crys. Liq. Crys., 2014, 596, 113-121. (<http://dx.doi.org/10.1080/15421406.2014.918336>)
52. Rumi, M., Tondiglia, V.P., Natarajan, L.V., White, T.J., and Bunning, T.J.\*, “Non-uniform helix unwinding of cholesteric liquid crystals in cells with interdigitated electrodes”, Chem. Phys. Chem., 2014, 15, 1311-1322. (<http://dx.doi.org/10.1002/cphc.201300995>) **(invited special issue on Liquid Crystals) (cover illustration) (very important paper)**
53. Wang, D.H., Wie, J.J., Lee, K.M., White, T.J.\*, and Tan, L.-S.\*, “Impact of Backbone Rigidity on the Photomechanical Response of Glassy, Azobenzene-Functionalized Polyimides”, Macromolecules, 2014, 47, 659-667. (<http://dx.doi.org/10.1021/ma402178z>)
54. Cazzell, S.A., McConney, M.E., Tondiglia, V.P., Natarajan, L.V., Bunning, T.J., and White, T.J.\*, “Contribution of Crosslink Density and Chirality to Reflection Wavelength Tuning in Structurally Chiral Nematic Gels”, Journal of Materials Chemistry Part C, 2014, 2, 132-138. (<http://dx.doi.org/10.1039/C3TC31432D>)
55. Lee, K.M., Lynch, B.M., Luchette, P., and White, T.J.\*, “Photomechanical effects in liquid crystal polymer networks prepared with m-fluoroazobenzene”, Journal of Polymer Science Part A: Polymer Chemistry, 2014, 52, 876-882. (<http://dx.doi.org/10.1002/pola.27072>)
56. Smith, M.L.\*, Lee, K.M., White, T.J., and Vaia, R.A., “Design of polarization-dependent, flexural- torsional deformation in photo responsive liquid crystalline polymer networks”, Soft Matter, 2014, 10, 1400-1410. ([http://dx.doi.org/ 10.1039/C3SM51865E](http://dx.doi.org/%2010.1039/C3SM51865E)) **(invited special issue on Reconfigurable Soft Matter)**
57. Shankar, M.R.\*, Smith, M.L., Tondiglia, V.P., Lee, K.M., McConney, M.E., Wang, D.H., Tan, L.-S., and White, T.J.\*, “Contactless, Photoinitiated Snap-through in Azobenzene-functionalized Polymers”, Proceedings of the National Academies of Sciences, 2013, 110, 18792-18797. (<http://dx.doi.org/10.1073/pnas.1313195110>) (featured Chemistry World and numerous online profiles)
58. Vernon, J.P., Serak, S.V., Hakobyan, R.S., Aleksanyan, A.K., White, T.J., Bunning, T.J., and Tabiryan, N.V.\*, “Recording polarization gratings with a standing spiral wave”, Applied Physics Letters, 2013, 103, 2011101. (<http://dx.doi.org/10.1063/1.4829742>)
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**Refereed Conference Proceedings**

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6. White, T.J., Koval, J.J., Tondiglia, V.P., Natarajan, L.V., Vaia, R.A., Serak, S., Grozhyk, V., Tabiryan, N., and Bunning, T.J., “Polarization dependent photoactuation in azobenzene LC polymers”, Proc. SPIE, 2007, Vol. 6654.

**Conference Proceedings**

1. Beblo, R., Settle, M., Guin, T., White, T., Reich, G., “Constitutive Modeling of Patterned Liquid Crystal Elastomer for Active Flow Control”, ASME Conf. Proc., 2017.
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3. Fuchi, K., Buskohl, P.R., Ware, T., Vaia, R.A., White, T.J., Reich, G.W., and Joo, J.J.\*, “Inverse Design of LCN Films for Origami Applications Using Topology Optimization”, ASME Conf. Proc., 2014.
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**Presentations**

*Invited Seminars*

1. White, T.J., “Pixelated Polymers: Directing the Self-Assembly of Liquid Crystalline Polymer Networks and Elastomers”, APTAC at University of Southern Mississippi, November 2017. **(invited keynote)**
2. White, T.J., “Pixelated polymers: directing the self-assembly of liquid crystalline networks”, University of Massachusetts, Department of Polymer Science and Engineering, September 2017. (invited – R. Hayward)
3. White, T.J., “Photomechanical Effects in Materials, Composites, and Systems: Opportunities and Challenges”, Incubator: Materials for Optomechanical Actuation, June 2017. (invited – P. Morrison)
4. White, T.J., “Pixelated polymers: directing the self-assembly of liquid crystalline networks”, Vandeveer Bush Faculty Fellowship Symposium, April 2017. (selected AFRL presenter)
5. White, T.J., “Mechanical Design Opportunities and Challenges: Some Thoughts”, Workshop on Optomechanical Effects in Materials, April 2017. (invited – R. Shankar)
6. White, T.J., “Programming Shape or Stretch in Liquid Crystal Elastomers”, Kent State University, Liquid Crystal Institute, December 2016. (invited – Q. Wei)
7. White, T.J., “Programming Shape or Stretch in Liquid Crystal Elastomers”, University of Delaware, Department of Materials Science, November 2016. (invited – C. Kloxin)
8. White, T.J., “Programming Shape or Stretch in Liquid Crystal Elastomers”, North Carolina State University, Department of Chemical Engineering, September 2016. (invited – M. Dickey)
9. White, T.J., “Photomechanical Effects in Azobenzene-Functionalized Polymers”, Technical University of Eindhoven, Functional Devices Group, August 2016. (invited – A. Schenning)
10. White, T.J., “Programming Liquid Crystal Elastomers: Elasticity, Actuation, and Beyond”, University of Minnesota, Department of Aerospace Engineering, May 2016. (invited – D. James)
11. White, T.J., “Programming Liquid Crystal Elastomers: Elasticity, Actuation, and Beyond”, Case Western Reserve University, Macromolecular Science and Engineering, January 2016. (invited – S. Rowan)
12. White, T.J., “Programming Liquid Crystal Elastomers: Elasticity, Actuation, and Beyond”, University of Akron, College of Polymer Science and Engineering, October 2015. (invited – T. Kyu)
13. White, T.J., “Stimuli-Responsive Liquid Crystalline Materials: Towards Optics and Origami”, University of Cambridge, Department of Physics, November 2014. (invited – M. Warner)
14. White, T.J., “Stimuli-Responsive Liquid Crystalline Materials: Towards Optics and Origami”, Technical University of Eindhoven, Institute for Complex Molecular Systems, November 2014. (invited – D. Broer)
15. White, T.J., “Stimuli-Responsive Liquid Crystalline Materials: Towards Optics and Origami”, University of Cincinnati, Department of Materials and Mechanical Engineering, September 2014. (invited – G. Beaucage, J. Iroh)
16. White, T.J., “Stimuli-Responsive Liquid Crystalline Materials: Towards Optics and Origami”, Wright State University, Department of Chemistry, September 2014. (invited – K. Turnbull)
17. White, T.J., “Smart and Stimuli-Responsive Polymers, Liquid Crystals, and Composites”, University of Pittsburgh, Department of Industrial Engineering, November 2013. (invited – M.R. Shankar)
18. White, T.J., “Smart and Stimuli-Responsive Polymers, Liquid Crystals, and Composites”, University of Colorado, Department of Chemical Engineering, March 2013. (invited – C. Bowman)
19. White, T.J., “Color Change in Cholesteric Liquid Crystals”, Kent State University, Liquid Crystal Institute Colloquia, October 2012. (invited - T. Hegmann)
20. White, T.J., “Stimuli-Responsive Liquid Crystalline Materials”, U.S. Air Force Academy (USAFA), September 2012. (invited – S. Iacono)
21. White, T.J., “Taking Flight with Light: Photomechanical Effects in Glassy Photoresponsive Polymeric Materials”, University of Iowa, Department of Chemical and Biochemical Engineering, March 2012. (invited - C. Allan Guymon)
22. White, T.J., “Smart Optically Responsive Materials: Exploiting Chiral (and Achiral) Photochemistry to Enable Color Tunable Cholesteric Liquid Crystal Reflectors”, University of Iowa, Optical Science and Technology Center Seminar, March 2012. (invited – C. Allan Guymon)
23. White, T.J., “Shape Adaptation in Glassy Photoresponsive Polymeric Materials”, Ohio University, Department of Chemistry and Biochemistry, Department Colloquium, October 2011. (invited – J. Rack)
24. White, T.J., “Photoresponsive Liquid Crystal Polymer Networks: Glassy Adaptive Materials”, Technical University of Eindhoven, Department of Chemistry and Chemical Engineering, September 2011. (invited – D. Broer)
25. White, T.J., “Novel Light Directed Effects in Cholesteric Liquid Crystals”, University of Colorado, Department of Physics, Condensed Matter Seminar, March 2011. (invited – I. Smalyukh)
26. White, T.J., "Photoresponsive Liquid Crystal Polymer Networks: Glassy Adaptive Materials”, Georgia Tech University, Woodruff School of Mechanical Engineering, Departmental Seminar, March 2011. (invited – A. Alexeev)
27. White, T.J., and Lee, K.M., "Photoresponsive Liquid Crystal Polymer Networks: Glassy Adaptive Materials”, Proctor and Gamble, Miami Valley Research Center, January 2011. (invited – J. Adams)

*National and International Meetings*

1. Rumi, M., White, T.J., Bunning, T.J., “Photoinduced effects in guest-host liquid crystals containing naphthopyran derivatives”, 2017 MRS Fall Meeting, Boston, MA, November–December, 2017.
2. Auguste, A., White, T.J., "Omni-directional soft elasticity for designer substrates", invited seminar, Hope College, Holland, MI, November 2017.
3. Warner, M., Mostajeran, C., Kowalski, B., White, T.J., “Topography from the flash of a lamp?”, International Liquid Crystal Elastomer Conference (ILCEC), Houston, TX, October 2017. (plenary keynote)
4. Auguste, A., White, T.J., “Tuning Poisson’s ratios through omni-directional soft elasticity”, International Liquid Crystal Elastomer Conference (ILCEC), Houston, TX, October 2017.
