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Curriculum Vitae

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EDUCATION

Ph.D., City University of New York, 2003

Major: Chemistry (Polymer)

Dissertation: Combination of Anionic, Ring-Opening Metathesis, Living Radical Polymerization for Novel Nanostructured Polymer Synthesis

M. S., Beijing University of Chemical Technology, 1996

Major: Polymer Materials

Thesis: Selective Anionic Polymerization of Allyl Methacrylate

B.S., Hefei University of Technology, 1993

Major: Polymer Materials

EMPLOYMENT HISTORY

Professor, UB Department of Chemical and Biological Engineering, 2020-present

Associate Professor, UB Department of Chemical and Biological Engineering, 2013-present

Assistant Professor, UB Department of Chemical and Biological Engineering, 2007-2013

Postdoctoral Research Associate, Washington University at St. Louis, 2003-07

PUBLICATIONS

Referred Journal Papers (>5,000 citations by Google Scholar, H-index: 44)

1. Z. Zhang, H. Sun, J. Giannino, Y. Wu, C. Cheng, Biodegradable Zwitterionic Polymers as PEG Alternatives for Drug Delivery, *J. Polym. Sci.*, **2024**, <https://doi.org/10.1002/pol.20230916>.
2. X. Zhao, G. Wang, Y. Gao, C. Cheng, Mixed Shell Nanoparticles via Polymerization-induced Self-assembly of Y-shaped ABC Miktoarm Star Copolymers, *Polymer*, **2023**, *280*, 126046.
3. Z. Zhang, C. Cheng, Self-Reinforced and Self-Healing Dynamic Covalent Polymeric Networks with Shifting Chemical Structures, *Chem. Commun.*, **2023**, *59*, 7259-7262.
4. M. A. Mohamed, L. Yan, A. Shahini, N. Rajabian, A. Jafari, S. T. Andreadis, Y. Wu, C. Cheng, Well-Defined pH-Responsive Self-Assembled Block Copolymers for the Effective Codelivery of Doxorubicin and Antisense Oligonucleotide to Breast Cancer Cells, *ACS Appl. Bio Mater.*, **2022**, *5*, 4779-4792.
5. M. A. Mohamed, A. Singh, P. N. Prasad, C. Cheng, Well-Defined pH-Sensitive Self-Assembled Triblock Copolymer-Based Crosslinked Micelles for Efficient Cancer Chemotherapy, *Molecules*, **2022**, *27*, 8153.
6. C. Sabatini, R. J. Aguilar, Z. Zhang, S. Makowka, A. Kumar, M. M. Jones, M. B. Visser, M. Swihart, C. Cheng, Mechanical Characterization and Adhesive Properties of a Dental Adhesive Modified with a Polymer Antibiotic Conjugate, *J. Mech. Behav. Biomed. Mater.*, **2022**, *129*, 105153.

