Curriculum Vitae – Yang Qin

Department of Chemical & Bimolecular Engineering *e-mail: yang.qin@uconn.edu*
Institute of Materials Science *Phone: 806-486-9080*

Education Background & Employment History

08/2020-	Associate Professor, Department of Chemical & Biomolecular Engineering, Institute of Materials Science, University of Connecticut
06/2017-08/2020	Associate Professor, Department of Chemistry & Chemical Biology, University of New Mexico
08/2010-05/2017	Assistant Professor, Department of Chemistry & Chemical Biology, University of New Mexico
08/2009-08/2010	Center for Functional Nanomaterials, Brookhaven National Laboratory, NY. Research Associate. Advisor: Prof. Robert B. Grubbs.
10/2006-08/2009	Department of Chemistry, University of Minnesota, Minneapolis, MN. Postdoctoral research fellow. Advisor: Prof. Marc A. Hillmyer.
08/2001-10/2006	Department of Chemistry, Rutgers University-Newark, Newark, NJ. Degree achieved: Ph.D. in Chemistry. Advisor: Prof. Frieder Jäkle.
07/2000-06/2001	Department of chemistry, Beijing University, P. R. China. Research assistant. Advisor: Prof. Xinru Jia.
09/1996-07/2000	Department of chemistry, Peking University, P. R. China. Degree achieved: B.Sc. in Chemistry. Advisor: Prof. Xinru Jia.

Funding & Awards

Total external funding amount: ~ $2.2 M.

Current:

1. "Polymeric Carbyne Mimics and Main-Group Element-Containing Conjugated Polymers Derived from Trans-Enediyne Monomers." National Science Foundation, CHE-MSN 1904659. – PI: $466,510 (July 1, 2019 – June 30, 2022)
2. "On-Demand Cancer Therapy and Antimicrobials Triggered by Light." National Institutes of Health (NIH) grant P20GM103451: New Mexico IDeA Network of Biomedical Research Excellence (INBRE). – PI: $559,942 (April 1, 2019 – Mar. 31, 2024).
3. "A Platform-Independent X-ray Diffraction Diagnostic for Phase Transition Kinetics in Traditional and Synthetic Microstructure Materials." Sandia National Laboratory Academic Alliance Partnership. – UNM PI: $300,000 (Oct. 1, 2018 – Sept. 30, 2021).
4. "MRI: Acquisition of High Resolution Mass Spectrometer for Research in Materials and Biological Chemistry." NSF – co-PI: $225,400 (Sept. 01, 2019 – Aug. 31, 2022).
5. "USDA HSI Collaboration: Integrating Food Science/Engineering and Education Network (IFSEEN). NIFA 2015-38422-24059" – co-PI: $282,400 to YQ (Sept. 1 2015–Aug. 31 2019, No-Cost Extension to Aug. 31, 2020.)
6. "NSF CAREER Award: Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites." DMR 1453083 – PI: $525,000 (May 01, 2015 – April 30, 2020, No-Cost Extension to April 30, 2021).

Completed:

7. "UNM OVPR Equipment Fund 2014" – PI: $90,000 (April 22nd, 2014–June 30th, 2014).
8. "Energize New Mexico – NSF EPSCoR" – Participant: $100,000 to YQ (2013-2018).

9. "UNM RAC award 11-L-04" – PI: $8,000 (2010-2011).
10. "Dean's Award for Outstanding Doctoral Dissertation" – the Graduate School, Rutgers – Newark, May 18th, 2007.
11. "Outstanding Poster Presentation at BORAM X" – Boron in the Americas X, San Juan, Puerto Rico, August 2nd-6th, 2006.
12. "Graduate Student Excellence Award" – Graduate Student Government Association, Rutgers University, May 19th, 2006.
13. "Excellence in Graduate Polymer Science Award" – Division of Polymer Chemistry, 231st ACS National Meeting, Atlanta, GA, March 26th-30th, 2006.

Teaching Experiences

2021 Spring: CHEG 2111 – Engineering Thermodynamics I
2020 Spring: CHEM 432L – Advanced Synthetic Lab
2019 Fall: (1) CHEM 302 – Organic Chemistry II
(2) CHEM 545/NSME 518: Polymer Chemistry and Synthesis of Nanostructures
2019 Spring: (1) CHEM 302 – Organic Chemistry II
(2) CHEM 432L – Advanced Synthetic Lab
2018 Fall: CHEM 545/NSME 518: Polymer Chemistry and Synthesis of Nanostructures
2018 Spring: CHEM 432L – Advanced Synthetic Lab
2017 Fall: CHEM 545/NSME 518: Polymer Chemistry and Synthesis of Nanostructures
2017 Spring: CHEM 432L – Advanced Synthetic Lab
2016 Fall: CHEM 545/NSME 518: Polymer Chemistry and Synthesis of Nanostructures
2016 Spring: Research Semester
2015 Fall: CHEM 545/NSME 518: Polymer Chemistry and Synthesis of Nanostructures
2015 Spring: CHEM 432L – Advanced Synthetic Lab
2014 Fall: CHEM 545 – Polymer Chemistry
2014 Spring: CHEM 432L – Advanced Synthetic Lab
2013 Fall: CHEM 545 – Polymer Chemistry
2013 Spring: CHEM 432L – Advanced Synthetic Lab
2012 Fall: CHEM 545– Polymer Chemistry
2012 Spring: CHEM 301 – Organic Chemistry I
2011 Fall: CHEM 545 – Polymer Chemistry
2011 Spring: CHEM 301 – Organic Chemistry I
2010 Fall: CHEM 302 – Organic Chemistry II

Notable Services

- College of Arts & Sciences P&T Committee, Dec. 2019 – present.
- Associate Chair for Graduate Studies, Department of Chemistry & Chemical Biology, UNM, Aug. 2018 – March 2020.
- Chair, American Chemical Society Central New Mexico Local Section (2019)
- Chair, Faculty Search Committee–Open Rank-Guido Daub Endowed Professorship (2018)
- Member, Research Allocations Committee, UNM, Dec. 2016 – Dec 2018.
- Member, Graduate Studies Committee, Aug. 2016 – July 2018; Jan. 2011 – Sept. 2012.
- Member, CCB Faculty Award Committee, Aug. 2015 – Aug. 2016.
- Member, CCB Chair Advisory Committee, May 2014 – May 2016.
- Member, Faculty Search Committee, Electronic and Energy Materials, Open Rank (2014).
- Departmental seminar coordinator, 2011 – 2014.
- Member, Department Renovation Committee, 2011 – 2012.