5. Kowalski, B., White, T.J., “Tailored curvatures in liquid crystal elastomer sheets”, International Liquid Crystal Elastomer Conference (ILCEC), Houston, TX, October 2017.
6. White, T.J., Auguste, A., Kowalski, B., Guin, T., Godman, N., Donovan, B., Leslie, M., “From the Inside Looking Out: Perspective on Current Status and Future R&D of Liquid Crystalline Elastomers”, International Liquid Crystal Elastomer Conference (ILCEC), Houston, TX, October 2017. (invited)
7. Guin, T., White, T.J., “Photo-Patterned Carbon Nanotube - Liquid Crystal Elastomer Nanocomposites”, International Liquid Crystal Elastomer Conference (ILCEC), Houston, TX, October 2017.
8. Donovan, B., White, T.J., “LCEs from Thiol-ene Polymerizations”, International Liquid Crystal Elastomer Conference (ILCEC), Houston, TX, October 2017.
9. Leslie, M.T., Venetos, M., White, T.J., Wnek, G.E., Korley, L.T.J., "Shape and color tuning in cholesteric liquid crystal elastomers", International Liquid Crystal Elastomer Conference (ILCEC), Houston, TX, October 2017.
10. White, T.J., Tan, L.-S., Lee, K.M., Wie, J.J., and Donovan, B., “Photomechanical Effects in Azobenzene-Functionalized Polymer Networks and Elastomers”, Frontiers of Photoactive Soft Matter, Boulder, CO, September 2017. (invited)
11. Lee, K. M., Baczkowski, M., Wang, D. H., Lee, D. H., White, T. J., Tan, L.-S., “Effect of Bulky Cardo-diamine on Photomechanical Response in Linear Azobenzene Polyimides”, Frontiers of Photoactive Soft Matter 2017, Boulder, CO, September 2017. (Poster)
12. Donovan, B. R., White, T. J., "Uniform Liquid Crystal Elastomers from Thiol-ene Photopolymerizations" Frontier of Photoactive Soft Matter, Boulder, CO, September 2017.
13. Donovan, B. R., White, T. J., "Uniform Liquid Crystal Elastomers from Thiol-ene Photopolymerizations" Photopolymerization Fundamentals Meeting, Boulder, CO, September 2017.
14. Lee, K. M., Tondiglia, V., and White, T. J., “Initiatorless Photopolymerization of Liquid Crystal Monomers: Enabling Improved Electrooptic Device Performance”, Photopolymerization Fundamentals 2017, Boulder, CO, September 2017. (Poster)
15. White, T.J., Lee, K.M., Kowalski, B., and Tondiglia, V.P., “Photopolymerization of Liquid Crystalline Monomers: Enabling Next Generation Optics”, Photopolymerization Fundamentals Meeting, Boulder, CO, September 2017. (invited)
16. Godman, N.P., Auguste, A.D., Kowalski, B.A., and White, T.J., “Liquid crystal elastomers derived using chain transfer agents”, ACS National Meeting, Washington DC, August 2017.
17. Donovan, B. R., White, T. J., "Liquid Crystal Elastomers with Programmable and Dynamic Shape Change" ACS National Meeting, Washington DC, August 2017.
18. Guin, T., Kowalski, B., Auguste, A., Rahul, R., Grabowski, C., Maruyama, B., Vaia, R., White, T. J., "Voxelated Liquid Crystal Elastomer Nanocomposites," ACS National Meeting, Washington DC, August 2017.
19. Auguste, A., White, T.J., "Exploring the functionality of homeotropically aligned liquid crystal elastomers", American Chemical Society 254th National Meeting, Washington, DC, August 2017.
20. Kowalski, B., Guin, T., White, T.J., "Liquid crystalline elastomer films: actuation under load", American Chemical Society (ACS) National Meeting, Washington, DC, August 2017.
21. White, T.J., “Pixelated polymers: directing the self-assembly of liquid crystalline networks”, American Chemical Society (ACS) National Meeting, Washington, DC, August 2017. (invited)
22. White, T.J., Leslie, M.L., Guin, T., Beblo, R., Settle, M., and Reich, G., “Shape Programming: Functional Topographical Surfaces”, American Chemical Society (ACS) National Meeting, Washington, DC, August 2017. (invited)
23. White, T.J., Lee, K.M., and Tondiglia, V.P., “Responsive Optical Filters Prepared from Polymer Stabilized Cholesteric Liquid Crystals”, SPIE Optics + Photonics, San Diego, CA, August 2017. (keynote)
24. Mills, M.S., Kowalski, B., White, T.J., Evans, D.R., “Electrically Selectable Airy Beams using Cholesteric Liquid Crystals”, International Photorefractive Review, Sarasota, FL, June 2017.
25. Leslie, M.T., White, T.J., Wnek, G.E., Korley, L.T.J., "Bioinspired stimuli-responsive materials: concurrent shape and color change in programmed cholesteric liquid crystal", American Chemical Society National Meeting, San Francisco, CA, April 2017.
26. Guin, T., Kowalski, B., Auguste, A., Rahul, R., Grabowski, C., White, T. J., " Voxelated Liquid Crystal Elastomer Nanocomposites," ACS National Meeting, San Francisco, CA, April 2017.
27. Kowalski, B., Mostajeran, C., Warner, M., White, T.J., "Thermomechanical deformation of liquid crystalline elastomers: from flat to functional", American Chemical Society (ACS) National Meeting, San Francisco, CA, April 2017
28. Auguste, A., Godman, N., White, T.J., "Omnidirectional nonlinear elasticity in liquid crystal elastomers", American Chemical Society 253rd National Meeting, San Francisco, CA, April 2017.
29. Leslie, M.T., White, T.J., Wnek, G.E., Korley, L.T.J., "Bioinspired stimuli-responsive materials: concurrent shape and color change in programmed cholesteric liquid crystal", Research ShowCASE, Case Western Reserve University, Cleveland, OH, April 2017.
30. Guin, T., Kowalski, B., Auguste, A., Rahul, R., Grabowski, C., White, T. J., " Electrically-Induced Shape Change in Patterned Carbon Nanotube-Containing Liquid Crystal Elastomers," MRS National Meeting, Phoenix, AZ, April 2017.
31. Auguste, A., Godman, N., Guin, T., White, T.J., "Omnidirectional soft elasticity in homeotropically aligned liquid crystal elastomers", Material Research Society Spring Meeting, Phoenix, AZ, April 2017.
32. Rumi, M., White, T. J., Bunning, T. J., “Properties of polymer stabilized cholesteric liquid crystals in the oblique helicoidal state”, APS March Meeting 2017, New Orleans, LA, March 2017.
33. Kowalski, B., White, T.J., "Resolution limits of voxelated liquid crystal networks and elastomers", American Physical Society (APS) March Meeting, New Orleans, LA, March 2017
34. Auguste, A., White, T.J., "Localizing linear and nonlinear elastic responses in liquid crystal elastomers", American Physical Society March Meeting, New Orleans, LA, March 2017.
35. Lee, K. M., Tondiglia, V., Bunning, T. J., and White, T. J., “Time-dependent Deformation of Polymer Network in Polymer Stabilized Cholesteric Liquid Crystals”, Emerging Liquid Crystal Technology XII, SPIE Photonics West, San Francisco, CA, February 2017.
36. Lee, K. M., Tondiglia, V., and White, T. J., “Dynamic EO responses in Positive Dielectric Anisotropy Polymer Stabilized Cholesteric Liquid Crystals”, Emerging Liquid Crystal Technology XII, SPIE Photonics West, San Francisco, CA, January 2017.
37. Lee, K. M., Tondiglia, V., Bunning, T. J., and White, T. J., “Photo-controllable reflection notch tuning and broadening in PSCLCs”, Emerging Liquid Crystal Technology XII, SPIE Photonics West, San Francisco, CA. February 2017. (Poster)
38. White, T.J., Ware, T.H., Ahn, S.-K., Guin, T., Auguste, A., and Godman, N., “Programming Shape or Stretch in Liquid Crystal Elastomers”, Shape Memory Applications, Research, and Technology (SMART), Dallas, TX, December 2016. (**plenary**)
39. White, T.J., Rumi, M., and Bunning, T.J., “Photoresponsive Liquid Crystal Systems: Using Light to Control Light”, International Symposium on Stimuli Responsive Materials, Sonoma, CA, October 2016. (invited)
40. White, T.J., “Photopolymerization and Aerospace: Selected Opportunities”, Radtech: Future of Photopolymerization, Estes Park, CO, October 2016. (invited)
41. White, T.J., Lee, K.M., Tondiglia, V.P., “Electrical Control of Reflection Wavelength and Bandwidth in Cholesteric Liquid Crystals”, International Meeting on Electrochromics (IME-12), Delft, Netherlands, August 2016. (invited)
42. White, T.J., et. al, “Cooperative Research of Liquid Crystalline Materials: Enabling Applications Beyond Displays”, ACS National Meeting, Philadelphia, PA, August 2016. (invited)
43. Tondiglia, V.P., Lee, K.M., and White, T.J., “Bandgap Tuning Induced by Polymer Deformation in PSCLCs with Positive Dielectric Anisotropies”, SPIE Optics+Photonics, San Diego, CA, August 2016. (invited)
44. Bunning, T.J., White, T.J., Evans, D.R., Tabiryan, N.V., “20 Years and Counting of LC Science and Technology at the Summer SPIE Meeting”, SPIE Optics+Photonics, San Diego, CA, August 2016. (keynote)
45. Rumi, M., Kosa, T., Sukhomlikova, L., Taheri, B., White, T. J., and Bunning, T. J. “Environment effects on the kinetics of naphthopyrans in phototropic LC guest-host systems”, 26th International Liquid Crystal Conference, Kent, OH, August 2016.