7. M. Zhu, Z. Cao, H. Yang, Z. Xu, C. Cheng, Improved Dye and Heavy Metal Ions Removal in Saline Solutions by Electric Field-Assisted Gravity Driven Filtration Using Nanofiber Membranes with Asymmetric Micro/nano Channels, *Sep. Purif. Technol.*, **2022**, *300*, 121775.
8. N. Zhang, H. Yang, Z. Xu, C. Cheng, Capillary-Driven Flow Combined with Electric Field and Fenton Reaction to Remove Ionic Dyes from Water or Concentrated NaCl Solution: Mechanism and Application, *Colloids Surf. A: Physicochem. Eng.*, **2022**, *651*, 129660.
9. M. Chen, H. Yang, Z. Xu, C. Cheng, Separation of Single and Mixed Anionic Dyes in Saline Solutions Using Uncharged Polyacrylonitrile-tris(hydroxymethyl)aminomethane (PAN-Tris) Ultrafiltration Membrane, *J. Cleaner Prod.*, **2022**, *336*, 130471.
10. H. Sun, L. Yan, R. Zhang, J. F. Lovell, Y. Wu, C. Cheng, A Sulfobetaine Zwitterionic Polymer-Drug Conjugate for Multivalent Paclitaxel and Gemcitabine Co-Delivery, *Biomater. Sci.*, **2021**, *9*, 5000-5010.
11. Z. Zhang, M. M. Jones, C. Sabatini, S. T. Vanyo, M. Yang, A. Kumar, Y. Jiang, M. T. Swihart, M. B. Visser, and C. Cheng, Synthesis and Antibacterial Activity of Polymer-antibiotic Conjugates Incorporated into a Resin-based Dental Adhesive, *Biomater. Sci.*, **2021**, *9*, 2043-2052.
12. M. A. Mohamed, A. Shahini, N. Rajabian, J. Caserto, A. M. A. El-Sokkary, M. A. Akl, S. T. Andreadis, C. Cheng, Facile Thiol-ene Elastomers with Tunable Biodegradability, Mechanical and Surface Properties to Enhance Myogenic Differentiation of Myoblasts, *Bioactive Mater.*, **2021**, *6*, 2120-2133.
13. H. Moussa, M. M. Jones, N. Huo, R. Zhang, M. Keskar, M. B. Visser, M. T. Swihart, C. Cheng, C. Sabatini, Biocompatibility, Mechanical, and Bonding Properties of a Dental Adhesive Modified with Antibacterial Monomer and Cross-linker, *Clin. Oral Investig.*, **2021**, *25*, 2877-2889.
14. H. Sun, W. Erdman, Y. Yuan, M. A. Mohamed, R. Xie, Y. Wang, S. Gong, C. Cheng, Crosslinked Polymer Nanocapsules for Therapeutic, Diagnostic, and Theranostic Applications, *WIREs Nanomed Nanobiotechnol.*, **2020**, e1653.
15. N. Shahkaramipour, A. Jafari, T. Tran, C. M. Stafford, C. Cheng, H. Lin, Maximizing the grafting of zwitterions onto the surface of ultrafiltration membranes to improve antifouling properties, *J. Membrane Sci.*, **2020**, *601*, 117909.
16. A. Jafari, L. Yan, M. A. Mohamed, Y. Wu, C. Cheng, Well-Defined Diblock Poly(ethylene glycol)-*b*-Poly(ϵ -caprolactone)-based Polymer-Drug Conjugate Micelles for pH-Responsive Delivery of Doxorubicin, *Materials*, **2020**, *13*, 1510.
17. A. Jafari, N. Rajabian, G. Zhang, M. A. Mohamed, P. Lei, S. T. Andreadis, B. Pfeifer, C. Cheng, PEGylated Amine-Functionalized Poly(ϵ -caprolactone) for the Delivery of Plasmid DNA, *Materials*, **2020**, *13*, 898.
18. M. A. Mohamed, A. Fallahi, A. M. A. El-sokkary, S. Salehi, M. A. Akl, A. Jafari, A. Tamayol, H. Fenniri, A. Khademhosseini, S. T. Andreadis, C. Cheng, Stimuli-Responsive Hydrogels for Manipulation of Cell Microenvironment: From Chemistry to Biofabrication Technology, *Prog. Polym. Sci.*, **2019**, *98*, 101147.
19. J. Liu, S. Zhang, D.-e. Jiang, C. M. Doherty, A. J. Hill, C. Cheng, H. B. Park, H. Lin, Highly Polar but Amorphous Polymers with Robust Membrane CO₂/N₂ Separation Performance, *Joule*, **2019**, *3*, 1881-1894.
20. H. Sun, F. M. Haque, Y. Zhang, A. Commisso, M. A. Mohamed, M. Tsianou, H. Cui, S. M. Grayson, C. Cheng, Linear-Dendritic Alternating Copolymers, *Angew. Chem. Int. Ed.*, **2019**, *58*, 10572-10576.
21. H. Sun, L. Yan, M. Y. Z. Chang, K. A. Carter, R. Zhang, L. Slyker, J. F. Lovell, Y. Wu, C. Cheng, A Multifunctional Biodegradable Brush Polymer-Drug Conjugate for Paclitaxel/Gemcitabine Co-Delivery and Tumor Imaging, *Nanoscale Adv.*, **2019**, *1*, 2761-2771.
22. M. A. F. Afzal, M. Haghightarlari, S. P. Ganesh, C. Cheng, J. Hachmann, Accelerated Discovery of High-Refractive-Index Polyimides via First-Principles Molecular Modeling, Virtual High-Throughput Screening, and Data Mining, *J. Phys. Chem. C*, **2019**, *123*, 14610-14618.
23. M. Keskar, C. Sabatini, C. Cheng, M. T. Swihart, Synthesis and Characterization of Silver Nanoparticle-Loaded Amorphous Calcium Phosphate Microspheres for Dental Applications,

