1 Grand Ave. Dept of Chemistry and Biochemistry ⏐ San Luis Obispo, CA 93407 ⏐ 805-756-2692 ⏐ pcostanz@calpoly.edu

**Philip J. Costanzo**

*Nanotechnology* *• Specialty Polymers* • *Materials Science* • *Synthetic Chemistry*

**Profile**

Enthusiastic, highly-motivated scientist with over 20 years of experience in rational macromolecular design, synthesis, and application with different macromolecular engineering labs. Exhibits exceptional communication, presentation, and supervisory skills. Adept in working as a member of multidisciplinary teams. Efficiently investigates structure-property relationships and converts multidisciplinary questions into chemical objectives. Capably conducts multistep synthesis of organic compounds, including inert atmosphere and vacuum-line techniques. Expertise encompasses:

Research & Development • Experimental Design & Methods • Project Planning

Proposal Preparation • Report Writing • Team Facilitation • Product Development

**Academic Credentials**

University of California at Davis

*Ph.D. Organic Chemistry : “Synthesis, Assembly, and Application of Novel Nanoaggregates.”*

* + - June 2005
    - Thesis Advisor - Timothy Patten

Carnegie Mellon University

*B.S. in Chemistry with Minor in Engineering Studies and Concentrations in Polymer and Material Science* :

*“Synthesis of Novel Materials via Atom Transfer Radical Polymerization ( ATRP ).”*

* + - May 2001 w/ Departmental Honors
    - Thesis Advisor - Krzysztof Matyjaszewski

**Teaching Appointments**

Professor (9/16 - Current)

Associate Professor (9/12 - 9/16)

Assistant Professor ( 9/07 - 9/12)

*Department of Chemistry and Biochemistry @ California Polytechnic State University, San Luis Obispo*

Completed teaching assignments:

* Undergraduate Research (CHEM 200/201/400/401 - every quarter of appointment)
* Honors Research (CHEM 463 - over 60 enrollments)
* Senior Project (CHEM 461 - over 80 enrollments)
* Survey of Organic Chemistry (CHEM 312: Lecture & Laboratory 19 quarters, last taught S22)
* Organic Chemistry I (CHEM 216/316: Lecture 10 quarters, last taught F22)
* Organic Chemistry I (CHEM 216/316: Laboratory 8 quarters, last taught F12)
* Organic Chemistry II (CHEM 317: Lecture 5 quarters, last taught W13)
* Organic Chemistry III (CHEM 318: Lecture 3 quarters, last taught S13)
* Chemical and Biological Warfare (CHEM 349: Lecture 13 quarters, last taught S22)
* Undergraduate Seminar III (CHEM 303: 1 quarters, last taught W22)
* Undergraduate Seminar (CHEM 459 - 4 quarters, last taught S17)
* Polymers and Coatings II (CHEM 445/545: Lecture 8 quarters, last taught W15)
* Polymers and Coatings II (CHEM 448/548: Laboratory 8 quarters, last taught W15)
* College Teaching Practicum (CHEM 465 - 12 quarters, last taught S22)
* Graduate Seminar (CHEM 590 - 3 quarters, last taught S16)
* Graduate Thesis/Project (CHEM 598/599 - over 25 enrollments)

Teaching Assistant ( 9/01 – 1/03)

*Department of Chemistry @ University of California at Davis*

Resume Continues...

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**Professional Preparation**

NRC Postdoctoral Fellow ( 8/05 – 8/07)

*Sponsor - Rick Beyer @ Army Research Laboratory*

* + - Invented a thermo-responsive film system
    - Controlled film additive dispersion and migration properties using Diels-Alder chemistry and block copolymer phase separation
    - Synthesized difunctional, asymmetric polymer ligands
    - Created specialty resins for military applications
    - Managed laboratory and instrument maintenance
    - Received *National Research Council (NRC) Postdoctoral Fellowship, Gordon Research Council Post-Doctoral Award*

Graduate Research Scientist ( 7 /01 - 7/05 )

*Advisor - Timothy Patten @ University of California at Davis*

* + - Developed and employed innovative synthetic pathways for the preparation of difunctional, asymmetrical PEG linkers
    - Designed, prepared and characterized unique nanoparticles for a variety of applications
    - Controlled growth, shape, and size of nanoaggregates by dictating particle interactions
    - Assembled detection system based upon dielectrophoretic response of nanoaggregates
    - Managed laboratory and instrument maintenance
    - Received *NEAT-IGERT Fellowship, Borge Scholarship, Outstanding Teaching Assistant Award, Silver Graduate Student Award from MRS, Gordon Research Council Graduate Student Award, TYCO Electronic Foundation Fellowship*

Undergraduate Research Scientist ( 5 / 99 - 6 / 01 )

*Advisor - Krzysztof Matyjaszewski @ Carnegie Mellon University*

* + - Independently designed, prepared and published the synthesis and characterization of poly(methyl acrylate-*graft*-thiophene), a fluorescent graft copolymer
    - Synthesized block and gradient co-polymers via ATRP
    - Developed thermoplastic elastomers and hydrogels from prepared macromonomers
    - Assisted in laboratory and instrument maintenance
    - Received *Carnegie Mellon Outstanding Undergraduate Chemist Award, Howard Hughes Medical Institute Fellowship, Small Undergraduate Research Grant*

Professional Intern ( 5 / 00 - 8 / 00 )

*Advisor - Charles Bauer @ Eastman Kodak Research Labs - Polymer Science Lab*

* + - Enhanced the mechanical and thermal properties of thin films via star polymer additives
    - Determined the morphology and physical properties of star polymers of varying composition and architecture

Head Karate Instructor ( 10/95 - 7 / 05 )

*Supervisor - Jeff Mignogna @ Tang Soo Do Karate College - Pittsburgh, PA*

*Supervisor - Jim Trapani @ Pallen’s Martial Arts - Davis, CA*

* + - Instructed group (10-50 students) and private (1-10 students) classes
    - Participated in instructor training programs
    - Managed finances of the school, including contracts to students

Resume Continues...

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**Publications (**Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University*

34) Malouf, D. M., Richarson, A. D., L’Heureux, S. H. McDonough, E. A., Henry, A. M., Sheng, J. Y., Medhurst, E. A., Canales, A. E., Fleischer, C. J., Cecil, T. B., Thurman, S. E., McMullen, C. C., Costanzo, P. J., Bercovici, D. A. “Ylidenenorbornadiene Carboxylates: Experimental Kinetic Analysis of a Nucleophile-Induced Fragmentation Reaction.”  *Org. Lett.* **2022**, *24(15),*2793-2797,

33) Bisbjerg, G., Brown, G. W., Pham, K. S., de Kock, R. A., Ramos, W., Patierno, J. A., Bautista, A., Zawalick, N. M., Vigil, V., Padrnos, J. D., Mathers, R. T., Heying, M. D., Costanzo, P. J., “Exploring polymer solubility with thermally-responsive Diels-Alder monomers: Revisiting the monkey's fist.”  *J. Polym. Sci.* **2022**, *60(2),*175-187.

33) Wilborn, E. G., Gregory, C. M., Machado, C. A., Page, T. M., Ramos, W., Hunter, M. A., Smith, K. M., Gosting, S. E., Tran, R. Varney, K. L. Savin, D. A., Costanzo, P. J., “Unraveling polymer structures with RAFT polymerization and Diels-Alder chemistry.” *Macromolecules.* **2019.** *52 (3),* 1308-1316.

32) Liu, C. H., Noxon, I. C., Cuellar, L. E., Thraen, A. L., Immoos, C. E., Martinez, A. W., Costanzo, P. J. “Characterization of Reagent Pencils for Deposition of Reagents onto Paper-Based Microfluidic Devices” *Micromcachines.* **2017**, *8 (8),* 242 - 253.

31) Swanson, J. P., Cruz, M. A., Monteleone, L. R., Martinez, M. R., Costanzo, P. J., Joy, A. “The Effect of pendant group structure on the thermoresponsive properties of N-substituted polyesters” *Polym. Chem.* **2017,** *8*. 7195-7206.

30) Earla, A., Li, L., Costanzo, P., Braslau, R. “Phthalate plasticizers covalently linked to PVC via copper-free or copper catalyzed azide-alkyne cycloadditions.” *Polymer.* **2017.** *109,* 1-12.

29) Swanson, J. P., Martinez, M. R., Cruz, M. A., Mankoci, S. G., Costanzo, P. J., Joy, A. “A coacervate-forming biodegradable polyester with elevated LCST based on bis-(2-methoxyethyl)amine.” *Polym. Chem.* **2016**, *7,* 4693-4702.

28) Mitchell, H. T., Schultz, S. A., Costanzo, P. J., Martinez, A. W. “Poly(*N*-isopropylacrylamide) hydrogels for storage and delivery of reagents to paper-based analytical devices.” *Chromatography.* **2015.** *2,*  436-451.

27) Swanson, J. P., Monteleone, L. R., Haso, F., Costanzo, P. J., Liu, T., Joy, A. “A library of thermoresponsive, coacervate-forming biodegradable polyesters.” *Macromolecules.* **2015.** *48 (12),* 3834-3842.

