Curriculum Vitae

Hoyong Chung

Department of Chemical and Biomedical Engineering
FAMU-FSU College of Engineering
2525 Pottsdamer Street, Suite A160
Tallahassee, FL 32310
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hchung@eng.famu.fsu.edu

PROFESSIONAL POSITIONS

2021-present	Associate Professor, Department of Chemical and Biomedical Engineering, FAMU-FSU College of Engineering, Tallahassee, FL
2014-2021	Assistant Professor, Department of Chemical and Biomedical Engineering, FAMU-FSU College of Engineering, Tallahassee, FL

EDUCATION and TRAINING

2014	Postdoctoral Scholar. California Institute of Technology, Pasadena, CA
	Advisor: Robert H. Grubbs
2011	Ph.D. in Chemistry, Carnegie Mellon University, Pittsburgh, PA
	Advisor: Newell R. Washburn
2006	M.S. in Chemistry, University of Nevada, Las Vegas, LV
2004	B.S. in Polymer Science and Engineering, Kyungpook National University, South Korea

PUBLICATIONS

As PI at FAMU-FSU College of Engineering (*denotes corresponding author)

Submitted

26. Cheng, W.; Fukuda, M.; Kim, S.; **Chung, H.;** Ren, Y. Guan, J.* " Osmotically Rupturing Phagosomes in Macrophages Using PNIPAM Microparticles" **2022.**

25. Kim, S.; **Chung, H.*** "100% biomass-based biodegradable polymer: well-defined lignin and castor oil copolymer synthesis for functional material applications" **2022.**

24. Kim, S.; **Chung, H.*** "Precisely Programmable Crosslinking of Lignin-based Polymers for Convenient Property Control" **2022**.

Published (20 corresponding author papers)

23. Kim, S.; Saha, B.; Boykin, J.; **Chung, H.*** "Gallol Containing Adhesive Polymers" *Journal of Macromolecular Science, Part A* **2022** *accepted.* (DOI: 10.1080/10601325.2022.2100790)

Invited article for a special issue.

22. Cheng, W.; Kim, S.; Zivkovic, S.; **Chung, H.**; Ren, Y.; Guan, J.* "Specific Labelling of Phagosome-Derived Vesicles in Macrophages with a Membrane Dye Delivered with Microfabricated Microparticles" *Acta Biomaterialia* **2022** *141* 344-353 (DOI: 10.1016/j.actbio.2022.01.028)

21. Kim, S.; Kim, C.; **Chung, H.*** "N-Heterocyclic Carbene Containing Homogeneous Ru Catalyst for Aqueous Atom Transfer Radical Polymerization of Water-soluble Vinyl Monomers" *Polymer* **2022** *241* 124537. (DOI: 10.1016/j.polymer.2022.124537).

20. Kim, S.; **Chung, H.*** "Synthesis and Characterization of Lignin-graft-poly(ethylene brassylate): a Biomass-Based Polyester with High Mechanical Properties" *ACS Sustainable Chemistry & Engineering* **2021** *9* 44 14766–14776. (DOI: 10.1021/acssuschemeng.1c04334)

19. Liu, H.; Mulderrig, L.; Hallinan, D. Jr.*; **Chung, H.*** "Lignin-based solid polymer electrolytes: Lignin-graft-Poly(ethylene glycol)" *Macromolecular Rapid Communications* **2021** *42* 2000428 (DOI: 10.1002/marc.202000428).

Highlighted at inside cover of the issue.

Featured in 15 different presses.

18. Miao, Y.; Liu, H.; Cheng, W.; Liu, Y.; Kim, S.; Yuan, X.; Kusi-Appiah, A.; Lenhert, S.; Ma, T.; Ren, Y.; **Chung, H.**; Guan, J.* "Conjugating Micropatches to Living Cells Through Membrane Intercalation" *ACS Applied Materials & Interfaces* **2020** *12* 29110-29121 (DOI: 10.1021/acsami.0c08503).

17. Pramudya, I.; **Chung, H.*** "Recent Progress of Glycopolymers Synthesis for Biomedical Applications" *Biomaterials Science* **2019** *7* 4848-4872 (DOI: 10.1039/C9BM01385G).

16. Kim, M.; Butler, M. F.; Pramudya, I.; Lee, C.; Kim, S.; **Chung, H.*** "Metal-free Electrically Conductive Bioinspired Adhesive Polymers" *Chemistry of Materials* **2019** *31* 8358-8365 (DOI: 10.1021/acs.chemmater.9b01885).

15. Liu, H.; Mohsin, N.; Kim, S.; **Chung, H.*** "Lignin, a Biomass Crosslinker, in a Shape Memory Polycaprolactone Network" *Journal of Polymer Science, Part A: Polymer Chemistry* **2019** *57* 2121-2130 (DOI: 10.1002/pola.29483).

14. Bae, S. H.; Kim, S.; Yi, S. H.; Son, I.*; Kim, K. T.*; **Chung, H.** "Effect of Surface Roughness and Electroless Ni–P Plating on the Bonding Strength of Bi–Te-based Thermoelectric Modules" Coatings **2019** *9* 213 (DOI:10.3390/coatings9030213).

13. Kim, C.; **Chung, H.*** "Oligo(ethylene glycol) Length Effect of Water-Soluble Ru-Based Olefin Metathesis Catalysts on Reactivity and Removability" *The Journal of Organic Chemistry* **2018** *83* 9787-9794 (DOI: 10.1021/acs.joc.8b01312).

12. Pramudya, I.; Kim, C.; **Chung, H.*** "Synthesis and Adhesion Control of Glucose-based Bioadhesives via Strain-Promoted Azide-Alkyne Cycloaddition" *Polymer Chemistry* **2018** *9* 3638-3650 (DOI: 10.1039/C8PY00339D).

11. Kim, C.; **Chung, H.*** "Heterogeneous Removal of Water-Soluble Ruthenium Olefin Metathesis Catalyst from Aqueous Media via Host-Guest Interaction" *Journal of Visualized Experiments* **2018** *138* e58067 (DOI: 10.3791/58067).

10. Kim, M.; Ondrusek, B.; Lee, C.; Douglas, W. G.; **Chung, H.*** "Synthesis of Lightly-Crosslinked Zwitterionic Polymer-Based Bioinspired Adhesives for Intestinal Tissue Sealing" *Journal of Polymer Science, Part A: Polymer Chemistry* **2018** *56* 1564–1573 (DOI: 10.1002/pola.29041).