- Nanoscale Adv.*, **2019**, *1*, 627-635.
24. H. Sun, L. Yan, K. A. Carter, J. Zhang, J. Caserto, J. F. Lovell, Y. Wu, C. Cheng, Zwitterionic Crosslinked Biodegradable Nanocapsules for Cancer Imaging, *Langmuir*, **2019**, *35*, 1440-1449.
 25. B. Sun, H. Sun, Y. Li, H. Cui, C. Cheng, A Systematic Synthetic Study of Polyelectrolyte Nanocapsules via Crystallized Miniemulsion Nanodroplets, *Eng. Sci.*, **2019**, *5*, 39-45.
 26. P. Chakraborty, G. L. Zhao, C. Zhou, C. Cheng, D. D. L. Chung, Decreasing the Shear Stress-induced In-plane Molecular Alignment by Unprecedented Stereolithographic Delay in Three-dimensional Printing, *J. Mater. Sci.*, **2019**, *54*, 3586-3599.
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 29. M. A. F. Afzal, C. Cheng, J. Hachmann, Combining first-principles and data modeling for the accurate prediction of the refractive index of organic polymers, *J. Chem. Phys.*, **2018**, *148*, 241712/1-241712/8.
 30. H. Guo, P. Liu, H. Li, C. Cheng, Y. Gao, Responsive Emulsions Stabilized by Amphiphilic Supramolecular Graft Copolymers Formed in Situ at the Oil-Water Interface, *Langmuir*, **2018**, *34*, 5750-5758.
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 32. T. Zeng, D. Yang, H. Li, C. Cheng, Y. Gao, The fabrication of amphiphilic double dynamers for responsive Pickering emulsifiers, *Polym. Chem.*, **2018**, *9*, 627-636.
 33. H. Sun, M. Y. Z. Chang, W.-I Cheng, Q. Wang, A. Commisso, M. Capeling, Y. Wu, C. Cheng, Biodegradable Zwitterionic Polymer and Its Conjugate with Paclitaxel for Sustained Drug Delivery, *Acta Biomater.*, **2017**, *64*, 290-300.
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51. C.-K. Chen, W.-C. Law, R. Aalinkeel, B. Nair, Y. Yu, S. D. Mahajan, J. L. Reynolds, J. Wu, Y. Li, C. K. Lai, E. S. Tzanakakis, S. A. Schwartz, P. N. Prasad, C. Cheng, Biodegradable Cationic Polymer Nanocapsules for Bypassing Multidrug Resistance and Enabling Drug-Gene Co-Delivery to Cancer Cells, *Nanoscale*, **2014**, *6*, 1567-1572.
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5. C. Cheng, J. Zou, Nanoparticles and Nanocapsules and Method of Making, Appl. Serial Number 61/364,853; filed July 16, **2010**.
6. C. Cheng, E. Khoshdel, K. L. Wooley, Preparation of Brush Copolymers by ROMP and RAFT, Patent WO **2008/064972**, US Patent 7,960,479 issued June, **2011**.
7. J. S. Burry, C. Cheng, R. L. Evans, E. Khoshdel, K. L. Wooley, Composition Comprising Brush Copolymer for Treating Hair, Patent WO **2008/064973**; granted August **2010**.