26) Bass, G. F., Colt, M. S., Chavez, A. D., DeHoe, G. X., Formal, T. P., Seaver, C. P., Kha, K., Kelley, B. A., Scott, G. E., Immoos, C. E., Costanzo, P. J. “Synthetic design and investigation of novel polymeric surfactants.” *Polymer.* **2015.** *72*, 301-306

25) Mitchell, H. T., Noxon, I. C., Chaplan, C.A., Carlton, S. J., Liu, C. H. M., Ganaja, K. A., Martinez, N. W., Immoos, C. E., Costanzo, P. J, Martinez, A. W. “Reagent pencils: a new technique for solvent-free deposition of reagents onto paper-based microfluidic devices.” *Lab Chip.* **2015**, *15,* 2213 - 2220.

24) Dirlam, P. T., Simmonds, A. G., Kleine, T. S., Nguyen, N. A., Anderson, L. E., Klever, A. O., Florian, A., Costanzo, P. J., Theato, P., Mackay, M. E., Glass, R. S., Char, K., Pyun. J. “Inverse vulcanization of elemental sulfur with 1,4-diphenylbutadiyne for cathode materials in Li–S batteries.” *RSC Adv.* **2015**, *5*, 24718-24722.

23) Amato, N. D., Strange, G. A., Swanson, J. P., Chavez, A. D., Roy, S. E., Varney, K. L., Machado, C. A., Amato, D. V. Costanzo, P. J. “Synthesis and evaluation of thermally-responsive coatings based upon Diels-Alder chemistry and renewable materials.” *Polym. Chem.* **2014**, *5 (1),* 69 - 76.

22) Dirlam, P. T., Kim, H. J., Arrington, K. J., Chung, W. J., Sahoo, R., Hill, L. J., Costanzo, P. J., Theato, P., Char, K., Pyun, J. “Single chain polymer nanoparticles via sequential ATRP and oxidative polymerization.” *Polym. Chem.* **2013.** *4 (13),* 3765-3773.

21) Hill, L. J. Bull, M. M., Sung, Y., Simmonds, A. G., Dirlam, P. T., Richer, N. E., DeRosa, S. E., Shim, I-B., Guin, D., Costanzo, P. J., Pinna, N., Willing, M-G., Vogel, W., Char, K., Pyun, J. “Direction the Deposition of Ferromagnetic Cobalt onto Pt-Tipped CdSe@CdS Nanorods: Synthetic and Mechanistic Insights.” *ACS Nano* **2012.** *6 (10),* 8632-8645.

Resume Continues...

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**Publications continued… (**Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University continued…*

20) Kim, B. Y., Shallcross, R. C., Armstrong, N. R., Kim, H., Chung, W. J., Sahoo, R., Char, K., Dirlam, P. T., Costanzo, P. J., Pyun, J. “Surface Initiated Atom Transfer Radical Polymerizations from Indium Tin Oxide Electrodes: Electrochemistry of Polymer Brushes.” *ACS Symposium Series, Vol. 1101. Progress in Controlled Radical Polymerization: Materials and Applications.* DOI: 10.1021/bk-2012-1101.ch013. ISBN13: 9780841227576. Chapter 13, pp 197–209

19) Hill, M. R., Mukherjee, S., Costanzo, P. J., Sumerlin, B. “Modular Oxime Functionalization of Well-Defined Alkoxyamine-Containing Polymers.” *Polym. Chem.* **2012.** *3*, 1756-1762.

18) Curtzwiler, G. W., Costanzo, P. J., Fernando, R., Danes, J. E., Vorst, K. “Thermal Initiated Hydroxyethyl Methacrylate Functionalization of Multi-Walled Carbon Nanotubes.” *J. Appl. Polym. Sci.* **2011.** *121*, 964–969.

17) Carlson, J. S, Hill, M. R, Young, T., Costanzo, P. J. “Novel polymer coupling chemistry based upon latent cysteine-like residues and thiazolidine chemistry.” *Polym. Chem.* **2010.** *1,* 1423-1426.

16) Swanson, J. P., Rozvadovsky, S., Seppala, J. E., Mackay, M. E., Jensen, R. E., Costanzo, P. J. “Development of polymeric phase change materials based upon Diels-Alder chemistry.” *Macromolecules.* **2010.** *43 (14),* 6135-6141.

15) Dirlam, P. T., Strange, G. A., Orlicki, J. A., Wetzel, E. D, Costanzo, P. J. “Controlling Surface Energy and Wetability with Diels-Alder Chemistry.” *Langmuir*. **2010.** *26(6)*, 3942-3948.

All work was completed by Cal Poly undergraduates at Cal Poly and the Army Research Laboratory (ARL). Dirlam completed a summer internship at ARL and was mentored by PI’s Orlicki and Wetzel. *Langmuir* is a peer reviewed ACS journal and a 1st tier surface chemistry journal with a 4.384 impact factor.

*Completed at the Army Research Laboratory*

14) Stanzione, J. F., Jensen, R. E., Costanzo, P. J., Palmese, G. R. “Synthesis and Characterization of Ionic Polymer Networks in a Room-Temperature Ionic Liquid.” *ACS Appl. Mater. Interfaces*. **2012.** *4 (11),* 6142–6150.

13) Saito, T., Mather, B., Costanzo, P. J., Beyer, F. L., Long, T. “Influence of Site-Specific Sulfonation on Arylic Graft Copolymer Morphology.” *Macromolecules*. **2008**. *41(10)*, 3503-3512.

12) Costanzo, P. J., Beyer, F. L. “Thermo-responsive, optically active films based upon Diels-Alder chemistry.” *Chem. Mater.* **2007.** *19(25),* 6168-6173.

11) Costanzo, P. J., Beyer, F. L. “Thermally Driven Assembly of Nanoparticles in Polymer Matrices.” *Macromolecules*. **2007.** *40 (11)*, 3996-4001.

10) Costanzo, P. J., Demaree, J. D., Beyer, F. L. “Thermo-responsive films based upon Diels-Alder chemistry and block copolymer phase separation.” *Langmuir.* **2006.** *22 (24)*, 10251-10257.

*Completed at the University of California at Davis*

9) Barber, S., Kreer, T., Mulder, D., Costanzo, P., Patten, T., Kuhl. T. “Using thiol-gold bond formation to bridge surfaces with a polymer brush: SFA experiments and MD simulations.” *Macromolecules* **2013.** *46 (24*) 9826–9836.

8) Barber, S., Kreer, T., Costanzo, P. J., Patten, T. E., Johner, A., Kuhl. T. L., Marques, C. M. “Polymer under High Load.” *PLOS ONE* **2013.** *8 (3),* e58392. doi:10.1371/journal.pone.0058392

7) Costanzo, P. J., Patten, T. E., Dan, N. “Synthesis of Di-functional, asymmetrical PEG linkers of Various Molecular Weights and Their Effect upon Aggregation of Nanoparticles.” *Macromolecules*. **2008**. *41(4)*, 1570-1576.

6) Barber, S., Costanzo, P. J., Moore, N., Patten, T. E., Lancaster, K. S., Lebrilla, C. B Kuhl. T. “Preparation and Polymer Mediated Assembly of Bilaterial, Di-functional Nanosphere Aggregates.” *J. Phys. Chem. A.* **2006.** *110 (13)*, 4538-4542.

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**Publications continued… (**Cal Poly undergraduates are underlined.**)**

*Completed at the University of California at Davis continued…*

5) Costanzo, P. J., Patten, T. E. Seery, T. A. P. “Control and Tunability of Aggregation Rates for Nanostructures Using Nanoparticles of Various Sizes.” *Langmuir*. **2006.** *22(6)*, 2788-2794.

4) Costanzo, P. J., Liang, E., Patten, T. E., Collins, S. D., Smith, R. L. “Biomolecule Detection via Target Mediated Nanoparticle Aggregation and Dielectrophoretic Impedance Measurement (DEPIM).” *Lab on a Chip*. **2005.***5 (6)*, 606-610.

3) Costanzo, P. J., Patten, T. E. Seery, T. A. P. “Protein-Substrate Mediate Aggregation of CdS@SiO2 Nanoparticles: Synthesis and Assembly Mechanism.” *Chem. Mater.* **2004.** *16 (9)*,1775-1785.

*Completed at Carnegie Mellon University*

2) Buzin, A., Pyda, M., Costanzo, P., Matyjaszewski, K., Wunderlich, B. “Calorimeter study of block-copolymers of poly(*n*-butyl acrylate-*co*-methyl methacrylate).” *Polymer.* **2002.** *43 (20)*, 5563-5569.

1) Costanzo, P. J., Stokes, K. K. “Synthesis of poly(methyl acrylate) grafted from poly(thiophene) to form solid-state fluorescent materials.” *Macromolecules.***2002.** *35(18)*, 6804-6810.

**US Patents (**Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University*

4) Martinez, A. W., Mitchell H. T., Immoos, C. E., Martinez, N. W., Costanzo, P. J., Carlton, S. J. “Reagent-loaded pencils and methods.” US Patent # 10,343,168.

3) Vorst, K., Curtzwiler, G. W., Danes, J., Costanzo, P. J. “Systems and methods for determining recycled thermoplastic content.” US Patent # 8,063,374.