- Member, Faculty Search Committee, Assistant Professor (2011).

Publications

(** denotes corresponding author; [#] denotes undergraduate students; [$] denotes high school students)*

59. "Pressure Induced Assembly and Coalescence of Lead Chalcogenide Nanocrystals." Meng, L.; Duwal, S.; Lane, J. M. D.; Ao, T.; Stoltzfus, B.; Knudson, M.; Park, C.; Chow, P.; Xiao, Y.; Fan, H.*; and Qin, Y.* *J. Am. Chem. Soc.* **2021**, *143,* 2688-2693.

58. "Charge-Separated and Lewis Paired Metal-Organic Framework for Anion Exchange and CO_2 Chemical Fixation." Thapa, S.; Meng, L.; Hettiarachchi, E.; Bader, Y. K.; Dickie, D. A.; Rubasinghege, G.; Ivanov, S. A.; Vereeland, E. C. and Qin, Y.* *Chem. Eur. J.* **2020**, *26*, 13788-13791.

57. "Hybrid Conjugated Polymer/Magnetic Nanoparticle Composite Nanofibers through Cooperative Non-Covalent Interactions." Meng, L.; Watson II, B. W. and Qin, Y.* *Nanoscale Adv.* **2020**, *2*, 2462-2470.

56. "Shape Dependence of Pressure-Induced Phase Transition in CdS Semiconductor Nanocrystals." Meng, L.; Lane, J. M. D.; Baca, L.; Tafoya, J.; Ao, T.; Stoltzfus, B.; Knudson, M.; Morgan, D.; Austin, K.; Park, C.; Chow, P.; Xiao, Y.; Li, R.; Qin, Y.;* and Fan, H.* *J. Am. Chem. Soc.* **2020**, *142*, 6505-6510.

55. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites for Organic Photovoltaics." Meng, L.; Fan, H.; Lane, J. M. D. and Qin. Y. * *MRS Adv.* **2020**, *5*, 2055-2065.

54. "X-Ray Diffraction and Electron Microscopy Studies of the Size Effects on Pressure-Induced Phase Transitions in CdS Nanocrystals." Meng, L.; Fan, H.; Lane, J. M. D.; Tafoya, J.; Baca, L.; Ao, T.; Stoltzfus, B.; Knudson, M.; Morgan, D.; Austin, K. and Qin, Y.* *MRS Adv.* **2020**, *5,* 2447-2455.

53. "Charge-Separated Metal-Organic Frameworks Derived from Boron Centered Tetrapods." Thapa, S.; Dickie, D. A. and Qin, Y.* *Cryst. Growth Des.* **2020***, 20,* 1598-1608.

52. "Triplet Excited-State Energetics and Dynamics in Molecular "Roller Wheels"." Livshits, M.; He, W.; Qin, Y.* and Rack, J. J.* *J. Phys. Chem. C* **2019**, *123*, 16556-16554.

51. "Large Excited-State Conformational Displacements Expedite Triplet Formation in a Small Conjugated Oligomer." Datko, B. D.; Livshits, M.; Zhang, Z.; Qin, Y.; Jakubikova, E.; Rack, J. J. and Grey, J. K.* *J. Phys. Chem. Lett.* **2019**, *10*, 1259-1263.

50. "Cross-conjugated poly(selenylene vinylene)s." Zhen Z. and Qin, Y.* *Polym. Chem.* **2019**, *10*, 1018-1025.

49. "Impact of side-chain extension on physical and electronic properties of cross-conjugated Poly(thienylene vinylene)s (PTVs)." Zhang, Z.; Zong, X.; Sun, Z.* and Qin, Y.* *Polymer* **2019**, *166*, 115-122.

48. "A Charge-Separated Diamondoid Metal-Organic Framework." Thapa, S.; Hettiarachchi, E.; Dickie, D. A.; Rubasinghege, G.* and Qin, Y.* *Chem. Commun.* **2018**, *54,* 12654-12657.

47. "Generating Photonastic Work from Irradiated Dyes in Electrospun Nanofibrous Polymer Mats." Livshits, M. Y.; Razgoniaev, A. O.; Arbulu, R. C.; Shin, J.; McCullough, B. J.; Qin,

Y.; Ostrowski, A. D.* and Rack, J. J.* *ACS Appl. Mater. Interfaces* **2018**, *10,* 37470–37477.

46. "Unravelling the Enigma of Ultrafast Excited State Relaxation in Non-Emissive Aggregating Conjugated Polymers." Datko, B. D.; Livshits, M. Y.; Zhang, Z.; Portlock, D.; Qin, Y.; Rack, J. J.* and Grey, J. K.* *Phys. Chem. Chem. Phys.* **2018**, *20*, 22159-22167.

45. "Metal-Organic Framework (MOF) Nanorods, Nanotubes, and Nanowires." Arbulu, R.; Jiang, Y.-B.; Peterson, E. and Qin Y.* *Angew. Chem. Int. Ed.* **2018**, *130*, 5915-5919.