46. White, T.J., Ware, T., Guin, T., Kowalski, B., Ahn, S.-K., Wie, J.J., Lee, K.M., and Tondiglia, V.P., “Programming Liquid Crystal Elastomers: Actuation, Elasticity, and Beyond”, 26th International Liquid Crystal Conference, Kent, OH, August 2016. (invited)
47. Kowalski, B. and White, T.J., “Switchable optical devices via surface relief in liquid crystal elastomers”, 26th International Liquid Crystal Conference, Kent, OH, August 2016.
48. Beblo, R., Guin, T., White, T., and Reich, G., “Flow Control via Surface Topography Using Patterned Liquid Crystal Elastomer”, 26th International Liquid Crystal Conference, Kent, OH, August 2016.
49. Guin, T., Ahn, S.-K., Ware, T.H., Lee, K.M., Tondiglia, V.P., and White, T.J., “Photoinduced Shape Change in Patterned Azobenzene-Containing Liquid Crystal Elastomers”, 26th International Liquid Crystal Conference, Kent, OH, August 2016.
50. Lee, K.M., Ware, T., Tondiglia, V., McBride, M., Zhang, X., Bowman, C., and White, T., “Initiatorless Photopolymerization of Liquid Crystal Monomers”, 26th International Liquid Crystal Conference, Kent, OH, August 2016.
51. Tondiglia, V., Lee, K.M., and White, T., “Photosensitivity of Reflection Notch Tuning and Broadening in Polymer Stabilized Cholesteric Liquid Crystals”, 26th International Liquid Crystal Conference, Kent, OH, August 2016.
52. Lee, K.M., Tondiglia, V., and White, T., “The Effect of Polymer Network Structure on the Electro-Optic Response of Polymer Stabilized Cholesteric Liquid Crystals”, 26th International Liquid Crystal Conference, Kent, OH, August 2016.
53. White, T.J., Ware, T., Guin, T., Kowalski, B., Ahn, S.-K., Lee, K.M., and Tondiglia, V.P., “Blueprinting Topology Into Liquid Crystal Elastomers”, Materials Research Society National Meeting, Phoenix, AZ, April 2016.
54. White, T.J., “Programming Liquid Crystal Elastomers: Elasticity, Actuation, and Beyond”, Materials Research Society National Meeting, Phoenix, AZ, April 2016. (award lecture)
55. Kowalski, B. and White, T.J., “High resolution photopatterning of liquid crystal elastomers”, Materials Research Society National Meeting, Phoenix, AZ, April 2016.
56. Mahoney, C., Park, K., Tondiglia, V., Luchette, P., Taheri, B., Palffy-Muhoray, P., White, T., and Vaia, R., “Gold Nanorods in Plasmonic Hybrids”, Materials Research Society National Meeting, Phoenix, AZ, April 2016.
57. Lee, K.M., Tondiglia, V., and White, T., “The Effect of Polymer Network Structure on the Electro-Optic Response of Polymer Stabilized Cholesteric Liquid Crystals”, Materials Research Society National Meeting, Phoenix, AZ, April 2016.
58. Tondliglia, V., Binzer, J.F., Lee, K.M., Bunning, T.J., and White, T.J., “Total reflection of electrically induced band gap changes in polymer stabilized cholesteric liquid crystals”, Materials Research Society National Meeting, Phoenix, AZ, April 2016.
59. Rumi, M., White, T.J., and Bunning, T.J., “Photophysics of liquid crystal systems containing naphthopyran derivatives”, APS March Meeting 2016, Baltimore, MD, March 2016.
60. White, T.J., Ware, T.H., Ahn, S.-K., Kowalski, B., Guin, T., Lee, K.M., and Tondiglia, V.P., “Responsive surfaces prepared by programming liquid crystalline elastomers”, ACS National Meeting, San Diego, CA, March 2016. (invited)
61. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Optical Patterning and Preparation of Liquid Crystalline Elastomers: Shape Changing Materials”, SPIE Photonics West, San Francisco, CA, February 2016. (invited)
62. White, T.J., Lee, K.M., Tondiglia, V.P., McConney, M.E., and Bunning, T.J., “Electrical Control of Reflection Wavelength and Bandwidth in Cholesteric Liquid Crystals”, SPIE Photonics West, San Francisco, CA, February 2016. (invited)
63. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Programming Mechanical Adaptivity in Liquid Crystal Polymer Networks”, Pacifichem, Honolulu, HI, December 2015. (invited)
64. Bunning, T.J., Lee, K.M., Tondiglia, V.P., and White, T.J., “Improving and Extending the Dynamic Optical Response of PSCLCs with Materials Chemistry”, Pacifichem, Honolulu, HI, December 2015.
65. De Sio, L., Placido, T., Comparelli, R., Curri, L., Serak, S., Tabirian, N., White, T.J., and Bunning, T., “Cholesteric Liquid Crystals + Nanoparticles”, Pacifichem, Honolulu, HI, December 2015.
66. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Localizing Stretch and Actuation within Liquid Crystalline Elastomers”, Materials Research Society National Meeting, Boston, MA, December 2015. (invited)
67. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Adaptive Shapes and Reconfigurable Surfaces Prepared from Liquid Crystalline Elastomers”, Materials Research Society National Meeting, Boston, MA, December 2015.
68. Buskohl, P.R., Fuchi, K., Ware, T., Bazzan, G., Durstock, M.F., Tan, L.-S., Joo, J., Reich, G., White, T., and Vaia, R.A., “Design Tools for Functional Reconfiguration of Liquid Crystal Elastomers”, Materials Research Society National Meeting, Boston, MA, December 2015.
69. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Programming Shape and Soft Elasticity in Liquid Crystal Elastomers”, International Liquid Crystal Elastomer Conference, Erice Italy, October 2015. (keynote)
70. Ware, T.H. and White, T.J., “Programmable Shape Change and Mechanics in Liquid Crystal Elastomers”, International Symposium on Stimuli-Responsive Materials, Sonoma, CA, October 2015. (invited)
71. Wie, J.J., Lee, K.M., Ware, T.H., McConney, M.E., Tondiglia, V.P., and White, T.J., “Programmable stimuli-responsive liquid crystalline polymers”, Polymer Society of Korea, Daegu, Korea, October 2015.
72. Reich, G.W., Fuchi, K., Ware, T., Buskohl, P.R., Bazzan, G., Durstock, M.F.,Tan, L.-S., Joo, J., White, T., and Vaia, R.A., "Design of origami structures and mechanisms for aerospace applications". Smart Material, Adaptive Structures, and Intelligent Systems Meeting, Colorado Springs, CO, September 2015.
73. Rumi, M., Cazzell, S., Kosa, T., Sukhomlikova, L., Taheri, B., White, T.J., and Bunning, T.J., “Photophysics of photoinduced order increase in liquid crystals doped with naphthopyran derivatives”, Optics of Liquid Crystal Conference, Sopot, Poland, September, 2015.
74. Bunning, T.J., White, T.J., Lee, K.M., Tondiglia, V., Binzer, J., De Sio, L., Serak, S., Umeton, C., and Tabiryan, N., “Cholesteric LC’s - a couple of scientific vignettes”, Optics of Liquid Crystal Conference, Sopot, Poland, September, 2015.
75. White, T.J., Ware, T.H., Lee, K.M., Ahn, S.-K, Wie, J.J., McConney, M.E., and Tondiglia, V.P., “Stimuli-Responsive liquid crystalline polymer Networks and composites”, Photopolymerization Fundamentals Conference, September 2015. (invited)
76. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Facile Multi-Step Synthesis of Liquid Crystalline Elastomers”, American Chemical Society National Meeting (POLY), August 2015. (invited)
77. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Shape Programmable Materials from Photoresponsive Liquid Crystalline Polymer Networks”, American Chemical Society National Meeting (POLY), August 2015.
78. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Functionally Graded Order in Liquid Crystal Elastomers: Designer Substrates for Flexible Devices?”, American Chemical Society National Meeting (PMSE), August 2015.
79. Lee, K.M., Ware, T.H., Tondiglia, V.P., and White, T.J., “Initiatorless Photopolymerization of Liquid Crystal Monomers”, American Chemical Society National Meeting (POLY), August 2015.
80. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Shape programming with light: voxelated liquid crystal elastomers”, SPIE Optics+Photonics, San Diego, CA, August 2015. (invited)
81. White, T.J., Lee, K.M., Worth, B., Tondiglia, V.P., McConney, M.E., Yang, D.-k., and Bunning, T.J., “Dynamic Filtering with Liquid Crystals”, SPIE Optics+Photonics, San Diego, CA, August 2015. (invited)
82. Tan, L.-S., Wang, D.H., Koerner, H., White, T.J., and Vaia, R.A. "Thermally activated shape-memory polyimides for origami-inspired objects in hot environment." 2015 European Polymer Congress, Dresden, Germany, June 2015.
83. White, T.J., Ware, T.H., Ahn, S.-K., and Tondiglia, V.P., “Programming Shape and Soft Elasticity in Liquid Crystal Elastomers”, Gordon Conference on Liquid Crystals, College of New England, June 2015. (invited)
84. Tondiglia, V.P., Lee, K.M., Binzer, J., Bunning, T.J., and White, T.J., “Total Reflection Properties of Dynamic Cholesteric Liquid Crystals”, Novel Optical Materials and Applications Conference (NOMA), Calabria, Italy, June 2015. (invited)
85. Wang, D.H., Baczkowski, M. L., Wie, J.J., White, T.J., and Tan, L.-S., “Synthesis and structure-property relationship of novel azobenzene-containing diamines and polyimides”, American Chemical Society National Meeting (PMSE), Denver, CO, April 2015.
86. White, T.J., Ware, T.H, Ahn, S.-K., McConney, Wie, J.J., and Tondiglia, V.P., “Voxelated Liquid Crystalline Elastomers”, American Chemical Society National Meeting (POLY), Denver, CO, April 2015. (invited)
87. White, T.J., Lee, K.M., Tondiglia, V.P., McConney, M.E., Yang, D.-k., and Bunning, T.J., “Color control in stimuli-responsive cholesteric liquid crystal composites”, American Chemical Society National Meeting (PMSE), Denver, CO, April 2015. (invited)
88. Bunning, T.J., Hrozhyk, U.A., Serak, S., De Sio, L., Umeton, C., Tabiryan, N.V., and White, T.J., “Responsive Liquid Crystal/Polymer Aperiodic and Periodic Composites”, American Chemical Society National Meeting (COLL), Denver, CO, April 2015.