*Completed at the Army Research Laboratory*

2) Costanzo, P. J., Beyer, F. L. “Controlling additive dispersion and migration properties.” US. Patent # 7,863,376.

1) Costanzo, P. J., Beyer, F. L., Jenson, R. E. “Reversible Viscosity Reducing Polymer.” US. Patent # 7,812,069.

**External Oral Presentations (**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined.**)**

**Over 80 external oral presentations have resulted from work at California Polytechnic State University.**

*Completed at California Polytechnic State University – Invited Talks*

42) Costanzo, P. J.\*. **Invited Speaker:** PMSE Future Faculty Scholars career panel. 28 OCT 2021.

41) Amato, D. N., Amato, D. V., Bisbjerg, G., Chavez, A. D., Dirlam, P. T., Gregory, C. G., Gosting, S. E., Kumler, M. S., Lin, N. A., Machado, C. A., Martinez, M. R., Meyersohn, M. S., Patierno, J. A., Pham, K. S., Ramos, W., Rozvadosvsky, S., Strange, G. A., Swanson, J. P., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Unraveling the Monkey’s Fist with Diels-Alder Chemistry.” **Invited Speaker:** Waterborne Coating Symposium: New Orleans, LA. 10 FEB 2021.

40) Amato, D. N., Amato, D. V., Bisbjerg, G., Chavez, A. D., Gregory, C. G., Gosting, S. E., Kumler, M. S., Lin, N. A., Luna, B., Machado, C. A., Martinez, M. R., Meyersohn, M. S., Ramos, W. Strange, G. A., Swanson, J. P., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Lebanon Valley College: Annville, PA. 13 OCT 2020.

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**External Oral Presentations continued …**

**(**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University continued…*

39) Amato, D. N., Amato, D. V., Bisbjerg, G., Chavez, A. D., Colt, T. A., Dirlam, P. T., Gregory, C. G., Gosting, S. E., Kumler, M. S., Lin, N. A., Luna, B., Machado, C. A., Martinez, M. R., Meyersohn, M. S., Ramos, W. Strange, G. A., Swanson, J. P., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** San Jose State University: San Jose, CA. 10 SEP 2019.39) Wilborn, E. G., Gregory, C. M., Gosting, S. E., Page, T. M., Ramos, W., Hunter, M. A., Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** American Chemical Society: San Diego, CA. 24 AUG 2019.

38) Wilborn, E. G., Gregory, C. M., Gosting, S. E., Page, T. M., Ramos, W., Hunter, M. A., Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Golden Gate Polymer Forum: San Francisco, CA. 24 JUL 2019.

37) Wilborn, E. G., Gregory, C. M., Gosting, S. E., Page, T. M., Ramos, W., Hunter, M. A., Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Polymer Composites and High Performance Materials: Sonoma, CA. 21 JUL 2019.

36) Amato, D. N., Amato, D. V., Chavez, A. D., Colt, T. A., Crenshaw, E. D., Gregory, C. G., Gosting, S. E., Kleine. T. S., Markmann, M. R., Martinez, M. R., Meyersohn, M. S., Schoch, T. M., Strange, G. A., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Detroit Society Coatings and Technology (DSCT) - FOCUS: Detroit, MI. 3 MAY 2018.

35) Amato, D. N., Amato, D. V., Chavez, A. D., Colt, T. A. Crenshaw, E. D., Dirlam, P. T., Gosting, S. E., Gregory, C. G., Kleine. T. S., Markmann, M. R., Martinez, M. R., Meyersohn, M. S., Pattillo, C. C., Schoch, T. M., Strange, G. A., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Waterborne Coating Symposium: New Orleans, LA. 2 FEB 2018. *Selected for plenary talk of entire conference.*

34) Amato, D. N., Amato, D. V., Chavez, A. D., Colt, T. A. Crenshaw, E. D., Dirlam, P. T., Gosting, S. E., Gregory, C. G., Kleine. T. S., Markmann, M. R., Martinez, M. R., Meyersohn, M. S., Pattillo, C. C., Schoch, T. M., Strange, G. A., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** University of Akron, Akron, OH. 1 DEC 2017.

33) Amato, D. N., Amato, D. V., Chavez, A. D., Colt, T. A. Crenshaw, E. D., Dirlam, P. T., Gosting, S. E., Gregory, C. G., Kleine. T. S., Markmann, M. R., Martinez, M. R., Meyersohn, M. S., Pattillo, C. C., Schoch, T. M., Strange, G. A., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** University of New Hampshire, Durham, NH. 12 SEP 2017.

32) Amato, D. N., Amato, D. V., Chavez, A. D., Crenshaw, E. D., Dirlam, P. T., Gregory, C. G., Kleine. T. S., Markmann, M. R., Martinez, M. R., Meyersohn, M. S., Pattillo, C. C., Schoch, T. M., Strange, G. A., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporation Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** American Chemical Society: San Francisco, CA. 3 APR 2017. *Selected for plenary talk in Frontiers in Nanoscience : Undergraduate Symposium*

31) Costanzo, P. J.\* “Undergraduate polymer synthesis developed for lecture and laboratory experiments.” **Invited Speaker:** American Chemical Society: San Francisco, CA. 3 APR 2017.

30) Barcus, K. S., Colt, T. A., Crenshaw, E. D., Gregory, C. G., Kleine. T. S., London, A. E., Markmann, M. R., Martinez, M. R., Meyersohn, M. S., Schoch, T. M., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporation Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Polymer Composites and High Performance Materials: Sonoma, CA. 28 JUL 2016.

Resume Continues...

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**External Oral Presentations continued …**

**(**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University continued…*

29) Barcus, K. S., Colt, T. A., Crenshaw, E. D., Gregory, C. G., Kleine. T. S., London, A. E., Markmann, M. R., Martinez, M. R., Meyersohn, M. S., Schoch, T. M., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Incorporation Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** University of California at San Diego : San Diego, CA. 18 APR 2016.

28) Markmann, M. R., Martinez, M. R., Schoch, T. M., Johnson, R. G., Wilborn, E. J, Barcus, K. S., Crenshaw, E. D.,Costanzo, P. J.\* “Incorporating Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** American Chemical Society: San Diego, CA. 14 MAR 2016.

27) Amato, D. U., Strange, G. A., Swanson, J. P., Chavez, A. D., Varney, K. L., Amato, D. V., Costanzo, P. J.\* “Re-healable Coatings Based Upon Thermally Responsive Linkages and Renewable Materials.” **Invited speaker:** Western Coating Symposium: Las Vegas, NV. 26 OCT 2015.

26) Amato, D. N., Amato, D. V., Chavez, A. D., Crenshaw, E. D., Johnson, R. G., Kleine. T. S., London, A. E., Machado, C. A., Markmann, M. R., Martinez, M. R., Pattillo, C. C., Roy, S. E., Rozvadovsky, S., Schoch, T. M., Strange, G.A, Swanson, J. P., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Employing Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** International Fusion Conference, London, England. 8 AUG 2015.

25) Amato, D. N., Amato, D. V., Chavez, A. D., Crenshaw, E. D., Dirlam, P. T., Johnson, R. G., Kleine. T. S., London, A. E., Machado, C. A., Markmann, M. R., Martinez, M. R., Pattillo, C. C., Roy, Strange, G.A, Roy, S. E., Sloch, T. M., Swanson, J. P., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Employing Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Case Western University, Cleveland, OH. 1 MAY 2015.

24) Amato, D. U., Strange, G. A., Swanson, J. P., Chavez, A. D., Varney, K. L., Amato, D. V., Costanzo, P. J.\* “Employing Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited speaker:** Carnegie Mellon University, Pittsburgh, PA. 29 MAY 2014.

23) Amato, D. N., Amato, D. V., Chavez, A. D., Crenshaw, E. D., Johnson, R. G., Kleine. T. S., London, A. E., Machado, C. A., Markmann, M. R., Martinez, M. R., Pattillo, C. C., Roy, S. E., Rozvadovsky, S., Schoch, T. M., Strange, G.A, Swanson, J. P., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Employing Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** International Fusion Conference, London, England. 8 AUG 2015.

22) Amato, D. N., Amato, D. V., Chavez, A. D., Crenshaw, E. D., Dirlam, P. T., Johnson, R. G., Kleine. T. S., London, A. E., Machado, C. A., Markmann, M. R., Martinez, M. R., Pattillo, C. C., Roy, Strange, G.A, Roy, S. E., Sloch, T. M., Swanson, J. P., Varney, K. L., Wilborn, E. J, Costanzo, P. J.\* “Employing Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Seoul National University, Seoul, South Korea. 16 JUN 2015.

21) Amato, D. U., Strange, G. A., Swanson, J. P., Chavez, A. D., Varney, K. L., Amato, D. V., Costanzo, P. J.\* “Synthesis and evaluation of thermally-responsive coatings based upon Diels-Alder chemistry and renewable materials.” **Invited speaker:** American Chemical Society: Dallas, TX. 16 MAR 2014

20) Amato, D. U., Strange, G. A., Chavez, A. D., Varney, K. L., Costanzo, P. J.\* “Synthesis and evaluation of thermally-responsive coatings based upon Diels-Alder chemistry and renewable materials.” **Invited Speaker:** Symposium on Stimuli-Responsive Materials: Santa Rosa, CA. 22 OCT 2013.