Featured in *Advanced Science News* **2018** May:

https://www.advancedsciencenews.com/polymers-for-use-in-wound-closure/

Joint Special Collection on Biopolymers in Wiley Journals **2019** March:

https://onlinelibrary.wiley.com/doi/toc/10.1002/(ISSN)1097-0282.Biopolymers2019

9. Kim, C.; Ondrusek, B.; **Chung, H.*** "Removable Water-Soluble Olefin Metathesis Catalyst via Host-Guest Interaction" *Organic Letters* **2018** *20* 736-739 (DOI: 10.1021/acs.orglett.7b03871).

8. Kim, M.; **Chung, H.*** "Photo-Responsive Bio-Inspired Adhesives: Facile Control of Adhesion Strength via a Photocleavable Crosslinker" *Polymer Chemistry* **2017** *8* 6300-6308 (DOI: 10.1039/C7PY01535F).

7. Liu, H.; **Chung, H.*** "Visible-light Induced Thiol-ene Reaction on Natural Lignin" *ACS Sustainable Chemistry & Engineering* **2017** *5* 9160-9168 (DOI: 10.1021/acssuschemeng.7b02065).

6. Liu, H.; **Chung, H.*** "Lignin-based Polymers via Graft Copolymerization" *Journal of Polymer Science, Part A: Polymer Chemistry* **2017** *55* 3515-3528 (DOI: 10.1002/pola.28744).

Top 20 top downloaded articles in *Journal of Polymer Science Part A: Polymer Chemistry* during 2017-2018.

5. Slegeris, R.; Ondrusek, B.; **Chung, H.*** "Catechol- and Ketone-Containing Multifunctional Bottlebrush Polymers for Oxime Ligation and Hydrogel Formation" *Polymer Chemistry* **2017** *8* 4707-4715 (DOI: 10.1039/C7PY01112A).

4. Ondrusek, B.; **Chung, H.*** "Modified N-Heterocyclic Carbene Ligand for the Recovery of Olefin Metathesis Catalysts via Noncovalent Host-Guest Interactions" *ACS Omega* **2017** *7* 3951-3957 (DOI: 10.1021/acsomega.7b00635).

3. Harper, T.; Slegeris, R.; Pramudya, I.; **Chung, H.*** "Single-phase Photo-crosslinkable Bioinspired Adhesive for Precise Control of Adhesion Strength" *ACS Applied Materials & Interfaces* **2017** *9* 1830-1839 (DOI: 10.1021/acsami.6b14599).

2. Pramudya, I.; Rico, C. G.; Lee, C.; **Chung, H.*** "POSS-Containing Bioinspired Adhesives with Enhanced Mechanical and Optical Properties for Biomedical Applications" *Biomacromolecules* **2016** *17* 3853-3861 (DOI: 10.1021/acs.biomac.6b00805).

1. Liu, H.; **Chung, H.*** "Self-Healing Properties of Lignin-Containing Nanocomposite: Synthesis of Lignin-graft-poly(5-acetylaminopentyl acrylate) via RAFT and Click Chemistry" *Macromolecules* **2016** *49* 7246-7256 (DOI: 10.1021/acs.macromol.6b01028).

Graduate/Postdoctoral Publications

12. **Chung, H.**; Washburn, R. N., "Chapter 2. Extraction and types of lignin. In Lignin in Polymer Composites", 1st ed.; Faruk, O.; Sain, M., Eds. Elsevier: **2015**.

11. Hilburg, S.; Elder, A.; **Chung, H.**; Ferebee, R.; Bockstaller M.; Washburn N. R. "A Universal Route towards Thermoplastic Lignin Composites with Improved Mechanical properties" *Polymer* **2014** *55* 995-1003.

10. **Chung, H.**; Al-Khouja, A.; Washburn, N. R. "Lignin-based Graft Copolymers via ATRP and Click Chemistry" In Green Polymer Chemistry: Biocatalysis and Materials II American Chemical Society **2013** *1144* 373-391.

9. **Chung, H.**; Grubbs, R. H. "Rapidly Crosslinkable DOPA containing Terpolymer Adhesives and PEG-based Crosslinkers for Biomedical Applications" *Macromolecules* **2012** *45* 9666-9673.

8. Li, W.*; **Chung, H.***; Daeffler, C.; Johnson, J. A.; Grubbs, R. H. " Application of ^{1}H DOSY for Facile Measurement of Polymer Molecular Weights" *Macromolecules* **2012** *45* 9595-9603 (*Co-first authors).

7. **Chung, H.**; Washburn, N. R. "Chemistry of Lignin-based Materials" *Green Materials* **2012** *3* 137-160.

6. **Chung, H.**; and Washburn, N. R. "Improved Lignin Polyurethane Properties with Lewis Acid Treatment" *ACS Applied Materials & Interfaces*, **2012** *4* 2840-2846.

5. **Chung, H.**; Glass, P.; Pothen J. M. ; Sitti, M.; Washburn, N. R. "Enhanced Adhesion of Dopamine Methacrylamide Elastomers via Viscoelasticity Tuning" *Biomacromolecules* **2011** *12* 342-347.

4. Glass, P.*; **Chung, H.***; Washburn, N. R.; Sitti, M. "Enhanced Wet Adhesion and Shear of Elastomeric Micro-Fiber Arrays with Mushroom Tip Geometry and a Photopolymerized p(DMA-co-MEA) Tip Coating" *Langmuir* **2010** *26* 17357-17362 (* Co-first authors).

3. Glass, P.; **Chung, H.**; Washburn, N. R.; Sitti, M. "Enhanced Reversible Adhesion of Dopamine Methacrylamide-Coated Elastomer Microfibrillar Structures under Wet Conditions" *Langmuir* **2009** *25* 6607-6612.

2. Shin, J.; Chang, A. Y.; Brownell, L. V.; Racoma, I. O.; Ozawa, C. H.; **Chung, H.**; Peng, S.; Bae, C. "Hydrophilic graft modification of a commercial crystalline polyolefin" *Journal of Polymer Science, Part A: Polymer Chemistry* **2008** *46* 3533-3545.

1. Bae, C.; Hartwig, J. F.; **Chung, H**; Harries, N. K.; Switek, K. A.; Hillmyer, M. A. "Regiospecific Side-Chain Functionalization of Linear Low-Density Polyethylene with Polar Groups" *Angewandte Chemie International Edition* **2005** *44* 6410-6413.

PATENTS

As PI at FAMU-FSU College of Engineering

15. Grubbs, R. H.; Stoller, M. L.; **Chung, H.**; Fitzgerald, A.; Kenny, T. W.; Thomas, R. M. "Targeting Microbubbles" Pub. No.: WO2013028942 A1, CN103917637A, EP2748299A1, US10149906B2, WO2013028942A8, and US 11224655 B2 (Date of patent Jan 18, 2022).

14. **Chung, H.** " Transparent and white biomass lignin-based polymers" FSU Ref No.21-047, Filing date 2021-3-25.