89. Bunning, T.J., Rumi, M., Cazzell, S., White, T.J., Kosa, T., Sukhomlinova, L., and Taheri, B., “Photophysics of photoinduced disorder-to-order transitions in dye-doped liquid crystals”, Materials Research Society National Meeting, San Francisco, CA, April 2015.
90. Smith, M.J., Malak, S.T., Jung, J., Lin, Z.H., White, T.J., Bunning, T.J., Lin, Z., and Tsukruk, V.V., “Utilizing thiol-ene click chemistry to fabricate highly emissive QD patterns for polymer based optical systems”, Materials Research Society National Meeting, San Francisco, CA, April 2015.
91. Rumi, M., Cazzell, S., Kosa, T., Sukhomlikova, L., Taheri, B., White, T. J., Bunning, T. J., “Phototropic liquid crystal materials containing naphthopyran dopants”, APS March Meeting 2015, San Antonio, TX, March 2015.
92. Gibson, J., Liu, X., Georgakopoulos, S.V., Ware, T., Wie, J.J., and White, T.J., “Novel Reconfigurable Antennas Using Liquid Crystal Elastomers”, APS April Meeting, April 2015.
93. Lee, K. M., Tondiglia, V., Natarajan, L., McConney, M. E., Bunning, T. J., and White, T. J., “Large Reflection Notch Tuning of Cholestreic Liquid Crystals Stabilized by Chiral Liquid Crystal Polymers”, SPIE Photonic West, San Francisco, CA, February 2015.
94. Bunning, T.J., Serak, S., DeSio, L., Umeton, C., Ouskova, E., Tondiglia, V.P., White, T.J., Binzer, J., and Tabiryan, N.V., “Dynamic LC/Polymer Systems”, SPIE Photonic West, San Francisco, CA, February 2015. (invited)
95. Buskohl, P.R., Fuchi, K., Ware, T., Bazzan, G., Durstock, M.F.,Tan, L.-S., Joo, J., Reich, G., White, T., and Vaia, R.A., "Design of Origami-based Materials: An Optimization Approach". Workshop on Origami Design for Integration of Self-assembling Systems for Engineering Innovation (ODISSEI), Miami, FL, January 2015 (invited)
96. Ware, T.H. and White, T.J., “Main-Chain Liquid Crystal Elastomer Actuators with Photopatterned Director Orientation”, Materials Research Society National Meeting, December 2014.
97. White, T.J., Ware, T.H., Wie, J.J., McConney, M.E., Lee, K.M., “Voxelated Liquid Crystal Elastomers”, International Symposium on Stimuli Responsive Materials, Sonoma, CA, October 2014. (invited)
98. Lee, K. M., Tondiglia, V., Natarajan, L., McConney, M. E., Bunning, T. J., and White, T. J., “Color and Bandwidth Control in Polymer Stabilized Cholesteric Liquid Crystals”, IMID, Daegu Korea, August, 2014.
99. White, T.J., Ware, T.H., Wie, J.J., Lee, K.M., “Optically Fixable Shape Memory in Azobenzene-functionalized Polymeric Materials, American Chemical Society National Meeting (PMSE), San Francisco, CA, August 2014. (invited)
100. White, T.J., Lee, K.M., Tondiglia, V.P., and Bunning, T.J., “Large range reflection notch tuning in polymer stabilized cholesteric liquid crystals”, SPIE Optics+Photonics, San Diego, CA, August 2014. (invited keynote)
101. Wie, J.J., Wang, D.H., Tondiglia, V.P., Tabiryan, N.V., Vergara-Toloza, R.O., Tan, L.-S., and White, T.J., “Light to work to electricity in azobenzene-functionalized linear polyimide copolymers”, SPIE Optics + Photonics, San Diego, CA, August 2014.
102. White, T.J., Ware, T.H., Wie, J.J., McConney, M.E., and Tondiglia, V.P., “From Flat to Functional: Complex 3-dimensional Shape Transformations in Patterned Liquid Crystal Polymers and Elastomers”, International Liquid Crystal Conference (ILCC), Dublin, Ireland, June 2014.
103. Ware, T.H., McConney, M.E., Wie, J.J., and White, T.J., “Origami-Inspired Main-Chain Liquid Crystal Elastomer Actuators”, International Liquid Crystal Conference (ILCC), Dublin, Ireland, June 2014.
104. Rumi, M., White, T. J., and Bunning, T. J., “Reflection spectra of distorted cholesteric liquid crystal structures in cells with interdigitated electrodes”, International Liquid Crystal Conference (ILCC), Dublin, Ireland, June 2014.
105. White, T.J., Lee, K.M., McConney, M.E., Tondiglia, V.P., Natarajan, L.V., and Bunning, T.J., “Stimuli-Responsive Cholesteric Liquid Crystal Composites for Optics and Photonics”, Society of Information Display – “Display Week”, San Diego, CA, June 2014. (invited)
106. Vaia, R.A., Durstock, M.F., White, T.J., Tan, L.-S., Joo, J.J., and Reich, G.W., “Where art and technology meet: Origami for three-dimensional adaptive devices”, SPIE DSS, Baltimore, MD, May 2014. (invited keynote)
107. Reich, G.W., Vaia, R.A., White, T.J., Joo, J.J., Durstock, M.F., and Tan, L.-S., “Adaptive Origami for Aerospace Systems”, MRS Spring Meeting, San Francisco, CA, April 2014. (invited)
108. White, T.J., McConney, M.E., Wie, J.J., and Ware, T.H., “Topography from Topology: 2-D and 3-D Shape Transformations in Patterned Liquid Crystalline Networks”, MRS Spring Meeting, San Francisco, CA, April 2014.
109. Wie, J.J., McConney, M.E., Lee, K.M., and White, T.J., “Shape Adaptivity of Light-Responsive Liquid Crystalline Polymer Networks: Twisting, Folding and Locomotion”, MRS Spring Meeting, San Francisco, CA, April 2014.
110. Ware, T.H., Wie, J.J., McConney, M.E., and White, T.J., “Optimization of Materials Chemistry of Photoresponsive Liquid Crystal Polymer Networks”, MRS Spring Meeting, San Francisco, CA, April 2014.
111. Chatterjee, S., Shankar, M.R., Smith, M.L., Tondiglia, V.P., Lee, K.M., McConney, M.E., Wang, D.H., Tan, L.-S., Wie, J.J., and White, T.J., “Photodriven Snapping Instability of Azobenzene-Functionalized Polymers”, MRS Spring Meeting, San Francisco, CA, April 2014.
112. Smith, M.L., Shankar, M.R., Backman, R., Tondiglia, V.P., Lee, K.M., McConney, M. E. , Wang, D.H., Tan, L.S., and White, T.J., “Designing light responsive bistable arches for rapid, remotely triggered actuation,” SPIE Smart Structures/NDE, San Diego, CA, March 2014.
113. Wie, J.J., Wang, D.H., Lee, K.M., Tan, L.-S., and White, T.J., “Positional Isomer Effects on Photomechanical Response of Azobenzene Functionalized Polyimides”, APS March Meeting, Denver, CO, March 2014.
114. White, T.J., Lee, K.M., Tondiglia, V.P., McConney, M.E., and Bunning, T.J., **“Electro-optic color tuning in cholesteric liquid crystals”** SPIE Photonics West, San Francisco, CA, February 2014. (invited)
115. Rumi, M., Tondiglia, V.P., Natarajan, L.V., White, T.J., and Bunning, T.J., “Microcharacterization of cholesteric liquid crystals in interdigitated electrode-based cells”, SPIE Photonics West, San Francisco, CA, February 2014. (invited)
116. White, T.J., Lee, K.M., McCOnney, M.E., Tondiglia, V.P., Natarajan, L.V., and Bunning, T.J., “Color Control with Cholesteric Liquid Crystals”, Optics of Liquid Crystals, Honolulu, HI, September 2013.
117. Vernon, J.P., Rumi, M., Hrozhyk, U.A., Serak, S.V., Tondiglia, V.P., McConney, M.E., Tabiryan, N.V., White, T.J., and Bunning, T.J., “Photoresponsive Cholesteric Liquid Crystal Architectures”, Optics of Liquid Crystals, Honolulu, HI, September 2013. (invited)
118. Taheri, B., Munoz, A., McConney, M.E., Kosa, T., Luchette, P., Sukhomlinova, L., White, T.J., and Bunning, T.J., “CW Mirrorless Lasing in Cholesteric Liquid Crystals”, Optics of Liquid Crystals, Honolulu, HI, September 2013. (invited)
119. White, T.J., McConney, M.E., Wie, J.J., Lee, K.M., and Tondiglia, V.P., “Stimuli-Responsive, Shape and Surface Morphing Liquid Crystal Polymer Networks”, ACS National Meeting (POLY), Indianapolis, IN, September 2013.
120. Vernon, J.P., Zhao, A.D., Lynch, B.M., Tondiglia, V.P., White, T.J., Tabiryan, N.V., and Bunning, T.J., “Self-​regulated and infrared-​stimulated control of light transmission through cholesteric liquid crystals”, ACS National Meeting (POLY), Indianapolis, IN, September 2013.
121. Wang, D.H., Wie, J.J., Lee, K.M., White, T.J., and Tan, L.-S., “Photomechanical responses of high Tg, main-chain-azobenzene-containing polyimides”, ACS National Meeting (POLY), Indianapolis, IN, September 2013.
122. Wie, J.J., Lee, K.M., McConney, M.E., and White, T.J., “Body Temperature Triggered Shape Memory Properties of Twisted Nematic Liquid Crystal Polymer Networks”, ACS National Meeting (POLY), Indianapolis, IN, September 2013.