19) Amato, D. N., Amato, D. V., Chavez, A. D., Dirlam, P. T., Machado, C. A., Pattillo, C. C., Roy, Strange, G.A, Swanson, J. P., Varney, K. L., Costanzo, P. J.\* “Employing Diels-Alder chemistry to prepare thermally-responsive materials.” **Invited Speaker:** Duquense University, Pittsburgh, PA. 13 SEP 2013.

18) Bentz, K. C., Chavez, A. D., London, A. E., Machado, C. A., Ningrum, D. U., Pattillo, C. C. Roland, C. D., Roy, S. E., Rozvadovsky, S., Strange, G.A, Swanson, J. P., Costanzo, P. J.\* “Development of polymeric phase change materials based upon Diels-Alder chemistry.” **Invited Speaker:** University of Southern Mississippi, Hattiesburg, MI. 28 NOV 2012.

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**External Oral Presentations continued …**

**(**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University continued…*

17) Bentz, K. C., Chavez, A. D., Dean, J. M., Dirlam, P. T., London, A. E., Machado, C. A., Pattillo, C. C. Roland, C. D., Roy, S. E., Rozvadovsky, S., Strange, G.A, Swanson, J. P., Costanzo, P. J.\* “Development of advanced materials from simple chemistry.” **Invited Speaker:** Army Research Laboratory, Aberdeen Proving Ground, MD. 27 AUG 2012.

16) Pattillo, C. C., Dirlam, P. T., S., Strange, G.A, Costanzo, P. J.\* “Controlling Surface Energy and Wetability with Diels-Alder Chemistry.” **Invited Speaker:** Western Coating Symposium: Las Vegas, NV. 24 OCT 2011.

15) Amato, D. V., Bentz, K. C., Carlson, J. S., Chavez, A. D., Dirlam, P. T., Hill, M. R., S., Kleine, T. S., Pattillo, C. C., Roland, C. D., Roy, S. E., Rozvadovsky, S., Strange, G.A, Swanson, J. P., Costanzo, P. J.\* “Development of advanced materials from simple chemistry.” **Invited Speaker:** Southern Methodist University (SMU) - Dallas, TX. 3 AUG 2011.

14) Amato, D. V., Bentz, K. C., Carlson, J. S., Chavez, A. D., Dirlam, P. T., Hill, M. R., S., Pattillo, C. C. Roland, C. D., Roy, S. E., Rozvadovsky, S., Strange, G.A, Swanson, J. P., Costanzo, P. J.\* “Development of advanced materials from simple chemistry.” **Invited Speaker:** Huntsman Chemical Company - Houston, TX. 2 AUG 2011.

13) Dirlam, P. T., Pattillo, C. C., Strange, G.A, Costanzo, P. J.\* “Controlling Surface Energy and Wetability with Diels-Alder Chemistry.” **Invited Speaker:** Los Angeles Society for Coatings Technology (LASCT) - Anaheim, CA. 8 JUN 2011.

and the University of Delaware (UDEL). Swanson ***received an Undergraduate Travel Award***.

12) Dirlam, P. T., Strange, G. A, Costanzo, P. J.\* “Controlling Surface Energy and Wetability with Diels-Alder Chemistry.” **Invited Speaker:** Western Coating Symposium: Las Vegas, NV. 27 OCT 2009.

11) Carlson, J., Dirlam, P.T., Hill, M. R., Rozvadovsky, S., Strange, G.A, Swanson, J. P. Costanzo, P. J.\* “Research in the Costanzo lab… Development of thermo-responsive materials utilizing Diels-Alder chemistry and novel crosslinking methodology” **Invited Speaker:** Army Research Laboratory, Aberdeen Proving Ground, MD. 12 AUG 2009.

All work was completed by Cal Poly undergraduates at Cal Poly and the Army Research Laboratory (ARL).

10) Rozvadovsky, S., Swanson, J. P., Costanzo, P. J.\*, Jensen, R. E. “Tailored Polymers for Insensitive Munitions Based upon Diels-Alder Chemistry.” **Invited Speaker:** Naval Research Laboratory, Indian Head, MD. 11 AUG 2009.

All work was completed by Cal Poly undergraduates at Cal Poly and the Army Research Laboratory (ARL). Co-Authors include staff scientists from the Army Research Laboratory (Jensen).

*Completed at the Army Research Laboratory - Costanzo was presenter at all listed presentations*

9) “New applications from old technology utilizing Diels-Alder chemistry and block copolymers.” Gordon Research Conference: Ventura, CA. 6 JAN 2007.

8) “Controlling additive dispersion and migration properties with block copolymers and Diels-Alder chemistry.” American Chemical Society: San Francisco, CA. 12 SEP 2006.

7) “Thermo-responsive film based upon Diels-Alder chemistry and block copolymer phase separation.” American Chemical Society: Atlanta, GA. 28 MAR 2006.

*Completed at the University of California at Davis - Costanzo was presenter at all listed presentations*

6) “Formation of end-functionalized poly(thiophene) via Grignard Metathesis Coupling.” American Chemical Society: Atlanta, GA. 26 MAR 2006.

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**External Oral Presentations continued …**

*Completed at the University of California at Davis - Costanzo was presenter at all listed presentations cont…*

5) “Biological detection based upon nanoaggregation.” Materials Research Society: San Francisco, CA. 30 MAR 2005.

4) “Synthesis and aggregation mechanism of nanostructures comprised of biotinylated CdS@SiO2 nanoparticles.” Materials Research Society: San Francisco, CA. 14 APR 2004.

*Completed at the University of California at Davis - Costanzo was presenter at all listed presentations*

3) “Biological sensing using nanoaggregation.” Materials Research Society: San Francisco, CA. 13 APR 2004.

2) “Synthesis, assembly mechanism, and sensor application of nanostructures comprised of biotinylated CdS@SiO­­2 nanoparticles.” American Chemical Society: Anaheim, CA. 28 MAR 2004.

1) “Synthesis of a novel biological sensor based on nanoaggregation.” **Invited Speaker:** Hartnell College. Salinas, CA. 22 OCT 2003.

**Internal Oral Presentations**

**(**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined. All work was completed at Cal Poly.**)**

29) Gosting, S. E.\*, Costanzo, P. J. “Development of Polymer Scintillators.” Cal Poly: Frost Summer Research Symposium. San Luis Obispo, CA. 29 AUG 2018.

28) Rhoads, R. H., Gregory, C. M..\*, Colt, T. A.\*, Costanzo, P. J. “Incorporating Diels-Alder chemistry to prepare thermally responsive materials.” Cal Poly: Frost Summer Research Symposium. San Luis Obispo, CA. 18 AUG 2017.

27) Gregory, C. M..\*, Colt, T. A.\*, Costanzo, P. J. “Incorporating Diels-Alder chemistry to prepare thermally responsive materials.” Cal Poly: Frost Summer Research Symposium. San Luis Obispo, CA. 12 AUG 2016.

26) Ventura, A. M.\*, Costanzo, P. J. “Incorporation of Cysteine Functional Groups for Novel Polymer Coupling Based Upon Thiazolidine Chemistry.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 20 FEB 2016.

25) Crenshaw, E, D.\*, Costanzo, P. J. “Incorporation of Diels-Alder Chemistry into Polymer Matrices.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 20 FEB 2016.

24) Liu, C. H.\*, Costanzo, P. J., Martinez, A. W. “Reagent Pencil Characterization for Microfluidic Paper Based Analytic Devices.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 20 FEB 2016. *Selected for CSU competition.*

23) Noxon, I. C.\*, Costanzo, P. J., Martinez, A. W. “Characterization of reagent pencils for solvent-free depositions of reagents onto paper-based diagnostic devices.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 7 FEB 2015. *Selected for CSU competition.*

22) Liu, C. H.\*, Costanzo, P. J., Martinez, A. W. “Characterization of reagent pencils for solvent-free depositions of reagents onto paper-based diagnostic devices.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 7 FEB 2015. *Selected for CSU competition.*

21) Monteleone, L. R.\*, Cruz, M. A.\*, Costanzo, P. J. “Controlling Surface Energy and Wettability with a Light Responsive Linker System.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 7 FEB 2015. *Selected for CSU competition.*

20) De Hoe, G. X.\*, Costanzo, P. J. “Synthetic Design of Block Copolymer Amphiphiles for Nanomaterial Dispersion.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 8 FEB 2014. *Selected for CSU competition.*

19) Kleine, T. S.\*, London, A. E., Costanzo, P. J. “Novel Polymer Topology Achieved Through Use of Diels-Alder Chemistry.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 8 FEB 2014.

18) Pattillo, C. P.\*, Costanzo, P. J. “Controlling Surface Energy and Wettability with a Light Responsive Linker System.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 2 MAR 2013. *Selected for CSU competition.*

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**Internal Oral Presentations continued…**

**(**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined. All work was completed at Cal Poly.**)**

15) Roy, S. E.\*, Costanzo, P. J. “Development of renewable polymeric phase change materials via Diels-Alder Chemistry.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 25 FEB 2012.