44. "Unconventional Conjugated Polymers Derived from a Common Set of trans-Enediyne Monomers." Qin Y.* *SynLett* **2018**, *29*, 999-1007.

43. "'Roller-Wheel' Pt-Containing Small Molecules and the Impact of 'Rollers' on Material Crystallinity, Electronic Properties and Solar Cell Performance." He, W.; Livshits, M. Y.; Dickie, D.; Zhang, Z.; Mejiaortega, L. E.[#]; Rack, J. J.*; Wu, Q.* and Qin Y.* *J. Am. Chem. Soc.* **2017**, *139*, 14109-14119.

42. "Polymer-assisted deposition of SrTiO3 film as cathode buffer layer in inverted polymer solar cells." Wang, H.; Patterson, B.; Yang, J.; Huang, D.; Qin Y. and Luo, H.* *Appl. Mater. Today* **2017**, *9*, 402-406.

41. "Boron 'Doped' Polyacetylenes." Hu, K.; Zhang, Z.; Burke, J.[#] and Qin Y.* *J. Am. Chem. Soc.* **2017**, *139*, 11004-11007.

40. "Core/Shell Conjugated Polymer/Quantum Dot Composite Nanofibers through Orthogonal Non-Covalent Interactions." Watson II, B. W.; Meng, L.; Fetrow, C.[#] and Qin Y.* *Polymers* **2016**, *8*, 408.

39. "A Molecular Tetrapod for Organic Photovoltaics." Yang, J.; Zhang, Z. and Qin Y.* *ACS Appl. Mater. Interfaces* **2016**, *8*, 22392-22401.

38. "A 'Roller-Wheel' Pt-Containing Small Molecule that Outperforms Its Polymer Analogs in Organic Solar Cells." He, W.; Livshits, M. Y.; Dickie, D.; Yang, J.; Quinnett, R.[#]; Rack, J. J.; Wu, Q. and Qin Y.* *Chem. Sci.* **2016**, *7,* 5798-5804.

37. "Structurally Diverse Poly(thienylene vinylene)s (PTVs) with Systematically Tunable Properties through Acyclic Diene Metathesis (ADMET) and Postpolymerization Modification." Zhang, Z. and Qin Y.* *Macromolecules* **2016**, *49*, 3318-3327.

36. "Polytriacetylenes (PTAs) Bearing Directly Attached Functional Groups with Tunable Physical and Electronic Properties" Hu, K. and Qin, Y.* *J. Polym. Sci. Part A Polym. Chem.* **2016**, *54*, 1391-1395.

35. "Conjugated Polymer/Fullerene Nanostructures through Cooperative Non-Covalent Interactions for Organic Solar Cells" Li, F.; Dawson, N.; Jiang, Y.-B.; Malloy, K. and Qin Y.* *Polymer* **2015**, *76*, 220-229.

34. "Synthesis and Characterization of Poly(selenylene vinylene) and Poly(selenylene vinylene)-*co*-Poly(thienylene vinylene) through Acyclic Diene Metathesis (ADMET) Polymerization." Zhang, Z. and Qin Y.* *ACS Macro Lett.* **2015**, *4*, 679-683.

33. "Polythienylene-vinylene Structure-Function Correlations Revealed from Resonance Raman Spectroscopy and Photocurrent Imaging." Gao J.; Thomas A. K.; Yang J.; Aldaz C.; Yang G.; Qin Y. and Grey J. K.* *J. Phys. Chem. C* **2015**, *119*, 8980-8990.

32. "A Molecular Breakwater-like Tetrapod for Organic Solar Cells." Yang, J.; He, W.; Denman, K.[$]; Jiang, Y.-B.; Qin, Y.* *J. Mater. Chem. A* **2015**, *3*, 2108-2119.

31. "Nano-Structuring Polymer/Fullerene Composites through the Interplay of Conjugated Polymer Crystallization, Block Copolymer Self-Assembly and Complementary Hydrogen Bonding Interactions." Li, F.; Yager, K. G.; Dawson, N. M.; Jiang, Y.-B.; Malloy, K. J.; Qin, Y.* *Polym. Chem*. **2015**, *6*, 721-731.

30. "A three-dimensional tetrahedral-shaped conjugated small molecule for organic solar cells." Qin, Y.; Yang, J. *Journal of Shanghai Normal University (Natural Sciences)*. **2014**, *43*, 159-167.

29. "Platinum-Segmented Polydiacetylenes." Hu, K.; Pandres, E.[#]; Qin, Y.* *J. Polym. Sci. A Polym. Chem*. **2014**, *52*, 2662-2668.

28. "Stable and Controllable Polymer/Fullerene Composite Nanofibers through Cooperative Noncovalent Interactions for Organic Photovoltaics." Li, F.; Yager, K. G.; Dawson, N. M.; Jiang, Y.-B.; Malloy, K. J.; Qin, Y.* *Chem. Mater.* **2014**, *26*, 3747-3756.

27. "Synthesis and Photovoltaic Properties of a Low Bandgap BODIPY-Pt Conjugated Polymer." He, W.; Jiang, Y.; Qin, Y.* *Polym. Chem.* **2014**, *5*, 1298-1304.

26. "*Cis*/*Cis*-2,5-Dipropenylthiophene Monomers for High Molecular Weight PTVs through ADMET Polymerization." Yang, G.; Hu, K.; Qin, Y.* *J. Polym. Sci. A Polym. Chem*. **2014**, *52*, 591-595.

25. "Complementary Hydrogen Bonding and Block Copolymer Self-Assembly in Cooperation toward Stable Solar Cells with Tunable Morphologies." Li, F.; Yager, K. G.; Dawson, N. M.; Yang, J.; Malloy, K. J.; Qin, Y.* *Macromolecules* **2013**, *46*, 9021-9031.