PRESENTATIONS

Invited

1. New Polymers to Escort Cancer Drugs, WNY STEM Forum, Buffalo, NY, November 8, **2023**.
2. Biodegradable Polymer-Drug Conjugates for pH-Responsive Release of Anticancer Drugs, ACS Northeast Regional Meeting, Rochester, NY, October 2-5, **2022**.
3. Functional Polylactide-based Anticancer Therapeutic Delivery Systems, College of Material Science and Engineering, Beijing University of Chemical Technology, March 20, **2018**.
4. Functional Polylactide-based Anticancer Therapeutic Delivery Systems, Department of Polymer Science and Engineering, University of Science and Technology of China, March 15, **2018**.
5. Functional Polylactide-based Therapeutic Delivery Systems for Cancer Treatment, Conference on Cancer Pharmacology Research, Queens, NY, December 13, **2017**.
6. Brush Polymer-Drug Conjugates for the Delivery of Anticancer Drugs, 252nd ACS National Meeting, Philadelphia, PA, August 23, **2016**.
7. Polymeric Nanocapsules (NCs) via Emulsions: Challenges and Strategies, Department of Chemistry, Queens University, Kingston, Ontario, Canada, July 26, **2016**.
8. Polymeric Nanocapsules (NCs) by Interfacial Crosslinking of Surfactants in Miniemulsion-Based Systems: Lessons from Wooley's Shell Crosslinked Knedel-like (SCK) Nanoparticles, 247th ACS National Meeting, Dallas, TX, March 17, **2014**.
9. New Class of Nanostructured Janus Copolymers: Double-Brush Copolymers, 247th ACS National Meeting, Dallas, TX, March 17, **2014**.
10. Polymeric Biomaterials for Drug and Gene Delivery, Department of Oral Biology, University at Buffalo, The State University of New York, Buffalo, NY, December 2, **2013**.
11. Miniemulsion Synthesis of Well-Defined Polymeric Nanomaterials for Drug and Gene Delivery, Young Investigators in Materials Research Symposium, University of Massachusetts Amherst, November 14, **2012**.
12. Functional Biodegradable Nanomaterials for Biomedical Delivery, The 12th Emerging Information and Technology Conference, Toronto, Canada, August 16, **2012**.
13. Biodegradable Cationic Nanocapsules by Thiol-Ene Miniemulsion Cross-Linking, NSF 2012 CBET Grantee Conference, Baltimore, MD, June 6-8, **2012**.
14. Well-Defined Polymeric Nanomaterials via Miniemulsion, Department of Chemistry, Texas A&M University, College Station, TX, March 8, **2012**.

15. Nanoscopic Biomaterials by Tandem Polymer and Organic Chemistries, The 66th Annual Fall Scientific Meeting, Midland Section of ACS, Central Michigan University, Mount Pleasant, MI, November 6, **2010**.
16. Synthetic Polymeric Nanostructures, Department of Chemistry, College of Staten Island, City University of New York, Staten Island, NY, October 14, **2010**.
17. Synthetic Polymeric Nanostructures with Potential Biomedical Applications, Department of Pharmaceutical Sciences, University at Buffalo, The State University of New York, Buffalo, NY, January 17, **2008**.
18. Synthetic Polymeric Nanostructures, Department of Chemical and Biological Engineering, University at Buffalo, The State University of New York, Buffalo, NY, March 23, **2007**.
19. Novel Grafted Copolymers: Synthesis and Self-Assembly, Department of Chemistry, College of Staten Island, City University of New York, Staten Island, NY, May 2, **2002**.