14) Hill, M. R.\*, Costanzo, P. J., “Modular oxime functionalization of well-defined alkoxyamine-containing polymers.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 25 FEB 2012. *Selected for CSU competition.*

13) Grau, W. C.\*, Mann, S. I.\*, Mackenzie, M. C., Costanzo, P. J. and Immoos, C. E. “Investigation into metallo-biomimetics for exploration of SOD reactivity.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 25 FEB 2012. *Selected for CSU competition.*

12) Roland, C. D.\*, Costanzo, P. J. “Dynamic topology of thermally-responsive materials via Diels-Alder chemistry.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 25 FEB 2012.

11) Dirlam, P. T.\*, Costanzo, P. J. “Controlling surface energy and wetability with Diels-Alder chemistry.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 26 FEB 2011.

10) Strange, G. A.\*, Costanzo, P. J. “Controlling nanoparticle dispersion via Diels-Alder chemistry.” Cal Poly: CSU Research Competition. San Luis Obispo, CA. 26 FEB 2011. *Selected for CSU competition*

9) Roy, S. E.\*, Swanson, J. P., Costanzo, P. J. “Development of Thermally Responsive Binders Designed for Insensitive Munitions.” Cal Poly: Summer Student Research Seminar. San Luis Obispo, CA. 19 AUG 2010.

8) Mackenzie, M. C.\*, Grau, W. C.\*, Immoos, C. E., Costanzo, P. J. “Merging metallo-biomimetics and “Click” chemistry for the investigation of SOD reactivity” Cal Poly: Summer Student Research Seminar. San Luis Obispo, CA. 19 AUG 2010.

7) Roland, C. D.\*, Costanzo, P. J. “Development of Thermally Responsive Polymer Matrices.” Cal Poly: Summer Student Research Seminar. San Luis Obispo, CA. 19 AUG 2010.

6) Hill, M. R.\*, Carlson, J. S., Costanzo, P. J. “Development of New Crosslinking Reactions.” Cal Poly: Summer Student Research Seminar. San Luis Obispo, CA. 19 AUG 2010.

5) Strange, G. A.\*, Costanzo, P. J. “Controlling nanoparticle dispersion via Diels-Alder chemistry.” Cal Poly: Summer Student Research Seminar. San Luis Obispo, CA. 19 AUG 2010.

4) Carlson, J. S.\*, Costanzo, P. J. “Novel polymer coupling chemistry based upon latent cysteine-like functionality.” Cal Poly : CSM Student presentations. San Luis Obispo, CA. 14 MAY 2010.

3) Swanson, J. P.\*, Costanzo, P. J. “Tailored Polymers for Insensitive Munitions Based upon Diels-Alder Chemistry.” Cal Poly: Summer Student Research Seminar. San Luis Obispo, CA. 26 AUG 2009.

2) Rozvadovsky, S.\*, Costanzo, P. J. “Synthesis and Optimization of Thermally Responsive Binders.” Cal Poly: Summer Student Research Seminar. San Luis Obispo, CA. 22 AUG 2008.

1) Costanzo, P. J.\* “Research in the Costanzo lab…” Cal Poly: Departmental Seminar. San Luis Obispo, CA. 17 JAN 2008..

**External Poster Presentations (**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University*

60) Henry, A. M., McDonough, E., Malouf, D., Medhurst, E., Sheng, J., Canales, A., Cecil, T., Munson, J., Fleischer, C, Costanzo, P. J., Bercovici, D. A. “Ylidenenorbornadiene carboxylates (YNDs): Experimental kinetic analysis of a nucleophile-induced retro-[4+2] fragmentation.” American Chemical Society: San Diego, CA. 22 MAR 2022.

58) Hunter, M. A.\*, Meyersohn, M. S., Gosting, S. E., Skinner, N. M., Costanzo, P. J. “Manipulation of molecular topology and composition using Diels-Alder chemistry.” American Chemical Society: Orlando, FL. 2 APR 2019.

57) Wilborn, E. G.\*, Gregory, C. M., Page, T. M. Costanzo, P. J. “Controlling polymer solubility with Diels-Alder chemistry and LCST.” American Chemical Society: New Orleans, LA. 19 MAR 2018. ***Selected for Sci-Mix Presentation.***

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**External Poster Presentations continued…**

56) Schoch, T. D.\*, Martinez, M. R., Meyersohn, M. S., Markmann, M. R., Costanzo, P. J. “Molecular weight changing polymers via Diels-Alder chemistry.” American Chemical Society: San Francisco, CA 4 APR 2017.

55) Meyersohn, M. S.\*, Markmann, M. R., Costanzo, P. J. “Inversion of molecular topology and composition using Diels-Alder chemistry.” American Chemical Society: San Francisco, CA 4 APR 2017.

54) Schoch, T. D.\*, Martinez, M. R., Meyersohn, M. S., Markmann, M. R., Costanzo, P. J. “Molecular weight changing polymers via Diels-Alder chemistry” American Chemical Society: San Francisco, CA 3 APR 2017. ***Selected for Sci-Mix Presentation.***

53) Meyersohn, M. S.\*, Markmann, M. R., Costanzo, P. J. “Inversion of molecular topology and composition using Diels-Alder chemistry.” American Chemical Society: San Francisco, CA 3 APR 2017. ***Selected for Sci-Mix Presentation.***

52) Morgan, S. E, Aubrecht, K. B., Berda, E. B., Cavicchi, K. A., Costanzo, P. J., Gabriel, G. J., Goh, C. Goh, S. L., Iacono., S. T., Savin, D. A. “Online resources for the polymer education community.” American Chemical Society: San Diego, CA. 15 MAR 2016.

51) Morgan, S. E, Aubrecht, K. B., Berda, E. B., Cavicchi, K. A., Costanzo, P. J., Gabriel, G. J., Goh, C. Goh, S. L., Iacono., S. T., Savin, D. A. “Online resources for the polymer education community.” American Chemical Society: San Diego, CA. 14 MAR 2016. ***Selected for Sci-Mix Presentation.***

50) Barcus, K. S.\*, Crenshaw, E. D., Markmann, M. R., Costanzo, P. J. “Incorporation of Diels-Alder chemistry into polymer matrices via an inimer approach.” American Chemical Society: San Diego, CA 15 MAR 2016.

49) Barcus, K. S.\*, Crenshaw, E. D., Markmann, M. R., Costanzo, P. J. “Incorporation of Diels-Alder chemistry into polymer matrices via an inimer approach.” American Chemical Society: San Diego, CA 14 MAR 2016. ***Selected for Sci-Mix***.

48) Markmann, M. R.\*, Martinez, M. R., Costanzo, P. J. “Molecular weight changing polymers via Diels-Alder chemistry.” Western Coating Symposium: Las Vegas, NV. 26 OCT 2015.

47) Crenshaw, E. D.\*, Barcus, K. S., Kleine, T. S., Markmann, M. R., Costanzo, P. J. “Incorporation of Diels-Alder chemistry into polymer matrices via an inimer approach.” Western Coating Symposium: Las Vegas, NV. 26 OCT 2015.

46) Alameda, B. A., Feist, S., Bass, G. F., Seaver, C. P., Kha, K., Kelley, B. A., Scott, G. E., Immoos, C. E., Costanzo, P. J.\* “Synthetic design and investigation of novel polymeric surfactants.” Western Coating Symposium: Las Vegas, NV. 26 OCT 2015.

45) Ross, A. S.\*, Monteleone, L. R., Cruz, M., A., Pattillo, C. P.,, Costanzo, P. J. “Controlling surface energy and wetability with a light responsive linker system.” Western Coating Symposium: Las Vegas, NV. 26 OCT 2015.

44) Martinez, M. R.\*, Markmann, M. R., Costanzo, P. J. “Molecular weight changing polymers via Diels-Alder chemistry.” American Chemical Society: Denver, CO. 24 MAR 2015

43) Crenshaw, E. D.\*, Kleine, T. S., London, A. E., Markmann, M. R., Costanzo, P. J. “Incorporation of Diels-Alder chemistry into polymer matrices via an inimer approach.” American Chemical Society: Denver, CO. 24 MAR 2015. Crenshaw ***received an Undergraduate Travel Award***.

42) Bass, G. F., Colt, M. S., Chavez, A. D., DeHoe, G. X., Seaver, C. P., Kha, K., Kelley, B. A., Scott, G. E., Immoos, C. E., Costanzo, P. J.\* “Synthetic design and investigation of novel polymeric surfactants.” Gordon Research Conference: Ventura, CA. 10 JAN 2015.

41) Monteleone, L. R.\*, Ross, A. S.\*, Cruz, M., A., Cattillo, C. P.,, Costanzo, P. J. “Controlling surface energy and wetability with a light responsive linker system.” American Chemical Society: Dallas, TX. 18 MAR 2014.

40) Morgan, S. E, Aubrecht, K. B., Berda, E. B., Cavicchi, K. A., Costanzo, P. J., Gabriel, G. J., Goh, C. Goh, S. L., Iacono., S. T., Savin, D. A. “Polymer science curriculum for the 21st century : PUNK.” American Chemical Society: Dallas, TX. 17 MAR 2014. ***Selected for Sci-Mix Presentation.***

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**External Poster Presentations continued …**

**(**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University continued…*

39) Monteleone, L. R.\*, Ross, A. S.\*, Cruz, M., A., Pattillo, C. P.,, Costanzo, P. J. “Controlling surface energy and wetability with a light responsive linker system.” American Chemical Society: Dallas, TX. 17 MAR 2014. Selected for Sci-Mix Presenation.