13. **Chung, H.** "Electrically Conductive Multiblock Polymers and Methods of Making the Same" U.S. Patent Application No. 17/143,275, Filing date 2021-1-7.

12. **Chung, H.** "Electrically Conducting Polymers" WO2020/081507 A1, 2020-4-23.

11. **Chung, H.** "Lignin Based Biodegradable Polymer and Methods of Making the Same" U.S. Patent Application No. 62/958,021, 2020-1-7; 10850037WO1, 2021-1-7.

Licensed to Cognitek as of May 18th 2021

10. **Chung, H.** "Electrically conducting Polymers" U.S. Provisional Application No. PCT/US19/56229, 2019-10-15.

9. **Chung, H.** "Zwitterionic Crosslinked Polymer-Based Adhesives" **US 20200332161A1**, Oct. 22, 2020.

8. **Chung, H.** "Homogeneous Catalysts That Are Recoverable By Host-Guest Interactions" **US 20180050331Al**, Feb. 22, 2018; **US10357763B2**, Jul. 23, 2019; **US 20190344255A1**, Nov. 14, 2019.

7. **Chung, H.** "Water Soluble Homogeneous Catalysts That Are Recoverable by Phase Selectivity and Host-Guest Interactions" **US 20180050332Al**, Feb. 22, 2018; **US10300470B2**, May 28, 2019; **US 20190270079Al**, Sep. 5, 2019.

6. **Chung, H.** "Functional Bottlebrush Polymers" **US20180312634A1**, Nov. 1, 2018.

5. **Chung, H.** "Lignin-containing Polymers" **US20160222151Al**, Aug. 4, 2016; **US9701777B2**, Jul. 11, 2017; **US20170335042Al**, Nov. 23, 2017; **US10308748B2**, Jun. 4, 2019.

Graduate/Postdoctoral Patents

4. **Chung, H.**; Schwartz, D. M.; Grubbs, R. H. "Stimuli Responsive Adhesive Gel for Removal of Foreign Particles from Soft Tissue" US9421164B2.

3. **Chung, H.**; Grubbs, R. H.; Michael R. Harrison "Rapidly Crosslinkable Bio-inspired Adhesives for Biomedical Applications" Pub. No.: WO2013142028 A1 and US8791219B2.

2. **Chung, H.**; Glass, P.; Sitti, M.; Washburn, N. R. "Micro-fiber Arrays with Tip Coating and Transfer Method for Preparing Same" Pub. No.: WO2012026973A2, WO2012026973A3, and US9079215B2.

1. **Chung, H.**; Washburn, N. R. "Lignin-containing Polymers and Compositions Including Lignin-Containing Polymers" Pub. No.: WO2014116672 A1 and US9914870B2.

AWARDS and HONORS

2020	ACS PMSE Young Investigator Award, San Francisco, 2020 Fall ACS National meeting
2016	GAP Commercialization Grant Award, Florida State University, Tallahassee, FL
2015	First Year Assistant Professor Award, Florida State University, Tallahassee, FL

COURSES TAUGHT

Courses at FAMU-FSU College of Engineering

Spring 2022	Introduction to Polymer Science and Engineering (ECH 4823 & 5828)
Fall 2022	Mass and Energy Balance I (ECH 3023)
Spring 2021	Introduction to Polymer Science and Engineering (ECH 4823 & 5828)
Fall 2021	Mass and Energy Balance I (ECH 3023)
Spring 2021	Mass and Energy Balance II (ECH 3024)
Fall 2020	Mass and Energy Balance I (ECH 3023)
Spring 2020	Mass and Energy Balance II (ECH 3024)
Fall 2014-2020	Mass and Energy Balance I (ECH 3023)
Spring 2017	Introduction to Polymer Science and Engineering (ECH 4823 & 5828)
Spring 2018	Industrial Engineering Chemistry (ECH 4937)

Current Graduate Students

Sundol Kim (Ph.D. Student, 2017 – present) and Jacob Boykin (Ph.D. Student, 2022 – present)

Curriculum Vitae

Current Postdoc scholars

Dr. Biswajit Saha (2021 – Present).

Current Undergraduate Students (URP/Honors)

Tamia Edwards (2021 – present), Nicolle Bejarano (2021 – present), John Sorensen (2021 – present).

Current Undergraduate Students (researchers, not URP/Honors)

Previous Graduate Student

Tristan Harper (2014 – 2016, MS 2016), Hailing Liu (Ph.D. Student, 2014 – 2019, Ph.D. 2019, Present: Professor at Liaoning University of Petroleum and Chemical Technology, Department of Petroleum and Chemical Technology, China), Irawan Pramudya (Ph.D. Student, 2015 – 2019, Ph.D. 2019), Siyuan Chen (M.S. Student, 2017 – 2019, MS 2019), Chayanne Burey (M.S. 2021).

Previous Postdoc Scholars

Dr. Brian Ondrusek (2015 - 2017), Dr. Rimantas Slegeris (2015 - 2017), Dr. Minkyu Kim (2016 – 2018), Dr. Cholejae Kim (2016 – 2018, Present: Tenure-track assistant professor at Chungbuk National University, Department of Chemistry, South Korea).

Previous Visiting Scholars

Prof. Injun Son (Kyungpook National University, South Korea, 2018 – 2019).

Previous Undergraduate Students (researchers, not URP/Honors)

Anne Schloss (2020 – 2022, BS in 2022), Christine Cremeans (2021 – 2021), Jordan Waldmann (2019 – 2020, BS in 2020). Dayna Richter (2018 – 2020, BS in 2020), Dat Vo (2020). Michael Butler (2017 – 2019, BS in 2018), Paola Chavez (2019), Andrea Aguilera (2019), Danyelle Graham (2016 – 2018, BS in 2018), Nuverah Mohsin (2016 – 2018, BS in 2018), Catalina G. Rico (2014 – 2016, B.S. in 2016), Dylan Unterbrink (2014-2015), Rashid Elsamra (2014-2015), Frederick Bagdasarian (2015), Dana Cazacu (2015).

Ph.D. Committee

Onyekachi Oparaji (Ph.D. 2017), Xiaoshi Zhang (Ph.D. 2018), Xuejian Chen (Ph.D. 2018), Kyungmin Kim (Ph.D. 2021), Thilina Nadeemali Dikella Dikella Gamaralalage (2021 – present), Wenhao Cheng (2021 – present), Jaehoon Jang (2022 – present).

M.S. Committee

Yuan Sang (M.S. 2016), Chen Qu (M.S.2016), Omena Okpowe (M.S. 2017), Xiaolin Jia (M.S. 2017), Naveen Prasad Mendi (M.S. 2018), Daokun Song (M.S. 2019), Masahiro Fukuka (2021 – present).