24. "Solution processable polydiacetylenes (PDAs) through acyclic enediyne metathesis polymerization." Hu, K.; Yang, H.; Zhang, W.*; Qin, Y.* *Chem. Sci.* **2013**, *4*, 3649-3653.

23. "Synthesis and Characterization of Polythiophene Block Copolymer and Fullerene Derivative Capable of "Three-Point" Complementary Hydrogen Bonding Interactions and Their Application in Bulk-Heterojunction Solar Cells." Li, F.; Yang, J.; Qin, Y.* *J. Polym. Sci. A Polym. Chem*. **2013**, *51*, 3339-3350.

22. "Photo-Cross-Linkable Azide-Functionalized Polythiophene for Thermally Stable Bulk Heterojunction Solar Cells." Nam, C.-Y.; Qin, Y.; Park, Y. S.; Hlaing, H.; Lu, X.; Ocko, B. M.; Black, C. T.; Grubbs, R. B.* *Macromolecules*, **2012**, *45*, 2338-2347.

21. "Self-Assembly of Borane End-Functionalized Polystyrene Through Tris(1-pyrazolyl)borate (Tp) Iron(II) Linkages." Qin, Y.; Shipman, P. O.; Jäkle, F.* *Macromol. Rapid Commun.* **2012**, *33,* 562-567.

20. "High Open-Circuit Voltage Photovoltaic Cells with a Low Bandgap Copolymer of Isothianaphthene, Thiophene and Benzothiadiazole Units." Kim, J. Y.; Qin, Y.; Stevens, D. M.; Kalihari, V.; Hillmyer, M. A.*; Frisbie, C. D.* *J. Phys. Chem*. *C* **2009**, *113*, 21928-21936.

19. "Synthesis and pH-dependent Micellization of the Amphiphilic Block Copolymer Poly(styreneboronic acid)-block- Polystyrene in Water." Cui, C.; Bonder, E. M.; Qin, Y.; Jäkle, F. *J.* * *Polym. Sci. A: Polym. Chem*. **2010**, *48*, 2438-2445.

18. "Poly(3-hexyl-2,5-thienylene vinylene) by ADMET Polymerization of a Di-propenyl Monomer" Qin, Y.; Hillmyer, M. A.* *Macromolecules* **2009**, *42*, 6429-6432.

17. "Low Band Gap Poly(thienylene vinylene)/Fullerene Bulk Heterojunction Photovoltaic Cells." Kim, J. Y.; Qin, Y.; Stevens, D. M.; Kalihari, V.; Hillmyer, M. A.*; Frisbie, C. D.* *J. Phys. Chem. C* **2009**, *113*, 10790-10797.

16. "Enhancement of the Morphology and Open Circuit Voltage in Bilayer Polymer/Fullerene Solar Cells." Stevens, D. M.; Qin, Y.; Hillmyer, M. A.*; Frisbie, C. D.* *J. Phys. Chem. C* **2009**, *113*, 11408-11415.

15. "Novel Distannylated Isothianaphthene as a Versatile Building Block for Low Band-Gap Polymers." Qin, Y.; Kim, J. Y.; Frisbie, C. D.*; Hillmyer, M. A.* *Macromolecules*, **2008**, *41*, 5563-5570.

14. "Tris(1-pyrazolyl)borate (Scorpionate) Functionalized Polymers as Scaffolds for Metallopolymers." Qin, Y.; Cui, C.; Jäkle, F.* *Macromolecules,* **2008**, *41*, 2972-2974.

13. "Synthesis of Organoboron Quinolate Polymers with Tunable Luminescence Properties." Qin, Y.; Kiburu, I.; Shah, S.; Jäkle, F.* *Macromolecules* **2007**, *40*, 1413-1420.

12. "Formation of Lewis Acid-Lewis Base Complexes with Well-Defined Organoboron Polymers." Qin, Y.; Jäkle, F.* *J. Inorg. Organomet. Polym. Mater.* **2007**, *17*, 149-157.

11. "Silylated Initiators for the Efficient Preparation of Borane End-Functionalized Polymers." Qin, Y.; Jäkle, F.* *Macromolecules* **2006**, *39*, 9041-9048.

10. "Luminescence Tuning of Organoboron Quinolates through Substituent Variation at the 5-Position of the Quinolate Moiety." Qin, Y.; Kiburu, I.; Shah, S.; Jäkle, F.* *Org. Lett.* **2006***, 8,* 5227-5230.

9. "Boron-Bridged Poly(ferrocenylene)s as Promising Materials for Nanoscale Molecular Wires." Heilmann, J.; Qin, Y.; Jäkle, F.*; Lerner, H.; Wagner, M.* *Inorg. Chim. Acta* **2006**, *359,* 4802-4806.

8. "A Synthetic Route to Borylene-Bridged Poly(ferrocenylene)s." Heilmann, J.; Scheibitz, M.; Qin, Y.; Sundararaman, A.; Jäkle, F.*; Kretz, T.; Bolte, M.; Lerner, H.; Holthausen, M.; and Wagner, M.* *Angew. Chem. Inter. Ed.* **2006***, 45,* 920-925.

7. "Preparation of Organoboron Block Copolymers via ATRP of Silicon and Boron Functionalized Monomers." Qin, Y.; Sukul, V.; Pagakos, D.; Cui, C; Jäkle, F.* *Macromolecules* **2005***, 38,* 8987-8990.

6. "A New Route to Organoboron Polymers via Highly Selective Polymer Modification Reactions." Qin, Y.; Cheng, G.; Achara, O.; Parab, K.; Jäkle, F.* *Macromolecules* **2004***, 37,* 7123-7131.