38) Morgan, S. E, Aubrecht, K. B., Berda, E. B., Cavicchi, K. A., Costanzo, P. J., Gabriel, G. J., Goh, C. Goh, S. L., Iacono., S. T., Savin, D. A. “Polymer science curriculum for the 21st century : PUNK.” American Chemical Society: Dallas, TX. 17 MAR 2014.

37) Dehoe, G. X.,\* Formal, T. P., Chavez, A. D., O’Bryan, G., Costanzo, P. J. “Synthetic design of block copolymer amphiphiles for nanomaterial dispersion.” Western Coating Symposium: Las Vegas, NV. 22 OCT 2013.

36) Kleine, T. S.,\* London, A. E.,\* Roland, C. D., and Costanzo, P. J.\* “Transparent, thermally-responsive coating.” Western Coating Symposium: Las Vegas, NV. 22 OCT 2013.

35) Varney, K. L.,\* Amato, D. U., and Costanzo, P. J. “Re-healable Coatings Based Upon Thermally Responsive Linkages.” Western Coating Symposium: Las Vegas, NV. 22 OCT 2013. Varney ***received Best Technical Student Poster award - 3rd place.***

34) Kleine, T. S.\*, Roland, C. D., London, A. E. and Costanzo, P. J. “Dynamic topology of thermally-responsive materials via Diels-Alder chemistry.” American Chemical Society: New Orleans, LA. 9 APR 2013. Kleine ***received an Undergraduate Travel Award***.

33) Machado, C. A.\* Dean, J. M., and Costanzo, P. J. “Preparation of thermally-responsive polyurethanes based upon Diels-Alder chemistry.” American Chemical Society: New Orleans, LA. 9 APR 2013. Machado ***received an Undergraduate Travel Award***.

32) Machado, C. A.\*, Dean, J. M., and Costanzo, P. J. “Preparation of thermally-responsive polyurethanes based upon Diels-Alder chemistry.” American Chemical Society: New Orleans, LA. 8 APR 2013. Selected for Sci-Mix Presenation.

31) Kleine, T. S., Roland, C. D., London, A. E. and Costanzo, P. J.\* “Dynamic topology of thermally-responsive materials via Diels-Alder chemistry.” Gordon Research Conference: Ventura, CA. 7 JAN 2013.

30) Mann, S. I.\*, Grau, W. C. Mackenzie, M. C., McMahon, M. L., Costanzo, P. J. and Immoos, C. E. “Utilizing “click chemistry” to incorporate MnSOD mimics into polymer scaffolds.” American Chemical Society: San Diego, CA. 26 MAR 2012. Selected for Sci-Mix Presentation.

29) Mann, S. I.\*, Grau, W. C. Mackenzie, M. C., McMahon, M. L., Costanzo, P. J. and Immoos, C. E. “Utilizing “click chemistry” to incorporate MnSOD mimics into polymer scaffolds.” American Chemical Society: San Diego, CA. 25 MAR 2012.

28) Grau, W. C.\*, Mackenzie, M. C, Mann, S. I., Lent, B. M., Costanzo, P. J. and Immoos, C. E. “Electronic and structural influences on SOD-like activity of Mn(III) Schiff base complexes.” American Chemical Society: San Diego, CA. 25 MAR 2012.

27) Chavez, A. D.\*, Dean, J. M., Strange, G. A., Costanzo, P. J. “Develop of a library of Diels-Alder linkage systems.” American Chemical Society: San Diego, CA. 25 MAR 2012.

26) Strange, G. A.\*, Richardson, A. D., Savin, D. A., Costanzo P. J. “Controlling nanoparticle dispersion via Diels-Alder chemistry.” Western Coating Symposium: Las Vegas, NV. 24 OCT 2011. Strange ***received Best Technical Student Poster award - 1st place.***

25) Roland, C. D\*, Orlicki, J. A. Costanzo, P. J. “Transparent, thermally-responsive coating.” Western Coating Symposium: Las Vegas, NV. 24 OCT 2011. Roland ***received Best Technical Student Poster award - 3rd place.***

24) Hill, M. R.\*, Carlson, J. S., Costanzo, P. J. “Novel polymer coupling chemistry based upon latent cysteine-like functionality.” Western Coating Symposium: Las Vegas, NV. 24 OCT 2011. Hill ***received Best Technical Student Poster award - Honorable mention***

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**External Poster Presentations continued …**

**(**Presenting authors are denoted with an \*. Cal Poly undergraduates are underlined.**)**

*Completed at California Polytechnic State University continued…*

23) Mackenzie, M. C.\*, Mann, S. I.\*, Grau, W. C., Costanzo, P. J. and Immoos, C. E. “Merging metallo-biomimetics and “Click” chemistry for the investigation of SOD reactivity.” American Chemical Society: Anaheim, CA. 28 MAR 2011. Selected for Sci-Mix Presentation.

22) Mackenzie, M. C.\*, Mann, S. I., Grau, W. C., Costanzo, P. J. and Immoos, C. E. “Merging metallo-biomimetics and “Click” chemistry for the investigation of SOD reactivity.” American Chemical Society: Anaheim, CA. 27 MAR 2011.

21) Bentz, K. C.\*, Costanzo, P. J., Immoos, C. E., Vorst, K. “Synthesis and characterization of linear and branched polylactic acid for use in coatings and adhesives for paper packaging.” American Coatings Society: Chicago, IL. 15 MAR 2011.

20) Hill, M. R., Carlson, J. S., Costanzo, P. J.\* “Novel polymer coupling chemistry based upon latent cysteine-like functionality.” Gordon Research Conference: Ventura, CA. 10 JAN 2011.

19) Yoo, H., Bull, M. M., Chung, W-J., Dirlam, P. T., Pyun, J. “Functionalization of ferromagnetic cobalt nanoparticles via ligand exchange with polymeric ligands.” American Chemical Society: Boston, MA. 23 AUG 2010.

18) McMahon, M. L.\*, Jaoudi, M., Immoos, C. E., Costanzo, P. J. “Systematic Design of Reactive Surface Coatings.” American Coatings Society: Charlotte, NC. 13 APR 2010.

17) Carlson, J. S.\*, Hill, M. R., Costanzo, P. J. “Novel polymer coupling chemistry based upon latent cysteine-like functionality.” American Chemical Society: San Francisco, CA. 22 MAR 2010.

16) Strange, G. A.\*, Richardson, A. D., Savin, D. A., Costanzo P. J. “Controlling nanoparticle dispersion via Diels-Alder chemistry.” American Chemical Society: San Francisco, CA. 22 MAR 2010.

15) Jaoudi, M.\*, Swanson, J. P., Costanzo, P. J., Immoos, C. E., “Synthesis and rational design of metal/ligand catalyst systems utilizing “Click” chemistry.” American Chemical Society: San Francisco, CA. 22 MAR 2010.

14) Harvey, V. L.\*, Wagner, M. A., Costanzo, P. J., Immoos, C. E., “Synthesis of fluorescence-based NO detection probes by “Click” chemistry.” American Chemical Society: San Francisco, CA. 22 MAR 2010.

13) Curtzwiler, G. W. \*, Costanzo, P. J., Fernando, R., Vorst, K. “Thermal Initiated Hydroxyethyl Methacrylate Functionalization of Multi-Walled Carbon Nanotubes.” Western Coating Symposium: Las Vegas, NV. 26 OCT 2009. Curtzwiler ***received Best Technical Student Poster award.***

12) Dirlam, P. T. \*, Strange, G. A \*, Costanzo, P. J. “Controlling Surface Energy and Wet-ability with Diels-Alder Chemistry.” Western Coating Symposium: Las Vegas, NV. 26 OCT 2009. Dirlam and Strange ***received Best Technical Student Poster - Runner up award.***

11) Dirlam, P. T. \*, Strange, G. A, Orlicki, J. A., Wetzel, E. D., Costanzo, P. J. “Development of Self-Pressurizing Capillaries using Diels-Alder Chemistry.” American Chemical Society: Washington, DC. 17 AUG 2009. Selected for Sci-Mix Presentation.

10) Richardson, A. D.\*, Strange, G. A., Costanzo, P. J., Savin, D. A. "Effect of polymer tethering on dispersions of silica nanoparticles in crosslinked epoxy composites" American Chemical Society: Washington, DC. 16 AUG 2009.

9) Dirlam, P. T. \*, Strange, G. A, Orlicki, J. A., Wetzel, E. D., Costanzo, P. J. “Development of Self-Pressurizing Capillaries using Diels-Alder Chemistry.” American Chemical Society: Washington, DC. 16 AUG 2009.

8) Rozvadovsky, S., Costanzo, P. J.\*, Jensen, R. E. “Tailored Polymers for Insensitive Munitions.” Gordon Research Conference: Ventura, CA. 13 JAN 2009.