Undergraduate Honors Committee

Panos Kiratzis (B.S. 2021), Jacob Boykin (B.S. 2022), John So

Biomedical Engineering Qualifying Exam Committee

2019 Summer, 2018 Summer, 2021 Spring (served for two BME committees), 2021 Fall (Chair of BME committee), 2022 Spring (Chair of qualifying exam committee)

Chemical Engineering Qualifying Exam Committee

2020 Fall, 2022 Spring (Chair of qualifying exam committee)

PROFESSIONAL SERVICE

Symposium organization

- Organizer at 254th National Meeting of the American Chemical Society for symposium titled "Advances in Lignin: Chemicals, Polymers, and Materials" Washington, DC, August 20-24, **2017**
- Organizer at 2023 Spring National Meeting of the American Chemical Society for symposium titled "Biomass-based Biodegradable Polymers" Indianapolis, IN, March 26-30, **2023**

Chair of a symposium

- 2022 AIChE Annual Meeting "Polymer Synthesis and Reaction Engineering symposium", Phoenix Convention Center, Phoenix, AZ, November 13 - 18, 2022.
- 2020 AIChE Annual Meeting "08A17 Polymer Thin Films, Confinement, and Interfaces" and "08F03 Multifunctional Composites", Hilton San Francisco Union Square, San Francisco, CA, November 15 - 20, 2020 (Virtual meeting).
- Polymers for Advanced Technologies (PAT 2019) "Scientific Session: Synthesis and Sustainability", The George Hotel, College Station, Texas, August 8 – 10, 2019.
- 256th National Meeting of the American Chemical Society for symposium titled "PMSE Young Investigators Symposium" Boston, MA, August 19-23, 2018
- 255th National Meeting of the American Chemical Society for symposium titled "Polymers with complex Architecture: From Synthesis to Self-Assembly" New Orleans, LA, March 18-22, 2018

Reviewer for funding agencies

- National Science Foundation (NSF)
- European Research Council (ERC)
- National Institute of Food and Agriculture Small Business Innovation Research
- American Chemical Society Petroleum Research Fund
- SC EPSCoR/IDeA, GEAR Collaborative Research Program (CRP)
- SC EPSCoR/IDeA, Grants for Exploratory Academic Research (GEAR)
- Research Grants Council (RGC) of Hong Kong
- Icelandic Research Fund (IRF) at The Icelandic center for research
- Auburn University Research Support Program (RSP)

Reviewer for journals

- 2022: Biomaterials Science (1 manuscript).
- 2021: Advanced Materials (1 manuscript), Green Chemistry (8 manuscript), Chemistry of Materials (1 manuscript), ACS Nano (1 manuscript), ACS Applied Materials & Interfaces (1 manuscript), ACS Applied Polymer Materials (2 manuscript), European Polymer Journal (3 manuscript), Polymer (Elsevier, 6 manuscripts), Advanced Functional Materials (1 manuscript), Materials Today Bio (1 manuscript), Energies (1 manuscript), Polymer Chemistry (2 manuscript), Advanced Healthcare Materials (2 manuscript), Sustainability (1 manuscript), Molecules (1 manuscript). Total 32 reviews.
- 2020: Green Chemistry (3 manuscript), ChemSusChem (2 manuscript), ACS Applied Materials & Interfaces (1 manuscript), Polymer Chemistry (1 manuscript), New Journal of Chemistry (1 manuscript), Journal of Functional Biomaterials (1 manuscript), Journal of Manufacturing Processes (1 manuscript), European Polymer Journal (1 manuscript), Composite Interfaces (1 manuscript), Polymer (2 manuscript), ACS Omega (1 manuscript), Small (1 manuscript), Advanced Materials (2 manuscript), Chemistry of Materials (1 manuscript), Journal of the Taiwan Institute of Chemical Engineers (1 manuscript), Industrial Crops and Products (1 manuscript), Bulletin of the Korean Chemical Society (1 manuscript).
  Total 21 reviews.
- 2019: Nature Communications (1 manuscript), Journal of American Chemical Society (1 manuscript), Polymer Chemistry (5 manuscripts), ChemSusChem (1 manuscript), Biomacromolecules (1 manuscript), Polymer (3 manuscript), ACS Applied Polymer Materials (1 manuscript), Biomacromolecules (1 manuscript), Macromolecular Bioscience (1 manuscript), ACS Biomaterials Science and Engineering (1 manuscript), Industrial & Engineering Chemistry Research (1 manuscript), Catalysts (1 manuscript)
  Total 18 reviews.
- 2018: Macromolecules (3 manuscripts), ACS Sustainable Chemistry & Engineering (3 manuscripts), Polymer Chemistry (2 manuscripts), ChemSusChem (2 manuscripts), ACS Macro Letters (1 manuscript), Advanced Materials Interfaces (1 manuscript), Advanced Functional Materials (1 manuscript), ACS Central Science (1 manuscript), Biomacromolecules (1 manuscript), Polymer (1 manuscript), Chemistry Select (1 manuscript), Organic Process Research & Development (1 manuscript), European Polymer Journal (1 manuscript).
  Total 19 reviews.
- Before 2018: Advanced Materials, Advanced Functional Materials, Macromolecules, Polymer Chemistry, ACS Applied Materials & Interfaces, ACS Macro Letters, ACS Sustainable Chemistry & Engineering, ChemSusChem, Biomacromolecules, Journal of Polymer Science, Part A: Polymer Chemistry, European Polymer Journal, Polymer, Catalysts, Materials, Journal of Applied Polymer Science, Molecules, Macromolecular Chemistry and Physics, ACS Central Science, ChemistrySelect. CRC Press book "Interdisciplinary Engineering Sciences: Concepts and Applications to Materials Science" review

Judge for an Exhibition

- Capital Regional Science and Engineering Fair, Tallahassee, FL, 2016 February – present.

University / local community service

- Chemical and Biomedical Engineering Department graduate committee member, 2014 – present.
- Chemical and Biomedical Engineering Department Seminar (ECH/BME 5935) coordinator, Fall 2015.
- Chemical and Biomedical Engineering Department Open House Event, 2020 November.
- Research presentation at AIChE FAMU-FSU College of Engineering Student Chapter, March 5, 2020.
- Outreach at Challenger Learning Center Summer and Winter camps, 2017 July – present.
- Mentor Round Table that is hosted by FSU student organizations: FORCE, CELLS, HEAL, Pre-PA, HERO (Undergraduate students mentoring service regarding future professions), and Pre-SOMA. Tallahassee, FL, 2019 April 10.
- Research presentation at Mayo Clinic (Jacksonville) - Collaboration for Accelerated Innovation, December 12, 2017.
- Research presentation at Tallahassee Memorial HealthCare, General Surgery Residency Program, August 2, 2017.
- Research presentation at FAMU-FSU College of Engineering, BMES talk series, September 28, 2016 and October 13, 2014.
- Research presentation at FAMU-FSU College of Engineering, Department open lab event, November 24, 2015.
- Research presentation at FAMU-FSU College of Engineering, Department advisory board, March 5, 2015.
- Research presentation at FAMU-FSU College of Engineering, Department of Chemical and Biomedical Engineering, September 19, 2014.