5. "Luminescent Organoboron Quinolate Polymers." Qin, Y.; Pagba, C.; Piotrowiak, P.; Jäkle, F.* *J. Am. Chem. Soc.* **2004**, *126,* 7015-7018.

4. "Lewis Acidic Organoboron Polymers." Qin, Y.; Cheng, G.; Parab, K.; Sundararaman, A.; Jäkle, F.* *Macromol. Symp.* **2003**, *196,* 337-345.

3. "Well-Defined Boron-Containing Polymeric Lewis Acids." Qin, Y.; Cheng, G.; Sundararaman, A.; Jäkle, F.* *J. Am. Chem. Soc.* **2002,** *124,* 12672-12673.

2. "Fabrication of Covalently Attached Ultrathin Films Based on Dendrimers via H-Bonding Attraction and Subsequent UV Irradiation." Zhong, H.; Wang, J.; Jia, X.*; Li, Y.; Qin, Y.; Chen, J.; Zhao, X.; Cao, W.; Li, M.; Wei, Y.* *Macromol. Rapid Commun.* **2001***, 22,* 583-586.

1. "Conjugation of Poly(amidoamine) Dendrimers (PAMAM) and Cytochrome C." Chen, L.; Zhong, H.; Jia, X.*; Qin, Y.; Liao, Q.; Li, M.; Wei, Y.* *Acta Polymerica Sinica* **2001***, 4,* 553-556.

Book/Chapter

1. "Selenium and Tellurium Containing Conjugated Polymers." Zhang, Z.; He, W. and Qin, Y. in *Main Group Strategies towards Functional Hybrid Materials*, Baumgartner, T. and Jäkle, F. Eds. John Wiley & Sons, 2017, p451.

Patents

1. "Azide Functionalized Poly(3-hexylthiophene) and Method of Forming Same" Qin, Y.; Grubbs, R. B.; Park, Y. S. US 8889342; 2014.
2. "Azide Functionalized Poly(3-hexylthiophene) and Method of Forming Same" Qin, Y.; Grubbs, R. B.; Park, Y. S. US 8679730; 2014.

Invited Presentations

37. "Cross-conjugated poly(thienylene vinylene)s (PTVs) and poly(selenylene vinylene)s (PSVs)." *ACS National Meeting Spring 2021; Virtual; April 13-April 15.*
36. "Design, Preparation, and Solar Cell Application of Organic/Inorganic Hybrid Materials." *Department of Chemistry, University of Connecticut, June 14th, 2019*.
35. "Hybrid Materials and Nanostructures Based on Conjugated Molecules for Organic Solar Cell Applications." *South-Central University for Nationalities, Wuhan, China, May 25th, 2019*.
34. "Hybrid Materials and Nanostructures Based on Conjugated Molecules for Organic Solar Cell Applications." *Henan University, Kaifeng, China, May 23rd, 2019*.
33. "Bottom-up approaches for precisely nanostructuring hybrid organic/inorganic multi-component composites." *American Chemical Society National Meeting, March 31 to April 4, 2019, Orlando USA*.
32. "Design, Preparation and Application of Organic/Inorganic Hybrid Materials." *Department of Chemistry, Carnegie Mellon University, Oct. 4th, 2018*.
31. "Pt-Containing Conjugated 'Roller-Wheel'-Shaped Materials for Organic Photovoltaic (OPV) Applications." *10th US-Japan Hybrid Materials Workshop, June 17-21, 2018*.
30. "*Design, Preparation and Application of Organic/Inorganic Hybrid Materials*." *Department of Chemistry, University of Chicago, Nov. 2nd, 2017*.
29. "Design, Preparation and Application of Organic/Inorganic Hybrid Materials." *Department of Chemistry, University of North Carolina at Chapel Hill, March 23rd, 2017*.
28. "Conjugated Polymers and Hybrid Nanostructures for Organic Photovoltaics." *Department of Chemistry, Colorado State University, Nov. 4th, 2016*.
27. "Conjugated Polymers and Hybrid Nanostructures for Organic Photovoltaics." *Department of Chemistry and Biochemistry, University of Colorado Boulder, Nov. 3rd, 2016*.
26. "Bottom-Up Approaches for Nanostructuring Hybrid Multi-Component Composites for Organic Solar Cells." *Department of Polymer Science and Engineering, University of Massachusetts at Amherst, Apr. 29th, 2016*.
25. "Bottom-Up Approaches for Nanostructuring Hybrid Multi-Component Composites for Organic Solar Cells." *Department of Chemistry, Tufts University, Apr. 28th, 2016*.