7) Dirlam, P. T, Costanzo, P. J., Orlicki, J. A., Wetzel, E. D. “Development of Self-Pressurizing Capillaries using Diels-Alder Chemistry.” Drexel University: MCOE Review. Philadelphia, PA. 10 NOV 2008.

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**External Poster Presentations continued …**

*Completed at the Army Research Laboratory - Costanzo was presenter at all listed presentations*

6) “Controlling dispersion and aggregation properties of film additives with Diels-Alder chemistry.” Gordon Research Conference: Ventura, CA. 9 JAN 2007.

*Completed at the University of California at Davis - Costanzo was presenter at all listed presentations*

5) “Synthesis of poly(ethylene glycol) grafted nanoparticles for biological sensing based upon nanoaggregation.” Gordon Research Conference: Ventura, CA. 12 JAN 2005.

4) “Synthesis and aggregation mechanism of nanostructures comprised of biotinylated CdS@SiO­2 nanoparticles.” American Chemical Society: New York, NY. 10 SEP 2003.

3) “Synthesis of an α-siloxy-ω-amino poly(ethylene glycol) for use in ligating biological molecules to nanoparticles.” American Chemical Society: New Orleans, LA. 25 MAR 2003.

*Completed at Carnegie Mellon University - Costanzo was presenter at all listed presentations*

2) “Preparation and characterization of telehelic macromonomers.” CRP Consortium: Pittsburgh, PA. 9 APR 2001.

1) “Synthesis and characterization of *n*-butyl acrylate / methyl methacrylate gradient copolymers.” ATRP Consortium: Pittsburgh, PA. 9 OCT 2000.

**Grants and Contracts**

*External / Internal Funding*

22) Primary investigator. “RUI: Creation and application of nucleophile-induced retro-Diels-Alder linkages in dynamic-covalent polymeric systems.” Awarded $297,503 from SEP 2020 - AUG 2023 by the National Science Foundation.

21) Primary investigator. “Polymer Scintillator Development.” Awarded $64,818 from NOV 2019 – SEP 2020 by Sandia National Laboratory.

20) Co-Primary investigator. “Developing Novel Stimuli-Responsive Polymer Systems.” Awarded $17,991 from NOV 2019 – JUL 2020 by RSCA, California Polytechnic State University .

19) Primary investigator. “Development of responsive surfactants for improved oil recovery.” Awarded $70,000 from SEP 2019 - AUG 2022 by the Petroleum Research Foundation.

18) Primary investigator. “Emulsion containing Diels-Alder linkages.” Awarded $75,000 from JUN 2018 – MAY 2019 by Bona, Inc.

17) Co-Primary investigator. “Integrating biological chemistry with “click” chemistry for the development of novel bio-active materials.” Awarded $15,000 from NOV 2017 – JUL 2018 by RSCA, California Polytechnic State University .

16) Primary investigator. “Organic Scintillator Development.” Awarded $50,000 from NOV 2017 – JUL 2018 by Sandia National Laboratory.

15) Primary investigator. “RUI: Investigation into dynamic-covalent linkages through the use of Diels-Alder chemistry and controlled radical polymerization techniques.” Awarded $210,000 from SEP 2017 - AUG 2020 by the National Science Foundation, CHE-MSN.

14) Primary investigator. “RUI: Preparation of Polymeric Phase Change materials based upon Diels-Alder chemistry.” Awarded $210,000 from AUG 2012 - JUL 2016 by the National Science Foundation, CHE-MSN.

13) Primary investigator. “NIST-SURF Program.” Awarded $8,500 from MAY 2015 - AUG 2015 by the NIST.

12) Co-Primary Investigator. “Online resources for the polymer education community.” Awarded $23,000 from OCT 2013 - SEP 2014 by the Camille and Henry Dreyfus Foundation (Special Grant Program in the Chemical Sciences.”

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**Grants and Contracts continued…**

*External / Internal Funding continued…*

11) Primary investigator. “Novel polymer coupling via thiazolidine chemistry.” Awarded $65,000 from SEP 2012 - AUG 2015 by the Petroleum Research Foundation.

10) Primary investigator. “Development of aerosol paint formulation.” Awarded $9,500 from NOV 2012 - NOV 2013 by Color it New!, LLC.

9) Primary investigator. “Optimization of vampire teeth formulation.” Awarded $5,000 from MAY 2011 - JUL 2011 by ScareCrow, Inc.

8) Primary investigator. “Easily processed Host-Guest polymer systems with high-Tg characterizatics.” Awarded $47,947 from APR 2011 - JUN 2013 by the Army Research Laboratory.

7) Primary investigator. “Development of Thermally Responsive Binders Designed for Insensitive Munitions Applications.” Awarded $56,661.00 from JAN 2011 - MAR 2012 by a C3RP subaward from Office of Naval Research to Cal Poly.

6) Co-Primary Investigator. “Aptamer-based Clinical Diagnostics in Paper-based Microfluidics Platforms.” Awarded $58,257 from JAN 2011 - MAR 2012 by a C3RP subaward from Office of Naval Research to Cal Poly.

5) Primary Investigator. “Incorporation of latent cysteine-like residues for the development novel coupling chemistry.” Awarded $46,000 from JUN 2010 - JUN 2012 from the Research Corporation, Cottrell College Science Awards.

4) Co-Primary Investigator. “Development of a bio-based and biodegradable polylactic acid spray coating and hot melt adhesive for corrugate and paperboard packages.” Awarded $160,000 from JAN 2010 - JAN 2011 from LBP and Henkel.

3) Co-Primary Investigator. “Use of “Click” Chemistry to Prepare Organic/Inorganic Hybrid Materials for Various Applications.” Awarded $15,000 from FEB 2010 - FEB 2011 by the Cal Poly Extramural Funding Initiative.

2) Primary Investigator. “Development of Thermally Responsive Binders for Insensitive Munitions.” Awarded $314,964 from APR 2008 - JUN 2011 by the Army Research Laboratory.

1) Primary Investigator. “Self-Regulating, Self-Presurizing Tubules of Integrated Circulatory Systems.” Awarded $35,063 from FEB 2008 - FEB 2009 by Drexel University under a Material Center of Excellence Award.

*Grant Applications*

24) Primary investigator. Development of programmable adhesives based upon Diels-Alder chemistry and renewable materials” National Science Foundation, STTR. Applied JUN 2021. Denied.

23) Co-Primary investigator. “Myoblast-enhanced collateral arteriogenesis: determining the impact of sex, quantifying mechanistic candidates, and optimizing polymer vehicle formulation” National Institute of Health. Applied NOV 2020. Denied.

22) Primary investigator. Development of programmable adhesives based upon Diels-Alder chemistry and renewable materials” National Science Foundation, STTR. Applied SEP 2020. Denied.

21) Co-Primary investigator. “Transplanting myoblasts in an injectable polymer to enhance collateral arteriogenesis in obese mice” National Institute of Health. Applied FEB 2019. Denied.

20) Co-Primary investigator. “CCI Phase I: NSF Center for Informatics Driven Polymer Design (CIDPoD)” National Science Foundation. Applied FEB 2018. Denied.

19) Co-Primary investigator. “CCI Phase I: NSF Center for Informatics Driven Polymer Design (CIDPoD)” National Science Foundation. Applied FEB 2017. Denied.

18) Primary investigator. “Development of Diels-Alder chemistry for preparation of thermally responsive materials : experiments and simulation.” National Science Foundation. Applied OCT 2015. Denied.

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**Grants and Contracts continued…**

*Grant Applications* *continued…*

17) Primary investigator. “Synthetic investigation into polymeric dispersants for carbon nanotubes.” Petroleum Research Foundation. Applied OCT 2015. Denied.

16) Primary investigator. “Synthetic Investigation into Polymeric Surfactants.” National Science Foundation, CHE-MSN. Applied OCT 2014. Denied.

15) Co-Primary investigator. “Merging metallo-biomimetics and polymer synthesis to study the influence of hydrophobicity on reactivity.” National Science Foundation, CHE-CAT. Applied JUL 2011. Denied.

14) Primary investigator. “Thermally responsive materials based upon Diels-Alder chemistry.” National Science Foundation, CAREER-DMR-POL. Applied JUL 2011. Denied.

13) Co-Primary investigator. “Accelerating Kuhn in SLO: An organization experiment in paradigm-shifting.” National Science Foundation, PFI. Applied DEC 2010. Denied.

12) Co-Primary investigator. “Merging metallo-biomimetics and polymer synthesis to study the influence of hydrophobicity on reactivity.” National Science Foundation, CHE-CAT. Applied DEC 2010. Denied.

11) Primary investigator. “Thermally responsive materials based upon Diels-Alder chemistry.” National Science Foundation, CAREER-DMR-POL. Applied JUL 2010. Denied.

10) Primary investigator. “Novel polymer coupling chemistry via latent cysteine-like functionality and thiazolidine chemistry.” National Science Foundation, DMR-POL. Applied OCT 2009. Denied

9) Co-Primary investigator. “Major Research Instrumentation: Acquisition of a High-Resolution NMR Spectrometer with Micro-imaging Capabilities.” National Science Foundation. Applied AUG 2009. Denied

8) Co-Primary investigator. “Development of “Click” Cartridges.” National Science Foundation, CHE-CAT. Applied NOV 2009. Denied

7) Co-Primary investigator. “Utilizing Thermal Initiated Multi-walled Carbon Nanotubes for High Performance Composities.” Lockheed Martin: University Research Initiative. Applied APR 2009. Denied.