PUBLISHED ABSTRACT and PREPRINTS

52. **Chung, H.**; Kim, S. “Facile chemical modification of lignin for synthesis of lignin-based sustainable polymers” MRS Meeting 2022, Boston, MI, November 27-December 2, 2022. (EN09)

51. **Chung, H.**; Saha, B. “Synthesis of Degradable Functional Bottlebrush Polymers” 2022 AIChE Annual Meeting, Phoenix, AZ, November 13-18, 2022.

50. **Chung, H.**; Kim, S. “Synthesis of Lignin-Based Polyesters” 2022 AIChE Annual Meeting, Phoenix, AZ, November 13-18, 2022.

49. Saha, B.; **Chung, H.** “Multifunctional and degradable bottlebrush adhesive polymers” ACS Fall 2022 National Meeting & Expo, Chicago, IL, August 21-25, 2022. (PMSE)

48. Kim, S.; **Chung, H.** “Precise property control method of lignin based polymer via crosslinking” ACS Fall 2022 National Meeting & Expo, Chicago, IL, August 21-25, 2022. (CELL)

47.**Chung, H.**; Kim, S. “Well-defined lignin-based functional polymers” ACS Fall 2022 National Meeting & Expo, Chicago, IL, August 21-25, 2022. (POLY)

46. **Chung, H.**; Kim, S. “Synthesis of lignin-based polymers” ACS Fall 2022 National Meeting & Expo, Chicago, IL, August 21-25, 2022. (AGFD)

45. Kim, S.; **Chung, H.** "Synthesis and Characterizations of Biomass-Based Polyesters with high mechanical properties" ACS Fall 2021 National Meeting & Expo, Atlanta, GA, August 22-26, 2021. (AGFD)

44. Kim, S.; **Chung, H.** "Lignin-Based Polyesters: Synthesis and Characterizations of Lignin-graft-poly(ethylene brassylate) with high mechanical properties" ACS Fall 2021 National Meeting & Expo, Atlanta, GA, August 22-26, 2021. (POLY)

43. **Chung, H.**; Liu, H.; Hallinan, D. Jr.; Mulderrig, L. "Novel synthesis approaches for lignin-based polymeric battery materials" ACS Spring 2020 National Meeting & Expo, March 22-26, 2020. (Paper ID: 3290963, Final paper number ENFL 621).

42. **Chung, H.**; Kim, S. "Synthesis of well-defined functional bioinspired adhesives polymers: Chemical functionalities and crosslinking effect on properties" ACS Spring 2020 National Meeting & Expo, March 22-26, 2020. (Paper ID: 3292500, Final paper number PMSE 925).

41. **Chung, H.** "Synthesis and characterization of bioinspired conducting adhesives: Fully organic and heterogeneous additive-free polymers" ACS Spring 2020 National Meeting & Expo, March 22-26, 2020. (Paper ID: 3290368, Final paper number PMSE 897).

40. **Chung, H.** "Lignin-based smart polymers: Self-healing and shape memory polymers" ACS Spring 2020 National Meeting & Expo, March 22-26, 2020 (Paper ID: 3290440, Final paper number CELL 228)

39. **Chung, H.**; Liu, H. "Lignin-Based Functional Polymers" Paper 157f, 2019 AIChE Annual Meeting, Orlando, FL, November 10 – 15, 2019.

38. **Chung, H.** "Well-defined polymer adhesives synthesis: Pendant functionalities and crosslinking effect on properties" Paper 604d, 2019 AIChE Annual Meeting, Orlando, FL, November 10 – 15, 2019.

37. **Chung, H.** "Synthesis of Well-defined Polymeric Adhesives: Chemical Functionalities and Crosslinking Effect on Properties" Polymers for Advanced Technologies (PAT 2019), The George Hotel, College Station, Texas, August 8 – 10, 2019.

36. **Chung, H.** "Synthesis of Well-defined Functional Polymeric Adhesives" Gordon Research Conference Polymers, Mount Holyoke College, South Hadley, MA, June 9-14, 2019.

35. **Chung, H.**; Liu, H. "Natural biomass-based sustainable polymers: lignin as a crosslinker in shape memory polymers" ACS Spring 2019 National Meeting & Exposition, March 31 – April 4, 2019, POLY-21.

34. Kim, S.; **Chung, H.** "Aqueous Atom Transfer Radical Polymerization (ATRP) of commonly used vinyl monomers with N-heterocyclic carbene (NHC) containing homogeneous Ru catalyst" ACS Spring 2019 National Meeting & Exposition, March 31 – April 4, 2019, ORGN-327.

33. **Chung, H.**; Liu, H. "New chemistry to modify natural lignin: synthesis of lignin-based functional polymers" ACS Spring 2019 National Meeting & Exposition, March 31 – April 4, 2019, CELL-470.

32. **Chung, H.**; Pramudya, I.; Kim, C. "Synthesis of bioinspired polymeric adhesives for precise control of properties via well-defined crosslinking chemistry" ACS Spring 2019 National Meeting & Exposition, March 31 – April 4, 2019, POLY-640.

31. Pramudya, I.; **Chung, H.** "Controllable glucose-based bioadhesive through strain-promoted azide-alkyne cycloaddition (SPAAC)" 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018, POLY-458.

30. Kim, C.; **Chung, H.** "Highly efficient removal of water soluble NHC-Ru catalyst by host-guest interaction" 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018, ORGN-88.

29. Liu, H.; **Chung, H.** "Lignin-based functional polymers" 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018, POLY-585.

28. **Chung, H.**; Slegeris, R.; Ondrusek, B. A. "Synthesis of multifunctional bottlebrush polymers" 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018. PMSE-20.

27. **Chung, H.**; Kim, C.; Ondrusek, B. A. "Recycle of PEG-bound homogeneous NHC-Ru catalyst via host-guest interaction in aqueous media" Abstracts of Papers, 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017 (2017), POLY-641.

26. **Chung, H.**; Pramudya, I.; Slegeris, R.; Kim, M. "Stimulus responsive bioinspired adhesives for finely tunable adhesion, mechanical, and optical properties" Abstracts of Papers, 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017 (2017), POLY-34.