123. McConney, M.E., Wie, J.J., Tondiglia, V.P., and White, T.J., “Bending and Buckling of Photo-responsive Liquid Crystalline Networks”, International Liquid Crystal Elastomer Conference, Shanghai, China, September 2013. (invited)
124. Rumi, M., Tondiglia, V.P., Natarajan, L.V., White, T.J., and Bunning, T. J., “Local optical spectra and texture for chiral nematic liquid crystals in cells with interdigitated electrodes”, Optics of Liquid Crystals, Honolulu, HI, September 2013.
125. White, T.J., McConney, M.E., Wie, J.J., Tondiglia, V.P., Martinez, A., and Smalyukh, I.I., “Defect and Domain Patterning in Mechanically Adaptive Liquid Crystal Polymer Networks”, SPIE Optics+ Photonics, San Diego, CA, August, 2013.
126. Bunning, T.J., Vernon, J.P., Tabiryan, N.V., Serak, S.V., Tondiglia, V.P., Rumi, M., Lee, K.M., McConney, M.E., and White, T.J., “Responsive Cholesteric Liquid Crystals”, SPIE Optics+ Photonics, San Diego, CA, August, 2013. (invited)
127. Tabiryan, N.V., Nersisyan, S.R., Serak, S.V., White, T.J., Bunning, T.J., Steeves, D.M., and Kimball, B.R., “The Science (and the Art) of Switching Diffractive Waveplates”, SPIE Optics+ Photonics, San Diego, CA, August, 2013. (invited)
128. Lee, K.M., Tondiglia, V.P., Natarajan, L.V., McConney, M.E., Bunning, T.J., and White, T.J., “Large Color Tuning of Polymer Stabilized Negative Dielectric Anisotropy Cholesteric Liquid Crystals”, SPIE Optics+ Photonics, San Diego, CA, August, 2013.
129. Rumi, M., Tondiglia, V.P., Natarajan, L.V., White, T.J., and Bunning, T.J., “Effects of in-plane electric fields on the optical properties of cholesteric liquid crystals, SPIE Optics+ Photonics, San Diego, CA, August, 2013.
130. Tondiglia, V.P., Natarajan, L.V., McConney, M.E., Bailey, C., Yang, D.-k., Bunning, T.J., and White, T.J., “Mechanism for field dependent reflection band broadening in polymer stabilized cholesteric liquid crystal.”, Novel Optical Materials and Applications Conference (NOMA), Calabria, Italy, June 2013.
131. Serak, S.V., Vergara, R., Tabiryan, N.V., White, T.J., and Bunning, T.J., “Advancing the prospects of using photoresponsive azopolymer liquid crystals for adaptive membrane optics, polymer engines and opto-mechanical power conversion”, Canadian Chemistry Conference and Exhibition, Montreal, Canada, May 2013. (invited)
132. White, T.J., Bunning, T.J., and Tabiryan, N.V., “Photosensitive polymer/liquid crystal mixtures”, ACS National Meeting (PMSE), New Orleans, LA, April 2013. (invited) (award talk for ACS PMSE Cooperative Research Award in Applied Polymer Science)
133. Natarajan, L.V., Tondiglia, V.P., Lee, K.M., McConney, M.E., Keister, C., Bunning, T.J., and White, T.J., “Dynamic reflection notch bandwidth broadening in polymer stabilized cholesteric liquid crystals”, ACS National Meeting (POLY), New Orleans, LA, April 2013.
134. Lee, K.M., Natarajan, L.V., Tondiliga, V.P., McConney, M.E., Bunning, T.J., and White, T.J., “Large Reflection Notch Tuning of Cholesteric Liquid Crystals Stabilized by Chiral Liquid Crystal Polymers”, ACS National Meeting (POLY), New Orleans, LA, April 2013.
135. McConney, M.E., Duning, M., Cazzell, S., Natarajan, L.V., Tondiglia, V.P., White, T.J., and Bunning. T.J., “Templated chiral polymer architectures”, ACS National Meeting (POLY), New Orleans, LA, April 2013.
136. Vernon, J.P., Serak, S.V., Hrozhyk, U.A., Tondiglia, V.P., White, T.J., Tabiryan, N.V., and Bunning, T.J., “Optically reconfigurable media enabled by photosensitive surfaces”, ACS National Meeting (COLL), New Orleans, LA, April 2013.
137. White, T.J., McConney, M.E., and Lee, K.M., “Wireless mechanical adaptivity: Photomechanical effects in azobenzene-functionalized polymeric materials”, ACS National Meeting (POLY), New Orleans, LA, April 2013. (invited)
138. Wie, J.J., Lee, K.M., Lynch, B.M., and White, T.J., "Three-dimensional mechanical deformations of azobenzene functionalized liquid crystalline polymer networks", ACS National Meeting (POLY), New Orleans, LA, April 2013.
139. McConney, M.E., Bunning, T.J., Vernon, J.P., Tabiryan, N.V., Serak, S.V., Tondiglia, V.P., Rumi, M., Lee, K.M., and White, T.J., “Responsive Cholesteric Liquid Crystals”, SPIE Photonics West, San Francisco CA, January, 2013. (invited)
140. McConney, M.E., Martinez, A., Lee, K.M., Tondiglia, V.P., Bunning, T.J., Smalyukh, I., and White, T.J. “Directed Self-Assembly of Liquid Crystalline Polymers through Photo-alignment Surfaces”, 2012 Fall Materials Research Society Meeting, Boston, MA, December 2012.
141. White, T.J., Lee, K.M., Wang, D.H., Tan, L.-S., Koerner, H., Smith, M.L., and Vaia, R.A. “Shape Adaptive Liquid Crystal Polymer Networks”, 8th International Symposium on Stimuli-Responsive Materials, October 2012. (invited)
142. White, T.J., Lee, K.M., Wang, D.H., Koerner, H., Tan, L.-S., and Vaia, R.A. “Wireless Mechanical Adaptivity: Photomechanical Effects in Azobenzene-Functionalized Polymeric Materials”, ASME 2012 Conference on Smart Materials, Adaptive Structures, and Intelligent Systems (SMASIS), September 2012. (invited)
143. Lee, K.M., Tondiglia, V., Natarajan, L., McConney, M., Bailey, C., White, T., and Bunning, T. “Dynamic Coloration Effects in Negative Dielectric Anisotropy Cholesteric Liquid Crystals”, International Meeting on Information Display (IMID), Seoul Korea, August 2012. (invited)
144. White, T.J., Lee, K.M., Wang, D.H., Tan, L.-S., Smith, M.L., Koerner, H., Vaia, R.A., and Bunning, T.J. “Towards Remote Fixing of Complex Shapes in Liquid Crystal Polymer Networks”, International Liquid Crystal Conference (ILCC), Mainz, Germany, August 2012. (invited)
145. Kosa, T., Sukhomlinova, L., Su, L., Taheri, B., White, T.J., and Bunning, T.J. “Light Induced Liquid Crystallinity – Order-increasing Phase Transitions in Naphthopryan Guest-Host Mixtures”, International Liquid Crystal Conference (ILCC), Mainz, Germany, August 2012.
146. Taheri, B., Munoz, A., McConney, M.E., Kosa, T., Luchette, P., Sukhomlinova, L., White, T.J., and Bunning, T.J. “CW mirrorless lasing in cholesteric liquid crystals”, International Liquid Crystal Conference (ILCC), Mainz, Germany, August 2012.
147. White, T.J., McConney, M.E., Cazzell, S.A., Duning, M., Hurtubise, J., Natarajan, L., Tondiglia, V., and Bunning, T.J. “Responsive Liquid Crystal Polymer Network Architectures: Towards Color Tuning”, Polymer Network Group Conference, Jackson Hole, WY, August 2012. (invited)
148. Bunning, T.J., Tabiryan, N.V., Serak, S., Hrozhyk, U.A., Vernon, J., Tondiglia, V., and White, T. “Dynamic photo-driven optical architectures using azo-benzene and liquid crystal material combinations”, SPIE Optics+Photonics, San Diego, CA, August 2012. (invited)
149. Bunning, T.J., Bailey, C.A., McConney, M.E., Yang, D.-k., Natarajan, L., Tondiglia, V., and White, T.J. “Novel electro-optic effects in negative dielectric polymer stabilized cholesteric liquid crystals”, SPIE Optics+Photonics, San Diego, CA, August 2012. (invited)
150. Lee, K.M., Tondiglia, V., Natarajan, L., Bailey, C.A., White, T., Bunning, T.J. “Electromechanical tuning of negative dielectric anisotropic cholesteric liquid crystals”, SPIE Optics+Photonics, San Diego, CA, August 2012.
151. Vernon, J., Serak, S., Hrozhyk, U., Tondiglia, V., White, T.J., Tabiryan, N.V., and Bunning, T.J. “Cholesteric liquid crystals and photoalignment surfaces”, SPIE Optics+Photonics, San Diego, CA, August 2012.
152. Lee, K.M., Tabiryan, N.V., Bunning, T.J., and White, T.J. “Photochemical mechanism in the generation of photomechanical behavior of the polydomain azobenzene liquid crystal polymer networks”, SPIE Optics+Photonics, San Diego, CA, August 2012.
153. Lee, K.M., Wang, D.H., Koerner, H., Vaia, R.A., Tan, L.-S., and White, T.J. “Photomechanical Behavior of Azobenzene Polyimides”, Collaborative Conference on Materials Research, Seoul, South Korea, June 2012.
154. White, T.J., Lee, K.M., Wang, D.H., Tan, L.-S., Smith, M.L., Koerner, H., Vaia, R.A., and Bunning, T.J. “Towards Remote Fixing of Complex Shapes in Liquid Crystal Polymer Networks”, CIMTEC 4th International Conference on Smart Materials, Structures, and Systems, Montecatini Terme, Italy, June 2012. (invited)
155. Wang, D.H., Lee, K.M., Koerner, H., Yu, Z., Vaia, R.A., White, T.J., and Tan, L.-S. “Azobenzene-Containing, High Tg, Crosslinked and Linear Aromatic Polyimides: Photomechanically Bendable and Twistable”, CIMTEC 4th International Conference on Smart Materials, Structures, and Systems, Montecatini Terme, Italy, June 2012.