24. "Bottom-Up Approaches for Nanostructuring Hybrid Multi-Component Composites for Organic Solar Cells." *Chemistry Department, University of Massachusetts at Boston, Apr. 27th, 2016*.
23. "Bottom-Up Approaches for Nanostructuring Hybrid Multi-Component Composites for Organic Solar Cells." *Department of Chemistry, University of South Dakota, Apr. 11th, 2016*.
22. "Bottom-Up Approaches for Nanostructuring Hybrid Multi-Component Composites for Organic Solar Cells." *Department of Chemistry & Biochemistry, New Mexico State University, Mar. 24th, 2016*.
21. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Multi-Component Composites for Organic Photovoltaics." *Center for Functional Nanomaterials, Brookhaven National Laboratory, Feb. 26th, 2016*.
20. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Multi-Component Composites for Organic Photovoltaics." *Department of Chemistry, Stony Brook University, Feb. 25th, 2016*.
19. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Multi-Component Composites for Organic Photovoltaics." *Department of Chemistry, Rutgers University at Newark, Feb. 24th, 2016*.
18. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Multi-Component Composites for Organic Photovoltaics." *Department of Chemistry, College of Staten Island, Feb. 23rd, 2016*.
17. "Platinum-containing conjugated polymers with novel structures and properties." *Pacifichem, Honolulu, Hawaii, Dec. 15-20, 2015.*
16. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Multi-Component Composites for Organic Photovoltaics." *Department of Chemistry & Biochemistry, University of Notre Dame*, Nov. 11th, 2015.
15. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites for Organic Photovoltaics." *Department of Chemistry, University of Missouri – Kansas City*, Oct. 8th, 2015.
14. Discussion Leader, "Gordon Research Conference: Polymer. " South Hadley, MA, June 14th – June 19th.
13. "Synthesis and Nano-Structuring Conjugated Polymers for Optoelectronic Devices." *Department of Chemistry, Chongqing University of Science and Technology*, *China,* June 6th, 2015.
12. "Synthesis and Nano-Structuring Conjugated Polymers for Optoelectronic Devices." *School of Materials Science and Engineering, South China University of Science and Technology*, *China,* May 11th, 2015.
11. "Core-Shell Polymer-Fullerene Composite Nanofibers for Organic Photovoltaics." *Department of Chemistry, Shanghai Normal University*, *China,* May 9th, 2015.
10. "Core-Shell Polymer-Fullerene Composite Nanofibers for Organic Photovoltaics." *Institute of Fine Chemicals, East China University of Science and Technology*, *China,* May 8th, 2015.
9. "Core-Shell Polymer-Fullerene Composite Nanofibers for Organic Photovoltaics." *Department of Chemistry, Fudan University*, *China,* May 7th, 2015.
8. "Nanostructuring Polymer Solar Cells (PSCs) through Cooperative Non-Covalent Interactions." *Department of Chemistry, New Mexico Tech*, Sept. 2nd, 2014.
7. "Improving Polymer Solar Cell (PSC) Performance through Cooperative Non-Covalent Interactions." *Optical Science & Engineering Series, UNM*, Feb. 5th, 2014.
6. "Conjugated Polymers for Organic Photovoltaics." *Fort Lewis College*, Oct. 14th, 2011.

5. "Supramolecular Block Copolymers for Organic Photovoltaics." *The 7th Sino-US Chemistry Professors Conference*, Guiyang, China, June 28th-30th, 2011.
4. "Nano–Structured Organic Photovoltaics." Department of Chemistry, *New Mexico Institute of Mining and Technology* (*New Mexico Tech*), Feb. 11th, 2011.
3. "Solution-Processable Organic Electronics." Integrating Nanotechnology with Cell Biology and Neuroscience (INCBN-IGERT), Center for High Technology Materials, *University of New Mexico*, Nov. 1st, 2010.
2. "Functional Polymers for Organic Electronics." Department of Physics & Astronomy, *University of New Mexico*, Oct. 11th, 2010.
1. "Functional Polymers for Organic Electronics." Department of Chemical & Nuclear Engineering, *University of New Mexico*, Sept. 21st, 2010.

Contributed Presentations

Oral Presentations

20. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites for Organic Photovoltaics." *MRS Spring Meeting, Phoenix, AZ, US, April 17-April 21,* 2017.
19. "Conjugated Polymer–CdSe Quantum Dot Core/Shell Composite Nanofibers for Organic Solar Cells." *MRS Spring Meeting, Phoenix, AZ, US, March 28-April 1,* 2016.
18. "Novel Functional Conjugated Polymers Derived from a Common Set of Enediyne Building Blocks." *MRS Spring Meeting, Phoenix, AZ, US, March 28-April 1,* 2016.
17. "Conjugated Polymer-CdSe Quantum Dot Core/Shell Composite Nanofibers for Organic Solar Cells." *251st ACS National Meeting, San Diego, CA, US, March 13-17,* 2016.
16. "Novel Functional Conjugated Polymers Derived from a Common Set of Enediyne Building Blocks." *251st ACS National Meeting, San Diego, CA, US, March 13-17,* 2016.
15. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites for Organic Photovoltaics." *251st ACS National Meeting, San Diego, CA, US, March 13-17,* 2016.
14. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites." *MRS Spring Meeting, San Francisco, CA, US, April 6-10, 2015.*
13. "Solution Processable Polydiacetylenes (PDAs) through Acyclic Enediyne Metathesis Polymerization." *249th ACS National Meeting, Denver, CO, US, March 22-26,* 2015.
12. "Supramolecular Polymer/Fullerene Composite Nanofibers for Organic Photovoltaics." *249th ACS National Meeting, Denver, CO, US, March 22-26,* 2015.
11. "Solution Processable Polydiacetylenes (PDAs) through Acyclic Enediyne Metathesis Polymerization." *247th ACS National Meeting, Dallas, TX, US, March 16-20,* 2014.
10. "Self-Assembly of Polythiophene Block-Copolymer and Fullerene Derivative via Complementary Hydrogen Bonding." *247th ACS National Meeting, Dallas, TX, US, March 16-20,* 2014.
9. "Self-Assembly of Polythiophene Block-Copolymer and Fullerene Derivative via Complementary Hydrogen Bonding." *245th ACS National Meeting, New Orleans, LA, US, April 7-11,* 2013.
8. "Solution Processable Polyacetylenes through ADMET Polymerization." *245th ACS National Meeting, New Orleans, LA, US, April 7-11,* 2013.
7. "Well-Defined and Functional Polyacetylenes through ADMET Polymerization." *244th ACS National Meeting, Philadelphia, PA, US, Aug. 19-23,* 2012.