25. **Chung, H.**; Liu, H. "Molecular engineered biopolymer lignin: Visible light induced modification of natural lignin" Abstracts of Papers, 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017 (2017), POLY-716.

24. **Chung, H.**; Ondrusek, B. A.; Kim, C. "Recoverable ruthenium-based olefin metathesis catalysts via host-guest complexation" Abstracts of Papers, 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017 (2017), ORGN-493.

23. **Chung, H.**; Liu, H. "Functional polymers from wood-based sustainable resources" Abstracts of Papers, 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016 (2016), ENVR-287.

22. **Chung, H.**; Ondrusek, B. "Stimulus responsive recyclable catalysts" Abstracts of Papers, 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016 (2016), CATL-303.

21. **Chung, H.**; Liu, H. "Lignin-based functional polymers" Abstracts of Papers, 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016 (2016), POLY-90.

20. **Chung, H.**; Slegeris, R.; Harper, T.; Gomez, C.; Pramudya, I. "Synthesis of functional and controllable polymeric adhesive" Abstracts of Papers, 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016 (2016), PMSE-299.

19. Slegeris, R.; **Chung, H.** "Oxime cross-linkable, dopamine containing brush polymers via ROMP for biomedical adhesive applications" Abstracts of Papers, 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016 (2016), POLY-291.

18. Chung, H.; Grubbs, R. H. "Polymer Adhesives for Medical Applications" 2014 MRS Spring Meeting, San Francisco, CA. United states, April 21-25, 2014

17. Horn, M.; **Chung, H.**; Matyjaszewski, K. "Solvent effects on the activation/deactivation step in ATRP" Abstracts of Papers, 245th ACS National Meeting & Exposition, New Orleans, LA, United States, April 7-11, 2013 (2013), PMSE-373.

16. Washburn, N. R.; Al-Khouja, A.; **Chung, H.** "Polymer grafting strategies for improving lignin properties" Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2012), 53(2), 277.

15. Washburn, N. R.; Al-Khouja, A.; **Chung, H.** "Polymer grafting strategies for improving lignin properties" Abstracts of Papers, 244th ACS National Meeting & Exposition, Philadelphia, PA, United States, August 19-23, 2012 (2012), POLY-360.

14. **Chung, H.**; Grubbs, R. H. "Rapidly crosslinkerable bio-inspired adhesives for biomedical applications" Abstracts of Papers, 244th ACS National Meeting & Exposition, Philadelphia, PA, United States, August 19-23, 2012 (2012), PMSE-293.

13. Washburn, N. R.; **Chung, H.** "Chemistry and polymer science of lignin-based materials" PMSE Preprints (2012), No pp. given

12. Washburn, N. R.; **Chung, H.** "Chemistry and polymer science of lignin-based materials" Abstracts of Papers, 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-29, 2012 (2012), PMSE-505.

11. **Chung, H.**; Washburn, N. R. "Modification of lignin via Lewis acid catalyzed hydroxylation" Abstracts of Papers, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011 (2011), POLY-361.

10. **Chung, H.**; Washburn, N. R. "Synthesis and physical properties characterization of highly functionalized lignin-based polyurethane elastomers" Abstracts of Papers, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011 (2011), CELL-246.

9. **Chung, H.**; Washburn, N. R. "Modification of lignin via Lewis acid catalyzed hydroxylation" Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2011), 52(1),

8. **Chung, H.**; Glass, P.; Sitti, M.; Washburn, N. R. "Enhancing the performance of bio-inspired adhesives" Abstracts of Papers, 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010 (2010), POLY-311.

7. **Chung, H.**; Glass, P.; Sitti, M.; Washburn, N. R. "Enhancing the performance of bio-inspired adhesives" Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2010), 51(2), 314-315.

6. **Chung, H.**; Tang, W.; Matyjaszewski, K. "Effect of temperature and solvent on the ATRP equilibrium constants and activation rate constants" Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2008), 49(2), 97-98.

5. Tang, W.; **Chung, H.**; Min, K.; Matyjaszewski, K. "Atom transfer radical polymerization of acrylamides with Cu(I) and Cu(0)" Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2008), 49(2), 16-17.

4. Tang, W.; **Chung, H.**; Min, K.; Matyjaszewski, K. "Atom transfer radical polymerization of acrylamides with Cu(I) and Cu(0)" Abstracts of Papers, 236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008 (2008), POLY-356.

3. **Chung, H.**; Tang, W.; Matyjaszewski, K. "Effect of temperature and solvent on the ATRP equilibrium constants and activation rate constants" Abstracts of Papers, 236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008 (2008), POLY-355.

2. **Chung, H.**; Chang, A. Y.; Racoma, I. O.; Ozawa, C. H.; Bae, C. "Regioselective functionalization of high-molecular-weight crystalline polyolefins via C-H activation of methyl side group" Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006 (2006), POLY-019.

1. **Chung, H.**; Chang, A. Y.; Racoma, I. O.; Ozawa, C. H.; Bae, C. "Regioselective functionalization of high-molecular-weight crystalline polyolefins via C-H activation of methyl side group" Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2006), 47(1), 247-248.

ORAL CONFERENCE PRESENTATIONS

As PI at FAMU-FSU College of Engineering

36. **Chung, H.**; Kim, S. "Facile chemical modification of lignin for synthesis of lignin-based sustainable polymers" MRS Meeting 2022, Boston, MI, November 27-December 2, 2022. (EN09)

35. **Chung, H.**; Saha, B. "Synthesis of Degradable Functional Bottlebrush Polymers" 2022 AIChE Annual Meeting, Phoenix, AZ, November 13-18, 2022.

34. **Chung, H.**; Kim, S. "Synthesis of Lignin-Based Polyesters" 2022 AIChE Annual Meeting, Phoenix, AZ, November 13-18, 2022.

33.**Chung, H.**; Kim, S. "Well-defined lignin-based functional polymers" ACS Fall 2022 National Meeting & Expo, Chicago, IL, August 21-25, 2022. (POLY)

32. **Chung, H.**; Kim, S. "Synthesis of lignin-based polymers" ACS Fall 2022 National Meeting & Expo, Chicago, IL, August 21-25, 2022. (AGFD)

31. **Chung, H.** "Development of lignin-based biodegradable polymers having tailored chemical structure" 2022 AIChE Annual Meeting, San Diego, CA, March 23, 2022.

30. **Chung, H.** "Synthesis and structure-property relationships study of biomass lignin-based polymers" 2022 AIChE Annual Meeting, San Diego, CA, March 22, 2022.

29. **Chung, H.** "Biomass Lignin-Based Stimulus Responsive Polymers" 2020 AIChE Annual Meeting, San Francisco, CA, November 15 – 20, 2020.