156. McConney, M.E., Duning, M., Natarajan, L.V., Tondiglia, V.P., Bailey, C., White, T.J., and Bunning, T.J. “Dynamic Coloration Enabled by Polymer Stabilized Cholesteric Liquid Crystals”, CIMTEC 4th International Conference on Smart Materials, Structures, and Systems, Montecatini Terme, Italy, June 2012. (invited)
157. McConney, M.E., Duning, M., Natarajan, L.V., Tondiglia, V.P., White, T.J., and Bunning, T.J. “Helicoidally structured gels undergoing order-disorder phase transitions”, American Chemical Society National Meeting, San Diego, CA, April 2012.
158. Taheri, B., Munoz, A., McConney, M.E., Kosa, T., Luchette, P., Sukhomlinova, L., White, T.J., and Bunning, T.J. “CW mirrorless lasing in cholesteric liquid crystals”, SPIE Photonics West, San Francisco, CA, January 2012. (invited)
159. Natarajan, L.V., McConney, M.E., Duning, M., Tondiglia, V.P., White, T.J., and Bunning, T.J. “Thermally responsive polymer/liquid crystal gels exhibiting large scale color changing in cholesterics”, SPIE Photonics West, San Francisco, CA, January 2012. (invited)
160. Tabiryan, N., Nersisyan, S.R., Serak, S.V., White, T.J., Bunning, T.J., Steeves, D.M., and Kimball, B.R. “Modernizing the technology for controlling light, both laser and broadband, with diffractive waveplates”, SPIE Photonics West, San Francisco, CA, January 2012. (invited)
161. McConney, M.E., Duning, M., Natarajan, L., Tondiglia, V.P., White, T.J., Bunning, T.J. “Responsive Polymer/Liquid Crystal Nanocomposites enabling Large Scale Coloration Changes”, 2011 Fall Materials Research Society Meeting, Boston, MA, December 2011.
162. Duning, M., Voevodin, A., McConney, M., Natarajan, L., Tondiglia, V.P., White, T.J., Bunning, T.J. “Structure/property relationships of Responsive LC Gels”, 2011 Fall Materials Research Society Meeting, Boston MA, December, 2011.
163. Bunning, T.J., McConney, M.E., Duning, M.D., Voevodin, A., Natarajan, L.V., Tondiglia, V.P., White, T.J. “Thermal Responsive Gels based on Order/Disorder Transitions in Liquid Crystal Fluids”, 2011 Fall Materials Research Society Meeting, Boston, MA, December 2011.
164. Lee, K.M., Wang, D., Koerner, H., Vaia, R.A., Tan, L.-S., and White, T.J. “Photomechanical Response of Highly Glassy Azobenzene Polyimide Networks”, 2011 Fall Materials Research Society Meeting, Boston, MA, December 2011.
165. Lee, K.M., Smith, M.L., Koerner, H., Vaia, R.A., Bunning, T.J., and White, T.J. “Molecular Orientation and Temperature Effects on Photodriven, Bending/Twisting and Mulitidimensional Oscillation of Azobenzene Liquid Crystalline Polymer Networks”, 2011 Fall Materials Research Society Meeting, Boston, MA, December 2011.
166. White, T.J., Lee, K.M., and Bunning, T.J., “Optically Directing Out-of-plane Shape Adaptations in Azobenzene Functionalized Liquid Crystalline Polymer Networks”, 2011 Fall Materials Research Society Meeting, Boston, MA, December 2011.
167. Bunning, T.J., McConney, M.E., Hurtubise, J., Duning, M., Natarajan, L.V, Tondiglia, V., and White, T.J. “Dynamic Selective Reflection Properties in Cholesteric Liquid Crystals”, International Stimuli Responsive Materials Conference, Hattiesburg, MS, October 2011. (invited)
168. White, T.J., Lee, K.M., Wang, D., Tan, L.-S., Tabiryan, N.V., Smith, M., Koerner, H., Vaia, R.A., and Bunning, T.J., “Shape Adaptation in Glassy Photoresponsive Polymeric Materials”, International Stimuli Responsive Materials Conference, Hattiesburg, MS, October 2011. (invited)
169. Tabiryan, N.V., Nersisyan, S.R., White, T.J., Bunning, T.J., Steeves, D.M., and Kimball, B.R. “Transmittive-to-reflective electro-optical switching system based on polymer diffractive waveplates and photonic bandgaps”, IMID-2011, Seoul, Korea, October 2011. (invited)
170. Serak, S.V., Vergara, R., Tabiryan, N.V., White, T.J., and Bunning, T.J. “Storing light energy and converting it into electricity with azobenzene liquid crystal elastomers”, Optics of Liquid Crystals, Yerevan, Armenia, September 2011.
171. Bunning, T.J., White, T.J., McConney, M.E., Tabiryan, N.V., Serak, S., Hrozhyk, U., Bailey, C., Natarajan, L.V., and Tondiglia, V.P. “Dynamic Coloration and Cholesteric Liquid Crystals”, Optics of Liquid Crystals, Yerevan, Armenia, September 2011. (invited)
172. Hrozhyk, U.A., Nersisyan, S.R., Tabiryan, N.V., Steeves, D., Kimball, B., White, T.J., and Bunning, T.J. “Universal Optical Controller”, Photorefractive Workshop, Marco Island, FL, June 2011.
173. White, T.J., Lee, K.M., Tabiryan, N.V., Smith, M., Koerner, H., Vaia, R.A., Bunning, T.J. “Photoresponsive Liquid Crystal Polymer Networks: Glassy Adaptive Materials”, International Liquid Crystal Elastomer Conference, Lisbon, Portugal, September 2011. (invited)
174. Lee, K.M., Wang, D.H., Koerner, H., Vaia, R.A., Tan, L-.S., and White, T.J. “Photomechanical Bending Behavior of Glassy, Amorphous Azo-Polyimides”, American Chemical Society Meeting, Denver, CO, August 2011.
175. Li, Q., Ma, J., Li, Y., Matthews, M., White, T.J., and Bunning, T.J. “Light-driven chiral molecular switches for dynamic reflection color phototuning”, American Chemical Society Meeting, Denver, CO, August 2011.
176. Bunning, T.J., McConney, M.E., Hurtubise, J., Duning, M., Natarajan, L.V, Tondiglia, V., and White, T.J. “Dynamic Selective Reflection Properties in Cholesteric Liquid Crystals”, 2011 SPIE Optics and Photonics National Meeting, San Diego, CA, August 2011. (invited)
177. Taheri, B., Kosa, T., Sukhomlinova, L., White, T., Bunning, T., and Munoz, A. “Phototropic Liquid Crystals”, 2011 SPIE Optics and Photonics National Meeting, San Diego, CA, August 2011. (invited)
178. Natarajan, L.V., White, T.J., Li, Q., and Bunning, T.J., “Polymer stabilization of phototunable cholesteric liquid crystals”, 2011 SPIE Optics and Photonics National Meeting, San Diego, CA, August 2011.
179. Lee, K.M., Koerner, H., Vaia, R.A., Bunning, T.J., and White, T.J. “Light-Activated Shape Memory of Glassy, Azobenzene Liquid Crystalline Polymer Networks”, 2011 SPIE Optics and Photonics National Meeting, San Diego, CA, August 2011.
180. Lee, K.M., Smith, M., Koerner, H., Tabiryan, N., Vaia, R.A., Bunning, T.J., and White, T.J., “Photodriven, multidimensional oscillation of glassy, azobenzene liquid crystalline polymer networks”, 2011 SPIE Optics and Photonics National Meeting, San Diego, CA, August 2011.
181. Lee, K.M., McConney, M.E., Natarajan, L.V., Tondiglia, V., White, T.J., and Bunning, T.J., “Liquid Crystal/Polymer Composites as Novel Responsive Motifs”, 2011 Nano Science and Technology Institute, Boston, MA, June 2011. (invited)
182. McConney, M.E., White, T.J., Hurtubise, J.M., Tondiglia, V.P., Bunning, T.J., “Dynamic High Contrast CLCs enabled by Surface tethered Polymer Stabilization”, Liquid Crystal Gordon Conference, June 2011.
183. Tondiglia, V.P., Natarajan, L.V., Bailey, C.A., Duning, M.M., Sutherland, R.L., Voevodin, A., White, T.J., and Bunning, T.J. “DC-field controlled bandwidth broadening in polymer stabilized cholesteric liquid crystals”, 10th International Novel Optical Materials and Applications Workshop, Cetraro, Italy, June 2011.
184. White, T., Lee, KM, Tondiglia, V., Koerner, H., Vaia, R., Bunning, T., “Polarization Controlled Photomechanical Behaviors of Polydomain Azobenzene Liquid Crystalline Polymer Networks”, “ APS Annual Meeting, Dallas, TX, March 2011.
185. Bunning, T., McConney, M., Hurtubise, J., Tondiglia, V., White, T., “A mechanistic study of a thermoresponsive polymer in a liquid crystal solvent”, APS Annual Meeting, Dallas, TX, March 2011.
186. Lee, K.M., Smith, M., Koerner, H., Vaia, R., Bunning, T., and White, T. “Molecular Alignment and Temperature Effects on Photodriven, ultidimensional Oscillaion of Azobenzene Liquid Crystalline Polymer Networks”, APS Annual Meeting, Dallas, TX, March 2011.
187. McConney, M., Hurtubise, J., Tondiglia, V., White, T., and Bunning, T. “The unique behavior of chiral template polymers swollen with liquid crystals”, APS Annual Meeting, Dallas, TX, March 2011.
188. Duning, M., Bailey, C., Voevodin, A., Tondiglia, V., Natarajan, L., White, T., and Bunning, T. “Symmetric reflection band broadening of weakly polymer stabilized cholesteric thin films using low DC electric fields”, APS Annual Meeting, Dallas, TX, March 2011.