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2. M. A. Mohamed, L. Yan, A. Shahini, A. Jafari, S. T. Andreadis, Y. Wu, C. Cheng, Well-defined pH-responsive self-assembled block copolymer for effective co-delivery of doxorubicin and antisense oligonucleotide to breast cancer cells, ACS Spring 2022 National Meeting, San Diego, CA, March 20-24, **2022**.
3. M. A. Mohamed, A. Shahini, J. Caserto, A. El-Sokkary, M. Akl, S. T. Andreadis, C. Cheng, Fast Synthesis of Biodegradable Elastomers with Tunable Mechanical and Surface Properties via Thiol-ene Click Chemistry for Skeletal Muscle Regeneration, 257th ACS National Meeting, Orlando, FL, March 31-April 4, **2019**.
4. A. Jafari, H. Sun, B. Sun, H. Cui, C. Cheng, Template Synthesis of Polyelectrolyte Multilayer Nanocapsules via Layer-by-layer Deposition on Crystallized Miniemulsion Nanodroplets, 257th ACS National Meeting, Orlando, FL, March 31-April 4, **2019**.
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7. M. T. F. Afzal, J. Hachmann, C. Cheng, Large-scale Exploration of Chemical Space to Identify Exceptional Molecular Targets for Optical Applications, 256th ACS National Meeting, Boston, MA, August 19-23, **2018**.
8. C. Cheng, H. Sun, Y. Yu, C.-K. Chen, J. Zou, Functional Polylactide-based Systems for Delivery of Cancer Therapeutics, TechConnect World 2018 Conference, Anaheim, CA, May 13-16, **2018**.
9. H. Sun, Y. Wu, C. Chong, Biodegradable Zwitterionic Polylactide-Based Delivery Systems for Cancer Treatment, 255th ACS National Meeting, New Orleans, LA, March 18-22, **2018**.
10. H. Lin, N. Shahkaramipour, C. Cheng, Grafting Zwitterions onto Membrane Surface Using Bioadhesive Polydopamine to Enhance Antifouling Properties for Wastewater Reuse, 255th ACS National Meeting, New Orleans, LA, March 18-22, **2018**.
11. M. A. F. Afzal, C. Cheng, J. Hachmann, Discovering Polyimides with Exceptional Optical Properties Using First-Principles Modeling, Virtual High-Throughput Screening, and Machine Learning, 254th ACS National Meeting, Washington, DC, August 20-24, **2017**.
12. M. A. F. Afzal, J. Hachmann, C. Cheng, Machine Learning Approach for Fast and Accurate Prediction of Optical Properties of Organic Molecules, 254th ACS National Meeting, Washington, DC, August 20-24, **2017**.
13. M. A. F. Afzal, C. Cheng, J. Hachmann, Accelerated Discovery of High-Refractive-Index Polymers

- Using First-Principles Modeling, Virtual High-Throughput Screening, and Data Mining, 2017 APS March Meeting, New Orleans, LA, March 13-17, **2017**.
14. M. A. F. Afzal, J. Hachmann, C. Cheng, In silico discovery of high performance organic polymers for optical applications, 253rd ACS National Meeting, San Francisco, CA, April 2-6, **2017**.
 15. H. Sun, R. Zhang, W.-I. Cheng, A. Commisso, M. Capeling, C. Cheng, Polylactide-Based Multifunctional Biodegradable Polymer-Drug Conjugates, 253rd ACS National Meeting, San Francisco, CA, April 2-6, **2017**.
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 18. M. A. F. Afzal, C. Cheng, J. Hachmann, Accurate prediction of the refractive index of polymers using first principles and data modeling, 2016 APS March Meeting, Baltimore, MD, March 14-18, **2016**.
 19. B. Sun, H. Sun, Y. Li, H. Cui, C. Cheng, Polyelectrolyte nanocages via crystal-forming miniemulsions, 251st ACS National Meeting, San Diego, CA, March 13-17, **2016**.
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 25. C.-K. Chen, C. H. Jones, M. Jiang, L. Fang, B. A. Pfeifer, C. Cheng, Well-defined Cationic Polylactides as Biodegradable Vector for Effective Delivery of Plasmid DNA, 2013 AIChE Annual Meeting, San Francisco, CA, November 3-8, **2013**.
 26. Y. Li, L. Christian-Tabak, V. L. F. Fuan, J. Zou, C. Cheng, RAFT Miniemulsion Polymerization Using Amphiphilic Double-Brush Copolymers as Giant Reactive Surfactants, 246th ACS National Meeting, Indianapolis, IN, September 8-12, **2013**.
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Defined Cross-Linked Polymeric Nanomaterials for Biomedical Delivery, 245th ACS National Meeting, New Orleans, LA, April 7-11, **2013**.