28. **Chung, H.** "Designing Multiple Chemical Functionalities into Adhesive Polymers for Stimulus Responsive and Electronically Conductive Properties" 2020 AIChE Annual Meeting, San Francisco, CA, November 15 – 20, 2020.

27. **Chung, H.** "Precise Synthesis of Functional Adhesive Polymers: Chemical Functionalities and Crosslinking Effect on Properties" ACS Fall 2020 National Meeting & Expo, August 16-20, 2020.

26. **Chung, H.** "Biomass lignin-based stimulus responsive polymers" ACS Fall 2020 National Meeting & Expo, August 16-20, 2020.

25. **Chung, H.** "Graft copolymerization to synthesis lignin-based polyesters" ACS Fall 2020 National Meeting & Expo, August 16-20, 2020.

24. **Chung, H.** "Synthesis of well-defined functional bioinspired adhesives polymers: Chemical functionalities and crosslinking effect on properties" ACS Spring 2020 National Meeting & Expo, March 22-26, 2020.

23. **Chung, H.** "Synthesis and characterization of bioinspired conducting adhesives: Fully organic and heterogeneous additive-free polymers" ACS Spring 2020 National Meeting & Expo, March 22-26, 2020.

22. **Chung, H.** "Lignin-based smart polymers: Self-healing and shape memory polymers" ACS Spring 2020 National Meeting & Expo, March 22-26, 2020.

21. **Chung, H.**; Liu, H. "Lignin-Based Functional Polymers" Paper 157f, 2019 AIChE Annual Meeting, Orlando, FL, November 10 – 15, 2019.

20. **Chung, H.** "Well-defined polymer adhesives synthesis: Pendant functionalities and crosslinking effect on properties" Paper 604d, 2019 AIChE Annual Meeting, Orlando, FL, November 10 – 15, 2019.

19. **Chung, H.** "Synthesis of Well-defined Polymeric Adhesives: Chemical Functionalities and Crosslinking Effect on Properties" Polymers for Advanced Technologies (PAT 2019), The George Hotel, College Station, Texas, August 8 – 10, 2019.

18. **Chung, H.** "Synthesis of Well-defined Functional Polymeric Adhesives" Polymers Gordon Research Conference, Mount Holyoke College, South Hadley, MA, June 9-14, 2019.

17. **Chung, H.**; Liu, H. "New chemistry to modify natural lignin: synthesis of lignin-based functional polymers" ACS Spring 2019 National Meeting & Exposition, March 31 – April 4, 2019.

16. **Chung, H.**; Liu, H. "Natural biomass-based sustainable polymers: lignin as a crosslinker in shape memory polymers" ACS Spring 2019 National Meeting & Exposition, March 31 – April 4, 2019.

15. **Chung, H.**; Pramudya, I.; Kim, C. "Synthesis of bioinspired polymeric adhesives for precise control of properties via well-defined crosslinking chemistry" ACS Spring 2019 National Meeting & Exposition, March 31 – April 4, 2019.

14. **Chung, H.**; Slegeris, R.; Ondrusek, B. A. "Synthesis of multifunctional bottlebrush polymers" 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018.

13. **Chung, H.**; Kim, C.; Ondrusek, B. A. "Recycle of PEG-bound homogeneous NHC-Ru catalyst via host-guest interaction in aqueous media" 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017.

12. **Chung, H.**; Pramudya, I.; Slegeris, R.; Kim, M. "Stimulus responsive bioinspired adhesives for finely tunable adhesion, mechanical, and optical properties" 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017.

11. **Chung, H.**; Liu, H. "Molecular engineered biopolymer lignin: Visible light induced modification of natural lignin" 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017.

10. **Chung, H.**; Ondrusek, B. A.; Kim, C. "Recoverable ruthenium-based olefin metathesis catalysts via host-guest complexation" 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017.

9. **Chung, H.**; Liu, H. "Functional polymers from wood-based sustainable resources" 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016.

8. **Chung, H.**; Ondrusek, B. "Stimulus responsive recyclable catalysts" 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016.

7. **Chung, H.**; Liu, H. "Lignin-based functional polymers" 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016.

6. **Chung, H.**; Slegeris, R.; Harper, T.; Gomez, C.; Pramudya, I. "Synthesis of functional and controllable polymeric adhesive" 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016.

5. Slegeris, R.; **Chung, H.** "Oxime cross-linkable, dopamine containing brush polymers via ROMP for biomedical adhesive applications" 252nd ACS National Meeting & Exposition, Philadelphia, PA, United States, August 21-25, 2016.

4. **Chung, H.** "Modified N-heterocyclic carbene ligands for recycle of ROMP and ATRP catalysts via Host-Guest interactions" Polymers Gordon Research Conference, June 11-16, 2017 Mount Holyoke College, South Hadley, MA

3. Liu, H; **Chung, H.** "Lignin-based smart materials" 2015 Sun grant conference, Feb 2- Feb 4, Auburn, Alabama

2. **Chung, H.**; Harper, T.; Gomez, C.; Liu, H. "Precise control of crosslinking chemistry: Tailor-made adhesion property for medical applications" Polymers Gordon Research Conference, June 14-19, 2015 Mount Holyoke College, South Hadley, MA

1. **Chung, H.**, "Stimulus Responsive Biomedical Adhesive", Science of Adhesion Gordon Research Conference, July 26-31, 2015 Mount Holyoke College, South Hadley, MA

INVITED SEMINARS

As PI at FAMU-FSU College of Engineering

41. "Facile chemical modification of lignin for synthesis of lignin-based sustainable polymers" MRS Meeting 2022, Boston, MI, November 27-December 2, 2022. (EN09)

40. "Degradable Diaminodisulfide Polymers for Circular Economy", Department of Chemistry, Chungbuk National University, Korea, July 7, 2022.

39. "Biomass Lignin-based Biodegradable Polymers for Renewable and Sustainable Plastic Use" Korea Research Institute of Chemical Technology (KRICT), Daegeon, Korea, July 4, 2022.

38. "Sulfoxide-Based Programmable Thermoresponsive Homopolymers", Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Korea, July 1, 2022.

37. "Sulfoxide-Based Programmable Thermoresponsive Homopolymers", Department of Materials Science and Engineering, Kyungpook National University, Korea, June 28, 2022.

36. "Lignin-based Biodegradable Polymers" Korea Research Institute of Chemical Technology (KRICT), Ulsan, Korea, June 22, 2022.

35. "The future of Environmentally-friendly and Sustainable plastics", Break-out session, SK Global Forum, Santa Clara, June 11, 2022.

34. "Synthesis of Multifunctional Adhesive Polymers for Biomedical Applications", Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Korea, July 23, 2021.

33. "Synthesis of Functional Adhesives and Lignin-based Biodegradable Polymers", Pyung Hwa Oil Seal Industry Co., Ltd., Korea, July 22, 2021.