189. Sutherland, R.L., Natarajan, L.V., Tondiglia, V.P., Bailey, C.A., Duning, M.M., Voevodin, A., White, T.J., Bunning, T.J. ”Liquid Crystal Bragg Filters”, SPIE Photonics West, San Francisco, CA, January 2011. (invited)
190. White, T.J., Bricker, R.L., Natarajan, L.V., Li, Q., Tabiryan, N.V., Taheri, B., Kosa, T., and Bunning, T.J. “Novel Light Directed Effects in Cholesteric Liquid Crystals”, 2011 SPIE Photonics West, San Francisco, CA, January 2011. (invited)
191. Lee, K., Bunning, T.J., and White, T.J. “Photomechanical Behaviors of Polydomain Azo-Liquid Crystalline Polymer Networks”, 2010 Pacifichem Meeting, Honolulu, HI, December 2010. (invited)
192. Lee, K., Bunning, T.J., and White, T.J. “Temperature Effect on the Photodriven Oscillation Behaviors of Monodomain Azo-Liquid Crystalline Polymer Networks”, 2010 Pacifichem Meeting, Honolulu, HI, December 2010.
193. White, T.J., McConney, M.E., Natarajan, L.V., Tondiglia, V.P., and Bunning, T.J. “Novel Light Directed Effects in Cholesteric Liquid Crystals”, 2010 Pacifichem Meeting, Honolulu, HI, December 2010.
194. Bunning, T.J., White, T.J., McConney, M.E., Hurtubise, J., Tabiryan, N.V., Serak, S.V., Natarajan, L.V., and Tondiglia, V.P. “Dynamic Cholesteric Liquid Crystals Using Spatially Templated Polymer Structures”, 2010 Pacifichem Meeting, Honolulu, HI, December 2010. (invited)
195. McConney, M.E., Hurtubise, J., Tondiglia, V.P., Natarajan, L.V., White, T.J., and Bunning, T.J., “Interactions Between Cholesteric Templated Polymers and Liquid Crystals”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
196. Tabiryan, N.V., Serak, S., Vergara, R., White, T.J., Vaia, R.A., and Bunning, T.J. “The Prospect of Light-powered Polymer Engines and Photo-controlled Adaptive Membranes Based on Azobenzene Liquid Crystal Elastomers”, Materials Research Society Meeting, Boston, MA, December 2010. (invited)
197. Bunning, T.J., White, T.J., McConney, M.E., Hurtibise, J., Tabiryan, N.V., Serak, S.V., Natarajan, L.V., and Tondiglia, V.P. “Dynamic Cholesteric Liquid Crystals Using Spatially Templated Polymer Structures”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010. (invited)
198. Taheri, B., Kosa, T., Sukhomlinova, L., Munoz, A., Su, L., White, T.J., and Bunning, T.J. “Phototropic Liquid Crystals”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010. (invited)
199. Natarajan, L.V., White, T.J., Li, Q., and Bunning, T.J. “Polymer Stabilization of Phototunable Cholesteric Liquid Crystals”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
200. Tabiryan, N.V., Serak, S.V., Vergara, R., White, T.J., Vaia, R.A., and Bunning, T.J. “The Prospect of Light-powered Polymer Engines and Photo-controlled Adaptive Membranes Based on Azobenzene Liquid Crystal Elastomers”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010. (invited)
201. Lee, K.M., Bunning, T.J., and White, T.J. “Shape Memory Behavior in Photoresponsive Azobenzene Liquid Crystal Polymer Networks”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
202. Oates, W.S., Wang, H., White, T.J., and Lee, K.M. “Polarized Light Induced Deformation of Azobenzene Liquid Crystal Elastomers”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
203. Natarajan, L.V., Tondiglia, V.P., Duning, M., Bailey, C., White, T.J., and Bunning, T.J. “Broadening of a Polymer Stabilized Negative Dielectric Anisotropy Cholesteric Reflection Notch Using a DC Field”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
204. Lee, K.M., Torres, Y., Koerner, H., Vaia, R.A., Bunning, T.J., and White, T.J. “Photomechanical Response of Azobenzene Liquid Crystal Polymer Networks as a Function of Temperature”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
205. Freer, A., White, T.J., Tabiryan, N.V., and Bunning, T.J. “Photoinduced Broadening of Cholesteric Liquid Crystal Reflectors”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
206. Voevodin, A., Natarajan, L.V., Tondiglia, V.P., Duning, M., Bailey, C., White, T.J., and Bunning, T.J. “Cholesteric Pitch Broadening Relationships for Negative Dielectric Anisotropy Materials”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
207. Hurtubise, J., McConney, M.E., Tondiglia, V.P., Natarajan, L.V., White, T.J., and Bunning, T.J. “Surface Initiated Polymer Stabilized Liquid Crystals”, 2010 Materials Research Society Fall Meeting, Boston, MA, December 2010.
208. White, T.J., Lee, K.M., Smith, M.L, Koerner, H., Vaia, R.A., and Bunning, T.J. “Photoresponsive Liquid Crystal Polymer Networks: Glassy Adaptive Materials”, Stimuli-Responsive Materials International Symposium, Hattiesburg, MS, October 2010. (invited)
209. Bunning, T.J., White, T.J., McConney, M.E., Hurtubise, J., Natarajan, L.V., and Tondiglia, V.P. “Dynamic Hyper-reflective Cholesteric Liquid Crystals using Spatially Polymer Templated Structures”, Liquid Crystal Photonics, Spain, September 2010. (invited)
210. Lee, K.M., Bunning, T.J., and White, T.J. “Effect of Crosslinking Density on the Photochemical Behaviors of Azo-Liquid Crystalline Polymer Networks”, American Chemical Society National Meeting, Boston, MA, August 2010.
211. Bailey, C.A., Tondiglia, V.P., Natarajan, L.V., Bricker, R., Sutherland, R.L., White, T.J., and Bunning, T.J. “Electro-mechanical tuning of the optical bandgap using negative dielectric anisotropy cholesteric liquid crystals”, SPIE Optics+Photonics, San Diego, CA, August 2010.
212. Natarajan, L.V., Voss, J.R., Tondiglia, V.P., White, T.J., and Bunning, T.J. “Fabrication of broadband reflective films with polymer stabilized cholesteric liquid crystals”, SPIE Optics+Photonics, San Diego, CA, August 2010.
213. White, T.J., Freer, A., Natarajan, L.V., Tondiglia, V.P., Li, Q., Serak, S.V., Tabiryan, N., and Bunning, T.J. “Light-controlled bandwidth in azo-benzene-based cholesteric liquid crystals”, SPIE Optics+Photonics, San Diego, CA, August 2010.
214. Lee, K., Serak, S.V., Tabiryan, N., Bunning, T.J., and White, T.J. “The use of photoresponsive liquid crystal polymer networks as membrane and cantilever optical systems”, SPIE Optics+Photonics, San Diego, CA, August 2010.
215. McConney, M.E., White, T.J., Tondiglia, V.P., Natarajan, L.V., Hurtubise, J., and Bunning, T.J. “Thermally tunable hyper-reflective filters”, SPIE Optics+Photonics, San Diego, CA, August 2010. (invited)
216. White, T.J., Tabiryan, N.V., Serak, S., Vaia, R.A., and Bunning, T.J. “Angle Controlled Bending and Oscillation of Azobenzene Liquid Crystal Polymer Network Cantilevers”, Optics of Liquid Crystals Meeting, Erice, Italy, October 2009.
217. Tabiryan, N.V., Serak, S.V., White, T.J., Vaia, R., and Bunning, T.J. “Using Photoresponsive Membranes and Cantilevers for Efficient Optical Switching”, Optics of Liquid Crystals Meeting, Erice, Italy, October 2009.
218. White, T.J., Tabiryan, N.V., Serak, S., Vaia, R.A., and Bunning, T.J. “Angle Controlled Bending and Oscillation of Azobenzene Liquid Crystal Polymer Network Cantilevers”, International Liquid Crystal Elastomer Conference, Kent, Ohio, September 2009.
219. Bunning, T.J., White, T.J., Bricker, R.L., Jakubiak, R., Tabiryan, N.V., Hrozyhk, U., and Serak, S.V. "Photoresponsive Cholesteric Liquid Crystals", SPIE Optics+Photonics, San Diego, CA, August 2009. (invited)
220. Serak, S., Vergara, R., Tabiryan, N., White, T.J., Vaia, R., and Bunning, T.J. “Photocontrolled membrane optics, cantilevers, and polymer engines fueled by light”, Novel Optical Materials and Applications, Cetraro, Italy, June 2009.
221. White, T.J., Serak, S. Hrozhyk, U. Tabiryan, N., Koerner, H., Vaia, R.A., and Bunning, T.J. ”Photodriven Oscillations of Azobenzene Liquid Crystal Polymer Network Cantilevers”, 2009 Spring Materials Research Society Meeting, San Francisco, CA, April 2009.
222. White, T.J., Bricker, R.L., Natarajan, L.V., Li, Q., Tabiryan, N.V., and Bunning, T.J. "Photoresponsive Liquid Crystal Materials: Phototunable CLCs and Oscillating LC Polymers", Hougen Symposium on Liquid Crystals, Madison, WI, April 2009. (invited)
223. White, T.J., Natarajan, L.V., Bricker, R.L., Li, Q., Tabiryan, N.V., and Bunning, T.J. “Impact of Helical Structure Retention in Phototunable Polymer Stabilized Cholesteric Liquid Crystals”, American Chemical Society National Meeting (POLY), Salt Lake City, UT, March 2009. (invited)
224. Bunning, T.J., White, T.J., Natarajan, L.V., Tondiglia, V.P., Sutherland, R.L., Bricker, R.L., Tabiryan, N.V., Serak, S.V., and Li, Q. " Polymer/(Liquid Crystal) Materials for and through Optics", Gordon Conference on Macromolecular Materials, Ventura, CA, January 2009. (invited)
225. Natarajan, L.V., Beckel, E.R., Tondiglia, V.P., Sutherland, R.L. White, T.J., and Bunning, T.J. “Improvement of electro-optical Performance of polymer Stabilized Cholesteric Liquid Crystals by Holographic Patterning”, 2nd International Workshop on Liquid Crystals for Photonics, Cambridge, UK, July 2008. (invited)
226. White, T.J., Tondiglia, V.P., Koerner, H., Vaia, R.A., Serak, S., Grozhyk, V., Tabiryan, N., and Bunning, T.J. “Photoresponsive Polymers with Large Deformation and Fast Movement”, CIMTEC Smart Conference, Acireale, Italy, June 2008.