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33. Y. Li, E. Themistou, J. Zou, B. P. Das, M. Tsianou, C. Cheng, A New Type of Unimolecular Polymeric Nanoparticle: Janus Double-Brush Copolymers, 2012 AICHE Annual Meeting, Pittsburgh, PA, October 28 - November 2, **2012**.
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36. C.-K. Chen, W.-C. Law, R. Aalinkeel, B. Nair, A. Kopwiththaya, S. D. Mahajan, J. L. Reynolds, J. Zou, S. A. Schwartz, P. N. Prasad, C. Cheng, Cationic Poly lactide for the Delivery of siRNA into Prostate Cancer Cells, 244th ACS National Meeting, Philadelphia, PA, August 19-23, **2012**.
37. C. Cheng, Heat and Mass Transfer Projects: Blood Heat Exchanger and Hemodialysis, The 15th ASEE Chemical Engineering Division Summer School, University of Maine, Orono, ME, July 21-26, **2012**.
38. C. Cheng, Evergreen Medical Safe Drug Delivery, Pre-Seed Workshop, NYS Center of Excellent in Bioinformatics & Life Sciences, Buffalo, NY, June 12, **2012**.
39. Y. Yu, J. Zou, J. W. Mok, C.-K. Chen, Y. Li, C. Cheng, Synthesis, Characterization, and Drug Release Study of Biodegradable Brush Polymer- Drug Conjugates, 10th National Graduate Research Polymer Conference, Cleveland, OH, May 23-24, **2012**.
40. C.-K. Chen, W.-C. Law, S. A. Schwartz, P. N. Prasad, C. Cheng, Synthesis, Characterization, and Biomedical Applications of Cationic Poly lactides, 10th National Graduate Research Polymer Conference, Cleveland, OH, May 23-24, **2012**.
41. C.-K. Chen, Q. Wang, C. L. Lai, C. Cheng, Synthesis and Characterization of Hydrolysable Chitosan Nanocapsules, 10th National Graduate Research Polymer Conference, Cleveland, OH, May 23-24, **2012**.
42. Y. Li, J. Zou, B. P. Das, M. Tsianou, C. Cheng, Amphiphilic Janus Double-Brush Copolymers and Their Performance as Nano-Surfactants, 243rd ACS National Meeting, San Diego, CA, March 25-29, **2012**.
43. Y. Li, E. Themistou, B. P. Das, L. Christian-Tabak, J. Zou, M. Tsianou, C. Cheng, Novel Polyelectrolyte Nanocages via "Crystal-Forming" Miniemulsions, 243rd ACS National Meeting, San Diego, CA, March 25-29, **2012**.
44. Y. Li, J. Zou, L. Christian-Tabak, C. Cheng, Janus Double-Brush Copolymers, 2011 AICHE Annual Meeting, Minneapolis, MN, October 16-21, **2011**.
45. Y. Yu, J. Zou, L. Yu, W. Ji, Y. Li, W.-C. Law, C. Cheng, Biodegradable Graft Polymer-Drug Conjugates, 2011 AICHE Annual Meeting, Minneapolis, MN, October 16-21, **2011**.
46. Y. Li, Y. Yun, J. Zou, C. Cheng, Novel Grafted Architectures: Janus Double-Brush Copolymers and Brush Polymer-Drug Conjugates, Gardon Research Conference 2011 Polymer (East), South Hadley, MA, June 17-22, **2011**.
47. Y. Li, C. Cheng, Synthesis of Double-Brush Copolymers by Tandem RAFT Polymerization, ROP, and ROMP, 240th ACS National Meeting, Boston, MA, August 16-20, **2010**.
48. J. Zou, P. Alexandridis, C. Cheng, Synthesis and Characterization of Well-Defined Polylactide-Based Biodegradable Nanoparticles by Thiol-Ene Reaction in Miniemulsion, 240th ACS National Meeting, Boston, MA, August 16-20, **2010**.
49. J. Zou, G. Jafr, E. Themistou, Y. Yap, P. Alexandridis, A. C. Ceacareanu, C. Cheng, Synthesis, Characterization, and Biomedical Assessment of pH-Sensitive Brush Polymer-Drug Conjugates, 240th ACS National Meeting, Boston, MA, August 16-20, **2010**.