6. "Novel distannylated isothianaphthene as a versatile building block for low band-gap polymers." *Industrial Partnership for Research in Interfacial and Materials Engineering Annual Meeting, May 27th-29st,* 2008.
5. "Synthesis and characterization of organoboron quinolate polymers with tunable luminescence properties." *Boron in the Americas X, San Juan, Puerto Rico, Aug 2nd-7th,* 2006.
4. "Use of silylated initiators for the efficient preparation of borane end-functionalized polymers via ATRP." *38th Middle Atlantic Regional Meeting, Hershey, PA, June 4th-7th,* 2006.
3. "Synthesis and characterization of organoboron quinolate polymers with tunable luminescence properties." *6th National Graduate Research Polymer Conference, University of Massachusetts, Amherst, June 15th-17th,* 2005.
2. "Synthesis and characterization of organoboron quinolate polymers with tunable luminescence properties." *230th ACS National Meeting, Washington, DC, US, Aug. 28-Sep. 1,* 2005.
1. "Luminescent organoboron quinolate polymers", *37th Middle Atlantic Regional Meeting of the American Chemical Society, New Brunswick, NJ, May 22-25,* 2005.

Poster Presentations

17. "Design, Synthesis, and Characterization of Unconventional Conjugated Polymers and Small Molecules" *Polymers Gordon Research Conference, Mount Holyoke College, South Hadley, MA, June 9-14, 2019*.
16. "Nanostructuring Organic, Hybrid and Pt-Containing Conjugated Materials for Organic Photovoltaics" *Polymers Gordon Research Conference, Mount Holyoke College, South Hadley, MA, June 11-16, 2017*.
15. "Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites for Organic Photovoltaics." *MRS Spring Meeting, Phoenix, AZ, US, March 28-April 1,* 2016.
14. "Supramolecular Polymer/Fullerene Composite Nanofibers for Organic Photovoltaics." *MRS Spring Meeting, San Francisco, CA, US, April 6-10, 2015.*
13. "Synthesis and Photovoltaic Properties of a Low Bandgap BODIPY–Pt Conjugated Polymer." *247th ACS National Meeting, Dallas, TX, US, March 16-20,* 2014.
12. "Soluble and Functional Polydiacetylenes (PDAs) from Solution Polymerizations." *Gordon Research Conference: Polymers, South Hadley, MA, June 9th-14th, 2013.*
11. "Conjugated Rod-Rod Block Polythiophenes and Supramolecular Self-Assembly with Fullerene toward Ordered BHJ Morphologies." *244th ACS National Meeting, Philadelphia, PA, US, Aug. 19-23,* 2012.
10. "UV Crosslinkable Polythiophene for Nano-imprinting and Photolithography toward Ordered Bulk Heterojunction in Organic Photovoltaics." *Gordon Research Conference: Polymers, South Hadley, MA, July 25th-30th, 2010.*
9. "Low Bandgap Poly(3-hexyl-2,5-thienylene vinylene) by ADMET Polymerization of a Dipropenyl Monomer for Photovoltaic Devices." *Gordon Research Conference: Polymers, South Hadley, MA, June 21st-29th, 2009.*
8. "Novel distannylated isothianaphthene: a versatile building block for low bandgap conjugated polymers." *Organic Microelectronics and Optoelectronics Workshop IV, Materials Research Society, San Francisco, CA, July 7th-10th,* 2008.
7. "Synthesis of conjugated polymers and block copolymers possessing low band-gaps as potential components in bulk hetero-junction solar cells." *Industrial Partnership for Research in Interfacial and Materials Engineering Annual Meeting, May 29th-31st,* 2007.

6. "Well-defined organoboron homo-, block- and telechelic polymers." *Boron in the Americas X, San Juan, Puerto Rico, Aug 2nd-7th,* 2006.
5. "Well-defined organoboron homo- and block co-polymers." *231st ACS National Meeting, Atlant, GA, March 26th-30th,* 2006.
4. "Preparation of organoboron block copolymers via ATRP of silicon and boron functionalized monomers." *230th ACS National Meeting, Washington, DC, Aug. 28-Sept, 1,* 2005.
3. "Synthesis and characterization of novel luminescent organoboron quinolate polymers." *228th ACS National Meeting, Philadelphia, PA, Aug. 22-26,* 2004.
2. "New Well-Defined Triarylborane Polymers: Synthesis, Characterization and formation of Lewis Acid-Lewis Base Complexes." *226th ACS National Meeting, New York, September 7-11,* 2003.
1. "Synthesis and Properties of polymers containing highly Lewis acidic groups." *224th ACS National Meeting, Boston, MA, August 18-22,* 2002.

Students Advising

Current Students

Chao Guan (Postdoc Dec. 2019-)
YunJeong Kwon (Graduate Student 2016-)
Yiran Bo (Graduate Student 2020-)
Bingning Wang (Graduate Student 2020-)
Sebastian DiMauro (Graduate Student 2021-)

Former Students

- *PhD Advisees*:
  Yousef Bader (PhD May 2021)
  Lingyao Meng (Ph.D July 2020)
  Sheela Thapa (Ph.D Dec. 2019)
  Brad Watson (Ph.D May 2019)
  Zhen Zhang (Ph.D November 2018)
  Keda Hu (Ph.D April 2017)
  Wenhan He (Ph.D March 2017)
  Jiangzhong Yang (Ph.D December 2016)
  Fei Li (Ph.D May 2014)
- *MS Advisees*:
  Roberto Arbulu (M.S. July 2018)
  Michael Williams (M.S. May 2015)
  Guoshun Yang (M.S. May 2014)
  Jun Peng (M.S. May 2014)
  Fei Chang (M.S. May 2013)
- *Undergraduate Advisees*:

  Jackie Tafoya (Undergraduate Student 2018-2020)
  Luke Baca (Undergraduate Student 2019-2020)
  Jessica Lien (UNM, undergraduate student, May 2019 – August 2019)
  Clayton Tiemann (UNM, undergraduate student, Jan 2018 – May 2018)
  James Burke (UNM, undergraduate student, May 2016 – May 2017)