227. White, T.J., Tondiglia, V.P., Koerner, H., Vaia, R.A., Serak, S., Grozhyk, V., Tabiryan, N., and Bunning, T.J., “Photoresponsive Liquid Crystal Elastomers”, Materials Research Society Spring Meeting, San Francisco, CA, March 2008.
228. Bunning, T.J., White, T.J., Tondiglia, V.P., Natarajan, L.V., and Sutherland, R.L. “Polymer/LC Nanocomposite Dynamic Gratings”, 35th Annual Conference of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, Philadelphia, PA, March 2008.
229. Hrozhyk, U., Nersisyan, S.R., Serak, S.V., Tabiryan, N.V., White, T.J., Tondiglia, V.P., Vaia, R.A, and Bunning, T.J. “Photoresponsive polymers, photonic bandgaps, and micro-optical structures utilizing azobenzene liquid crystals”, Optical Micro-Manipulation by Nonlinear Nanophotonics, Muenster, Germany, February 2008.
230. Hrozhyk, U., Serak, S., Tabirian, N.V., White, T.J., and Bunning, T.J. “Optically controlled polymer films with large and high-speed deformation ability”, SPIE Photonics West, San Jose, CA, January 2008.
231. Koval, J.J., White, T.J., Bunning, T.J., Vaia, R.A., Tabiryan, N., Serak, S., and Grozhyk, V. “Nanostructured Photoresponsive Polymers Based on Azobenzene Liquid Crystalline Elastomers”. Materials Research Society Fall Meeting, Boston, MA, December 2007.
232. Hrozhyk, U.A., Serak, S.V., Tabiryan, N.V., White, T.J., and Bunning, T.J. “The mechanism of large and high-speed photocontrol ability of azobenzene elastomers”, Optics of Liquid Crystals, Puebla, Mexico, October 2007.
233. White, T.J., Bunning, T.J., Koval, J., Tondiglia, V.P., Vaia, R.A., Serak, S., Grozhyk, V., and Tabiryan, N., “Polarization Dependent Photoactuation in Azobenzene LC Polymers”, SPIE Optics+Photonics, San Diego, CA, August 2007.
234. White, T.J., Natarajan, L.V., Tondiglia, V.P., Lloyd, P.F., Bunning, T.J., and Guymon, C.A. “Polymerization Behavior and Phase Separation Effects in Holographic Polymer Dispersed Liquid Crystals”, American Chemical Society National Meeting (POLY), Boston, MA, August 2007.
235. Bunning, T.J., White, T.J., Koval, J., Tondiglia, V.P., Natarajan, L.V., Vaia, R.A., Serak, S., Grozhyk, V., and Tabiryan, N., “Creating Work with Light: Photoresponsive Azobenzene Liquid Crystalline Elastomers”, American Chemical Society National Meeting (POLY), Boston, MA, August 2007. (invited)
236. White, T.J., Bunning, T.J., Vaia, R.A., Urbas, A.M., Serak, S., Grozhyk, V., and Tabiryan, N., “Polymer and Azobenzene Liquid Crystal Mixtures: New Photoresponsive Materials”, Society of Plastics Engineers Annual Meeting (ANTEC), Cincinnati, OH, May 2007. (invited)
237. White, T.J., Natarajan, L.V., Tondiglia, V.P., Lloyd, P.F., Bunning, T.J., and Guymon, C.A. “The Formation and Performance of Thiol-ene Based Holographic Polymer Dispersed Liquid Crystals (HPDLCs) Containing Fast Reacting Vinyl Monomers”, Materials Research Society National Meeting (MRS), San Francisco, CA, April 2007.
238. White, T.J., Natarajan, L.V., Tondiglia, V.P., Lloyd, P.F., Bunning, T.J., and Guymon, C.A. “The Influence of Thiol-ene Polymer Evolution on the Formation and Performance of Holographic Polymer Dispersed Liquid Crystals”, American Chemical Society National Meeting (POLY), San Francisco, CA, September 2006.
239. White, T.J., Liechty, W.B., and Guymon, C.A. “The Influence of N-Vinyl Pyrrolidinone on the Photopolymerization Kinetics and Mechanical Properties in Copolymerization with Acrylates with Increasing Functionality”, 2005 AICHE National Meeting, Cincinnati, OH, October 2005. (poster)
240. White, T.J. and Guymon, C.A. “Acrylate and Thiol-ene Based (H)PDLC Polymerization Kinetics, Liquid Crystal Phase Separation and Morphology”, Gordon Research Conference on Liquid Crystals, New London, NH, June 2005.
241. White, T.J. and Guymon, C.A. "Photopolymerization Kinetic Contribution of Additives in the Formation of Holographic Polymer Dispersed Liquid Crystals (HPDLCs)", Materials Research Society National Meeting, Boston, MA, December 2004.
242. White, T.J. and Guymon, C.A. "Composition Dependence of the Photopolymerization Kinetics in Holographic Polymer Dispersed Liquid Crystals (HPDLCs)", American Chemical Society National Meeting (POLY), Philadelphia, PA, August 2004.
243. White, T.J. and Guymon, C.A. “Photopolymerization Kinetics of Holographic Polymer Dispersed Liquid Crystals”, American Chemical Society National Meeting (PMSE), New York, NY, August 2003.

*Regional Conferences*

1. Duning, M.M., Tondiglia, V.T., Natarajan, L.V., Bailey, C.A., Sutherland, R.L., Voevodin, A., White, T.J., and Bunning, T.J. “Broadening of a Polymer Stabilized Cholesteric Liquid Crystal Reflection Notch Using DC Field”, Joint ACS and Society for Applied Spectroscopy Meeting, Dayton, OH, March 2011.
2. Lee, K.M., Koerner, H., Vaia, R., Bunning, T.J., and White, T.J., “Effect of Crosslinking Density on the Photomechanical Behaviors of Azobenzene Liquid Crystalline Networks”, Joint ACS and Society for Applied Spectroscopy Meeting, Dayton, OH, March 2011.
3. Hurtubise, J., McConney, M.E., White, T.J., Tondiglia, V.P., Natarajan, L.V., and Bunning, T.J. “Surface Initiated Polymerization in the Presence of Cholesteric Liquid Crystals”, CeRMACS American Chemical Society Meeting, Dayton, OH, June 2010.
4. Lee, K., Bunning, T.J., and White, T.J. “Polarization Controlled Photochemical Bidirectional Bending Behaviors of Poly-domain Azo-Liquid Crystalline Polymer Networks”, CeRMACS American Chemical Society Meeting, Dayton, OH, June 2010.
5. Duning, M., Natarajan, L.V., Tondiglia, V., White, T.J. Sutherland, R.L., and Bunning, T.J. “Broadening of a Polymer Stabilized Negative Dielectric Anisotropy Cholesteric Notch by a low DC Field”, CeRMACS American Chemical Society Meeting, Dayton, OH, June 2010.
6. McConney, M.E., White, T.J., Hurtubise, J., Tondiglia, V.P., Natarajan, L.V., and Bunning, T.J. “Tunable Hyper-Reflective Filters”, CeRMACS American Chemical Society Meeting, Dayton, OH, June 2010.
7. Freer, A., White, T.J., Tabiryan, N., and Bunning, T.J. “Photoinduced Broadening of Cholesteric Liquid Crystals”, CeRMACS American Chemical Society Meeting, Dayton, OH, June 2010.
8. Klosterman, J.R., Natarajan, L.V., Tondiglia, V.P., Sutherland, R.L., White, T., Guymon, C.A., Bunning, T.J., “The Effect on Holographic-Polymer Dispersed Liquid Crystals”, AIChE North Central Regional Conference, Chicago, IL, April 2004

*Specialty Conferences*

1. White, T.J., Bunning, T.J., Vaia, R.A., Serak, S., Grozhyk, V., and Tabiryan, N. “Azobenzene Liquid Crystal Elastomers”, Photopolymerization Fundamentals Conference, Breckenridge, CO, June 2007.
2. Bunning, T.J., Natarajan, L.V., Tondiglia, V.P., Sutherland, R.L., Beckel, E.R., White, T., and Wofford, J. “A foray into cholesteric LC’s and photoinitiation + several other odds and ends”, Photopolymerization Fundamentals Conference, Breckenridge, CO, June 2007.
3. White, T.J., Liechty, W.B., and Guymon C.A. “Copolymerization of N-Vinyl Pyrrolidone with Multifunctional Acrylates”, Radtech e/5, Chicago, IL, April 2006.
4. White, T.J., Liechty, W.B., and Guymon, C.A. “Influence of N-Vinyl Pyrrolidinone (NVP) to the Polymerization Kinetics of Photopolymer Systems with Increasing Acrylate Functionality”, Photopolymerization Fundamentals Conference, Breckenridge, CO, June 2005.
5. White, T.J. and Guymon, C.A. “Acrylate and Thiol-ene Based (H)PDLC Polymerization Kinetics, Liquid Crystal Phase Separation and Morphology”, Photopolymerization Fundamentals Conference, Breckenridge, CO, June 2005.
6. White, T.J. and Guymon C.A. "Photopolymerization Kinetics of Holographic Polymer Dispersed Liquid Crystals: Role of Octanoic Acid and N-Vinyl Pyrrolidinone", Great Lakes Photonic Symposium: Liquid Crystal Technology and Applications Conference, Cleveland, OH, June 2004.
7. Klosterman, J., Natarajan, L.V., Tondiglia, V.P., Sutherland, R.L., White, T., Guymon, C.A., and Bunning, T.J. “The Influence of Surfactant on the Temporal Evolution and Long-term Stability of HPDLC’” Great Lakes Photonic Symposium: Liquid Crystal Technology and Applications Conference, Cleveland, OH, June 2004.