6) Co-Primary investigator. “Utilizing Thermal Initiated Multi-Walled Carbon Nanotubes for High Performance Composites.” Lockheed Martin: Space Systems Division. Applied MAY 2009. Denied.

5) Co-Primary investigator. “New Process Methodology for using Multiwalled-Carbon Nanotubes to Improve Performance and Lower Cost Composite Panels.” Department of Advance Research Programs Agency (DARPA). Applied FEB 2009. Denied.

4) Primary investigator. “Versatile crosslinking technology towards the development of multifunctional materials.” Research Corporation, Cottrell College Science Awards. Applied NOV 2008. Denied.

3) Agilent Early Career Professor Award. Applied DEC 2008. Denied

2) Co-Primary investigator. “Major Research Instrumentation: Acquisition of a High-Resolution NMR Spectrometer with Micro-imaging Capabilities.” National Science Foundation. Applied MAY 2008. Denied

1) Primary investigator. “Synthesis, Characterization and Application of Thermo-responsive Block Copolymers.” Henry and Camille Dreyfus Faculty Start-up Award. Applied MAY 2007. Denied

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**Service**

*Department*

* + - Member of POC Committee (2018 - current)
    - Member of TEMFEC Committee (2015 - 2017)
    - Contributed to TEMFEC evaluations (2018 - 2020)
    - Member of Safety Committee (2009 - 2015)
    - Chair of Safety Committee (2010 - 2012, 2013 - 2015)
    - Member of Scheduling and Curriculum Committee (SCC) (2008 - 2011)
    - Member of Chemistry Department Grievance Panel (2013 - Current)
    - Member of faculty search committee for Open Hire (Spring 2015)
    - Member of faculty search committee for Analytical Hire (Fall 2014)
    - Member of faculty search committee for Wine Chemist Hire (Winter/Spring 2014)
    - Member of faculty search committee for Biochemistry Hire (Fall 2013)
    - Member of faculty search committee for Organic Chemist Hire (Fall 2013)
    - Member of faculty search committee for General/Biochemistry Hire (Fall 2012)
    - Member of faculty search committee for Polymer Hire (Fall 2010, Spring 2011)
    - Member of faculty search committee for Lecture Hire (Summer 2009)
    - Member of faculty search committee for General/Analytical Chemist Hire (Winter 2009)
    - Member of faculty search committee for Organic Chemist Hire (Fall 2008)
    - Served as Equitable Employment Facilitator (EEF) for Wine Chemist Hire (Winter/Spring 2014)
    - Served as Equitable Employment Facilitator (EEF) for Organic Chemist Hire (Fall 2013)
    - Served as Equitable Employment Facilitator (EEF) for General/Biochemistry Hire (Fall 2012)
    - Served as Equitable Employment Facilitator (EEF) for Polymer Hire (Fall 2010, Spring 2011)
    - Provided Departmental tour for President Armstrong (8 MAR 2011)
    - Provided Departmental tour during WOW (15 SEP 2010; 15 SEP 2009; 17 SEP 2008)
    - Organized Departmental tour for Cypress College (26 FEB 2015, 21 FEB 2013)
    - Organized Science and Math night Demonstrations at Virginia Peterson Elementary (7 FEB 2013)
    - Participated in Tehachapi School Demonstration (12 MAY 2011)
    - Participated in the Campfire Kids Demonstration (5 APR 2008)
    - Participated in the Partner School Demonstration (22 FEB 2008)
    - Department Seminar Coordinator (2014-2018)
    - Organized and hosted industrial contact for Polymers and Coatings program : Steve Diamanti - CooperVision (30 OCT 2013)
    - Organized and hosted seminar speaker : Mallory McMahon : Lubrizol (16 OCT 2015)
    - Organized and hosted seminar speaker : Prof. Derek Patton : University of Southern Mississippi (9 OCT 2015)
    - Organized and hosted seminar speaker : Philip Dirlam : University of Arizona (16 JUL 2015)
    - Organized and hosted seminar speaker : Prof. Abraham Joy : University of Akron (9 JUL 2015)
    - Organized and hosted seminar speaker : Prof. Jon Pokorowski : Case Western University (2 JUL 2015)
    - Organized and hosted seminar speaker : Prof. Dan Savin - Univ. of Southern Mississippi (23 OCT 2014)
    - Organized and hosted seminar speaker : Prof. Brent Sumerlin - University of Florida (5 JUN 2014)
    - Organized and hosted seminar speaker : John Swanson - U. Akron (17 APR 2014)
    - Organized and hosted seminar speaker : Kyle Bentz / Greg Strange - USM (12 NOV 2013)
    - Organized and hosted seminar speaker : Prof. Todd Emrick - UMass (18 APR 2013)
    - Organized and hosted seminar speaker : Dr. Andre Striegel - NIST (12 APR 2012)
    - Gave Departmental Seminar (15 JAN 2021)
    - Gave Departmental Seminar (17 JAN 2008)

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**Service continued…**

*College*

* + - Panelist - CENG Scholarship Academy (3 AUG 2020)
    - Invited Speaker - CENG Scholarship Academy (3 AUG 2020)
    - Chair/Member of DPRC – School of Education (2020-2021, 1 chair)
    - Chair/Member of DPRC – School of Education (2019-2020, 1 chair, 2 member)
    - Chair/Member of DPRC – School of Education (2018-2019, 3 chair)
    - Chair/Member of DPRC – School of Education (2017-2018, 1 chair)
    - Member of Academic Senate (SEP 2015 - AUG 2017)
    - Faculty Advisor for Alpha Chi Sigma (2009 - Current)
    - Member of College Advancement Planning (Spring 2011)
    - Advised during the Summer SOAR program (4, 10, 16, 17 AUG 2010; 30 JUL 2009; 24 JUL 2008)
    - Joined Alpha Chi Sigma (AXE) (Spring 2008)
    - Moderator for Undergraduate Research Opportunity Panel (1 NOV 2010)
    - Member of the Graduate School Discussion Panel (19 MAY 2008)

*University*

* + - *Received* ***University Award*** *for Distinguished Teaching : 2021-2022*
    - *Received* ***University Award*** *for Distinguished Scholarship : 2014-2015*
    - *Received* ***University Award*** *for Outstanding Undergraduate Advisor : 2010*
    - Member of CENG Dean search committee (2017-2018)
    - Member of Academic Senate (2015-2017)
    - Member of Focus Group with President Armstrong (17 MAY 2011)
    - Member of University search committee for Assistant Vice Provost of University Advising (Winter 2011)
    - Guest speaker : Five Cities Men’s Club (1 APR 2012)
    - Guest lecturer : ENGL134-49 - Topic : Technical writing skills (21 OCT 2010)
    - Participated in NSF Focus group for Women in Science (4 DEC 2008)

*National*

* + - Organized a research symposium at National American Chemical Society Conference (Spring 2022)
    - Organized a research symposium at National American Chemical Society Conference (Fall 2020)
    - Organized a research symposium at National American Chemical Society Conference (Fall 2010)
    - Co-Chair of MACRO (APR 2016 - Current)
    - Received Ronald T. Pflaum Outstanding Chapter Advisor Award, Alpha Chi Sigma (2016)
    - Active reviewer for funding agencies
    - National Science Foundation (NSF)
    - The Army Research Laboratory (ARL)
    - The Army Research Office (ARO)
    - Active reviewer for peer-reviewed publications
    - *Macromolecules*
    - *Polymer Chemistry*
    - *Langmuir*
    - *Journal of Material Science*
    - *Journal of Polymer Science*
    - *Chemical Communications*
    - *Soft Matter*

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**Awards**

* + - ***Ronald T. Pflaum Award*** *from Alpha Chi Sigma for Outstanding Chapter Advisor : 2014 - 2016*
    - ***California Polytechnic State University Award*** *for Distinguished Teaching : 2022-2022*
    - ***California Polytechnic State University Award*** *for Distinguished Scholarship : 2014-2015*
    - ***California Polytechnic State University Award*** *for Outstanding Undergraduate Advisor : 2010*
    - *National Research Council (NRC) Postdoctoral Fellowship (2005-2007)*
    - *Gordon Research Council Post-Doctoral Award 2007)*
    - TYCO Electronic Foundation Fellowship (3/05 - 6/05, 9/04 - 12/04)
    - GRC Graduate Student Award (1/05)
    - Silver Graduate Student Award from MRS (4/04)
    - NEAT-IGERT Fellowship (7/01 - 9/04)
    - Borge Scholarship (9/01 - 9/03)
    - Outstanding Teaching Assistant Award (6/03)
    - NSF Fellowship: Honorable Mention (4/03)
    - Fred and Mary Jane Corson/Dow Scholarship (11/02)
    - Carnegie Mellon Outstanding Undergraduate Chemist (5/01)
    - Howard Hughes Medical Institute Fellowship (5/99 - 5/01)
    - SURG (Small Undergraduate Research Grant) (5/99 - 9/99)
    - Honorable Mention Chemistry Olympics (3/96)