50. Z. Li, J. Ma, C. Cheng, K. L. Wooley, Block Molecular Brushes in Solution-State Self-Assembly: Nanoscopic Precursors with Increasing Complexity, 240th ACS National Meeting, Boston, MA, August 16-20, **2010**.
51. Z. Li, C. Cheng, K. L. Wooley, Synthesis of Block Molecular Brushes Using a "Grafting-Through" Method by Tandem RAFT Polymerization and ROMP, 238th ACS National Meeting, Washington, DC, August 16-20, **2009**.
52. J. Ma, C. Cheng, K. L. Wooley, Well-Defined Multifunctional Fluorocopolymers Having both Amphiphilic Structure and Reactive Sites, 237th ACS National Meeting, Salt Lake City, UT, March 22-26, **2009**.
53. S. I. Caulet, C. Cheng, H. Fang, N. S. Lee, P. Lu, G. Sun, K. Zhang, J.-S. A. Taylor, A. V. Walker, K. L. Wooley, Multistage Hierarchical Assembly of Polymers and Nanostructures to Afford Well-Defined, Stimulus-Responsive and/or Reactive Nanostructures, 237th ACS National Meeting, Salt Lake City, UT, March 22-26, **2009**.
54. J. Ma, C. Cheng, G. Sun, Z. Li, K. L. Wooley, Well-Defined Polymers Bearing Alkene/Norbornene Functionalities and Their Transformations into Complex Structures by Multiple Living Polymerizations, 236th ACS National Meeting, Philadelphia, PA, August 17-21, **2008**.
55. G. Sun, C. Cheng, K. L. Wooley, Functional Polymeric Vesicles with Tunable Sizes, 236th ACS National Meeting, Philadelphia, PA, August 17-21, **2008**.
56. J. W. Bartels, C. Cheng, J. Ma, G. Sun, E. Khoshdel, K. L. Wooley, RAFT Polymerization of Functional Polymers, 235th ACS National Meeting, New Orleans, LA, April 6-10, **2008**.
57. C. Cheng, K. Qi, D. G. Germack, E. Khoshdel, K. L. Wooley, Crosslinked Polymeric Nanoparticles via Brush Copolymers, 2007 AIChE Annual Meeting, Salt Lake City, UT, November 4-9, **2007**.
58. W. Du, L. Yali, C. Cheng, K. T. Powell, K. L. Wooley, Unique Nanostructures through PEGylation of Hyperbranched Fluoropolymer (HBFP) Scaffolds, 234th ACS National Meeting, Boston, MA, August 19-23, **2007**.
59. C. Cheng, K. Qi, D. G. Germack, E. Khoshdel, K. L. Wooley, Well-Defined Core-Shell Brush Block Copolymers: Tandem Syntheses and Transformations to Crosslinked Nanomaterials, Gordon Research Conference 2007 Polymer (East), South Hadley, MA, June 18-19, **2007**.
60. J. W. Bartels, K. T. Powell, J. Xu, C. Cheng, K. L. Wooley, Adhesion of a Non-Adhesive Coating: The Use of PEGylated Hyperbranched Fluoropolymers as Surfaces with Unique Anti-Biofouling, Uptake and Release, and Mechanical Characteristics, 6th International Symposium on Polymer Surface Modification: Relevance to Adhesion, Cincinnati, OH, June 11-13, **2007**.
61. C. Cheng, K. Qi, E. Khoshdel, K. L. Wooley, Nanoparticles and Nanocages Originating from Well-Defined Brush Block Copolymers, 233rd ACS National Meeting, Chicago, IL, March 25-29, **2007**.
62. K. T. Powell, C. Cheng, W. Du, K. L. Wooley, Hyperbranched Fluoropolymers (HBFP(III)), Designed as Complex Nanostructures for Potential Imaging and Therapeutic Delivery, 233rd ACS National Meeting, Chicago, IL, March 25-29, **2007**.
63. K. L. Wooley, J. W. Bartels, C. Cheng, W. Du, K. T. Powell, Complex Constructs Having Nanoscale Features by Combining Incompatible Polymer Components, 233rd ACS National Meeting, Chicago, IL, March 25-29, **2007**.
64. D. S. Germack, C. Cheng, K. L. Wooley, Synthesis of Polyisoprene and Polyisoprene-Containing Amphiphilic Block Copolymers via RAFT, 232nd ACS National Meeting, San Francisco, CA, September 10-14, **2006**.
65. Z. Chen, C. Cheng, K. Qi, K. L. Wooley, H. Cui, K. Hales, Z. Li, D. J. Pochan, E. Khoshdel, Shaped Core-Shell Morphologies Assembled Intramolecularly within Brush Block Copolymers and Intermolecularly between Linear Block Copolymers, 232nd ACS National Meeting, San Francisco, CA, September 10-14, **2006**.
66. C. Cheng, K. Qi, E. Khoshdel, K. L. Wooley, Well-Defined Core-Shell Brush Copolymers: Tandem Syntheses and Applications in the Preparations of Selectively Cross-Linked Nanoparticles and Nanocages, 231st ACS National Meeting, Atlanta, GA, March 26-30, **2006**.
67. K. T. Powell, C. Cheng, K. L. Wooley, Synthesis and Surface Morphology of Amphiphilic Cross-