32. "Synthesis and applications of multifunctional adhesive polymers", Department of Chemistry, Korea Advanced Institute of Science and Technology (KAIST), Korea, July 21, 2021.

31. "Biomass Lignin-based Polymers and Functional Adhesives for Battery Applications", Department of Materials Science and Engineering, Kyungpook National University, Korea, July 20, 2021.

30. "Synthesis of Functional Adhesives and Lignin-based Polymers", Optical Convergence Technology Center, Daegu Catholic University, Korea, July 20, 2021.

29. "Synthesis of 100% Biomass-based Polymers Possessing Well-Defined Chemical Structures", Department of Chemistry, Chungbuk National University, Korea, July 13, 2021.

28. "Development of Lignin-based Materials and Multifunctional Polymeric Adhesives for Additive Manufacturing Applications", Korea Institute of Materials Science, Korea, July 12, 2021.

27. “Biomass Lignin-based Biodegradable Polymers for Minimizing Carbon Emission”, Department of Materials Science and Engineering, Kyungpook National University, Korea, July 9, 2021.

26. “Development of Biomass Lignin-based Polymers for Functional Biodegradable Polymers Not Cheap Commodity Plastics”, Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Korea, July 8, 2021.

25. “100% Biomass-based and Biodegradable Polymers Surpassing Polyolefin for Industrial Applications”, Nano Convergence Practical Application Center, Daegu Technopark, Korea, July 6, 2021.

24. “Synthesis and Characterizations of Multifunctional Adhesives for Biomedical Applications”, Department of Polymer Science and Engineering, Kyungpook National University, Korea, July 5, 2021.

23. “Biomass Lignin-based Functional Polymers”, Polymer Journal Club, FAMU-FSU College of Engineering and Florida State University, October 9, 2020.

22. “Synthesis of Biomass Lignin-based Functional Polymers”, Center for Research in Soft Matter & Polymers, GCR Mini-Symposium, University of Delaware, October 1, 2020.

21. “Novel synthesis approaches for lignin-based polymeric battery materials” ACS Spring 2020 National Meeting & Exposition, symposium “Recent Advancements in Lignin Valorization Strategies for Fuels & Chemicals” in Division of Energy and Fuels, March, 2020.

20. “New Chemistry to Synthesize Biomass Lignin-based Functional Polymers for Enhanced Sustainability and Biodegradability” Florida International University, Department of Chemistry, February 7th, 2020.

19. “Precisely Synthesized Functional Adhesive Polymers: From Organic Electronics to Biomedical Applications” and “Lignin-based Sustainable Polymers: Stimulus responsive functional polymers and biodegradable polymers” Nitto Denko, November 23rd, 2019.

18. “Precisely Synthesized Functional Adhesive Polymers: From Organic Electronics to Biomedical Applications” PPG coating and innovation center, October 29th, 2019.

17. “Precisely Synthesized Functional Adhesive Polymers: Chemical Functionalities and Crosslinking Effect on Properties” Carnegie Mellon University, Department of Chemistry, October 28th, 2019.

16. “Adhesives of the future Synthesis of well-defined polymer adhesives: Effect of pendant functional groups and crosslinking on properties” Young Scholars Program (YSP), FSU, Tallahassee, July 3rd, 2019.

15. “Synthesis of well-defined polymer adhesives: Effect of pendant functional groups and crosslinking on properties” Keynote speaker at 95th Florida Annual Meeting and Exposition (FAME), Innisbrook Resort, Tampa Bay, FL, May 10th, 2019.

14. “Well-defined Functional Polymer Adhesives: New adhesive synthesis for energy storage, bioelectronics, and tissue adhesive applications”, Lubrizol Advanced Materials (LeARN), Brecksville, OH, March 7th, 2019.

13. “Synthesis of Well-defined Functional Polymeric Adhesives: Effect of Molecular Building Blocks, Functional Groups, Architectures, and Crosslinking on Properties”, Florida State University, Department of Chemistry and Biochemistry (Organic division seminar), January 17th, 2019.

12. “Synthesis of functional organic polymer adhesives by precise control of molecular building blocks, functional groups, architectures, and crosslinking”, FAMU-FSU College of Engineering, Chemical and Biomedical Engineering Department, October 26th, 2018.

11. “Stimulus-responsive polymers for functional adhesive applications”, Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Korea, August 6, 2018.

10. “New precisely-defined functional polymer adhesives”, Department of Materials Science and Engineering, Kyungpook National University, Korea, August 3, 2018.

9. “Precise synthesis of practically applicable multifunctional polymeric adhesives”, Department of Chemistry, Seoul National University, Korea, August 2, 2018.

8. “Development of Functional Organic Polymer Adhesives”, Division of Environmental Science and Engineering, Pohang University of Science and Technology (POSTECH), Korea, August 1, 2018.

7. “Development of Natural Lignin-based Functional Polymers”, Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Korea, July 31, 2018.

6. “Development of functional polymers for adhesives and environmentally-friendly degradable materials”, SK Innovation Institute of Technology Innovation, Korea, July 30, 2018.

5. “New removable and water soluble catalysts for ROMP and ATRP”, Department of Organic Materials System Engineering, Pusan National University, Korea, July 27, 2018.

4. “Synthesis of new functional adhesives, lignin-based polymers, and water-soluble Ru catalysts”, Korea Institute of Materials Science, Korea, July 27, 2018.

3. “Development of Ru-based water-soluble catalysts for vinyl monomer polymerization and olefin metathesis reactions”, Department of Chemistry, Korea Advanced Institute of Science and Technology (KAIST), Korea, July 26, 2018.

2. “Development of Functional Organic Polymer Adhesives”, Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology (KAIST), Korea, July 25, 2018.

1. “Smart Polymers” Materials Science and Engineering Program, Florida State University, Materials Science and Engineering Program, September 24, 2014.

PROFESSIONAL DEVELOPMENT

NSF International funding opportunity: Recovery, Renewal and Resilience in a Post-Pandemic World – Informational webinar (May 27th 2021)

Energy Efficiency and Renewable Energy: Funding Opportunities with the DOE, Featuring Special Guest Scott Minos (FSU, May 26th, 2021)

Green Chemistry Education Challenge Discussion – TOPIC: Preparing the Next Generation Workforce for Sustainable Action webinar hosted by Beyond Benign and Dow (May 21st, 2021)

NSF Convergence Accelerator Workshop - TOPIC: Materials for Energy and Sustainable Systems (May 20th, 2021)

PROFESSIONAL AFFILIATIONS

2006 - present	Member, American Chemical Society
2014 - present	Member, Materials Research Society
2019 - present	Member, American Institute of Chemical Engineers
2019 – present	Member, KIChE.