Luis Mejiaortega (UNM, USDA IFSEEN Scholar, Feb. 2016 – May 2017)
Kimberley Landry (UNM, USDA IFSEEN Scholar, Feb. 2016 – May 2017)
Gregory London (UNM, USDA IFSEEN Scholar, Feb. 2016 – May 2017)
Rachel Quinnett (REU, Kansas State University, June 2015 – July 2015)
Lynn Weikels, NM EPSCoR STEMAP student (July 2014)
Adrianna Cassandra Johnson, NM EPSCoR STEMAP student (July 2014)
Zachary Schaffer UNM REU student, Albany (June 2014–July 2014)
Paul Sandoval (Undergraduate Student, Sept. 2013–May 2014)
Elena Pandres, REU student, University of Massachusetts Amherst (June 2013–July 2013)
Drew Hyde, Tufts University (Undergraduate internship, May 2013–July 2013)
Robert Sparks (Undergraduate Student 2010-2012)
Alexander Starkey (Undergraduate Student, 01/2012-05/2012)
Robert Haver (STEM Student, Mount View College, 05/31/2011-08/05/2011)

- *High School Advisees*:
  Kimberly Denman, high school intern, Cottonwood Prep. (May 2014–July 2014)

Services

- Organizer of the "Frontiers in Conjugated Polymer Design & Synthesis" symposium in the ACS Spring 2021 National Meeting, virtual, April 13 – April 15, 2021.
- Served as an external judge for the "STEM EXPO" – Saint Pius X High School, Jan. 23rd, 2016, Jan. 31st, 2015, and Feb. 1st, 2014.
- Served as an external judge for the "3rd annual Science & Engineering Fair" – Albuquerque School of Excellence, Dec. 8th, 2012.
- Served as proposal reviewer for National Science Foundation.
- Served as user proposal reviewer for Center for Integrated Nanotechnologies (CINT).
- Served as proposal panel reviewer for Center for Functional Nanomaterials at Brookhaven National Laboratory (10/2013-).
- Served as reviewer for professional journals, including "Journal of the American Chemical Society", "Chemical Science", "Macromolecules", "Chemistry of Materials", "Advanced Energy Materials", "Journal of Physical Chemistry", "ACS Applied Materials & Interfaces", "Polymer Chemistry", "Polymer", "Physical Chemistry Chemical Physics", "Journal of Polymer Science, Part A: Polymer Chemistry", "Nanoscale", "Journal of Electroanalytical Chemistry", "Polymers", "Tetrahedron Letters", "RSC Advances", "Scientific Reports", "Topics in Current Chemistry" and "Chemistry Letters".
- Graduate Thesis/Qualification Committee:
  32. Tefera T. Tesema (PhD 2020; Chemistry; Advisor: Terefe Habteyes)
  31. Bijesh Kafle (PhD 2019; Chemistry; Advisor: Terefe Habteyes)
  30. Jacklyn Panell (Chemisrty; Advisor: Jeffrey Rack; RP 2019)
  29. Shekhar KC (PhD; 2019; Chemistry; Advisor: Ramesh Giri)
  28. Hamed Kookhaee (Chemistry; Advisor: Terefe Habteyes; RP 2018)
  27. Yongyi Wei (Ph.D; 2018; Chemistry; Advisor: Wei Wang)
  26. Prakash Basnet (Ph.D; 2018; Chemistry; Advisor: Ramesh Giri)
  25. Surendra Thapa (Ph.D; 2018; Chemistry; Advisor: Ramesh Giri)
  24. Emigdio Turner (Chemistry; advisor: Jeffrey Rack, RP 2018)
  23. Namrata Khanal (Chemistry; advisor: Ramesh Giri, RP 2018)
  22. Rajani Thapa (Chemistry; advisor: Jeffrey Rack, RP 2018)
  21. Noel Dawson (Ph.D; 2017; Physics; advisor: Kevin Malloy)
  20. Sebastian Vittardi (Chemistry; advisor: Jeffrey Rack, RP 2017)

19. Yueteng Zhang (Chemistry; advisor: Wei Wang, RP 2017)
18. Tefera Entele (Chemistry; advisor: Terefe Habteyes, RP 2017)
17. Shekha KC (Chemistry; advisor: Ramesh Giri, RP 2017)
16. Ju Chen (Chemistry; advisor: Martin Kirk, RP 2017)
15. Amrit Pokhrel (Chemistry; advisor: Martin Kirk, RP 2017)
14. Praksh Basnet (Chemistry; advisor: Ramesh Giri, RP 2016)
13. Bijesh Kafle (Chemistry; advisor: Terefe Habteyes, RP 2016)
12. Surendra Thapa (Chemistry; advisor: Ramesh Giri, RP 2016)
11. Ranjana Danji (Chemistry; advisor: Martin Kirk, RP 2016)
10. Alan Thomas (Ph.D; 2016; Chemistry; advisor: John Grey)
9. Jian Gao (Ph.D; 2014; Chemistry; advisor: John Grey)
8. Ryan Johnson (Ph.D; 2014; Chemistry; advisor: Hua Guo)
7. Jon Allen (Ph.D; 2013; Physics; advisor: David Dunlap)
6. Danae Davis (M.S. 2013; Chemistry; advisor: Richard Kemp)
5. Yanting Cao (Ph.D. 2014; Chemistry; advisor: Wei Wang)
4. Weimin Xuan (Ph.D 2013; Chemistry; advisor: Wei Wang)
3. Yongqian Gao (Ph.D 2011; Chemistry; advisor: John Grey)
2. Adam Wise (Ph.D 2012; Chemistry; advisor: John Grey)
1. Edwards Traywick Niles (Ph.D 2013; Chemistry; advisor: John Grey)