- linked Networks Composed of Hyperbranched Fluoropolymers by ATR-SCVCP and Diamine-Terminated Poly(ethylene glycol), 231st ACS National Meeting, Atlanta, GA, March 26-30, **2006**.
68. G. O. Brown, C. Cheng, C. S. Gudipati, K. T. Powell, J. Xu, K. L. Wooley, Hyperbranched Polymers as Vessel-Like Components in Complex Networks: Lessons from Meijer's Dendritic Box, 231st ACS National Meeting, Atlanta, GA, March 26-30, **2006**.
 69. C. Cheng, K. L. Wooley, Synthesis of Hyperbranched Fluoropolymers by Self-Condensing Vinyl Copolymerization, 229th ACS National Meeting, San Diego, CA, March 13-17, **2005**.
 70. G. O. Brown, C. Cheng, C. S. Gudipati, J. A. Johnson, K. T. Powell, K. L. Wooley, Nanoscopically-Resolved Amphiphilic Coatings: Treacherous Terrain to Inhibit Biofouling, 228th ACS National Meeting, Philadelphia, PA, August 22-26, **2004**.
 71. C. Cheng, N.-L. Yang, Investigation of Nitroxide-Mediated Radical Polymerization of Methacrylates Initiated by PS-TEMPO Adduct, 225th ACS National Meeting, New Orleans, LA, March 23-27, **2003**.
 72. C. Cheng, N.-L. Yang, Radical Polymerization Mediated by Stable Carbon Radical, 225th ACS National Meeting, New Orleans, LA, March 23-27, **2003**.
 73. C. Cheng, N.-L. Yang, M. H. Rafailovich, Y.-S. Seo, K. Yoon, Syntheses and Self-Assemblies of Novel Double-Brush Architectures, 224th ACS National Meeting, Boston, MA, August 18-22, **2002**.
 74. C. Cheng, N.-L. Yang, Well-Defined Graft Copolymers with Novel Nanostructures, Meeting of MARSEC for Polymers at Interfaces of National Science Foundation, Long Island, NY, December 21, **2001**.
 75. C. Cheng, N.-L. Yang, Advances of Well-Defined Alkoxyamine-Based Polyfunctional Macroinitiators for Structural Control of Graft Polymers, 222nd ACS National Meeting, Chicago, IL, August 26-30, **2001**.
 76. C. Cheng, N.-L. Yang, Accurate Structure Control of Graft Copolymers via Well-Defined Polyfunctional Macroinitiators for Nitroxide-Mediated "Living" Free Radical Polymerization, 220th ACS National Meeting, Washington, DC, August 20-24, **2000**.

TEACHING

Courses Taught

- CE 318 – Transport Process 2 (spring 2008 enrollment: 37; spring 2009 enrollment: 47; spring 2010 enrollment: 44; spring 2011 enrollment: 56; spring 2012 enrollment: 58; spring 2013 enrollment: 78)
- CE 404 – Chemical Engineering Product Design (fall 2011 enrollment: 49; fall 2012 enrollment: 65; fall 2013 enrollment: 66; fall 2014 enrollment: 78; fall 2015 enrollment: 57; fall 2016 enrollment: 84; fall 2017 enrollment: 71)
- CE 405(435)/535 – Polymer Science and Engineering 1 (fall 2009 enrollment: 12; fall 2010 enrollment: 15; fall 2011 enrollment: 21; fall 2012 enrollment: 28; fall 2013 enrollment: 40; fall 2014 enrollment: 30; spring 2016 enrollment: 22; spring 2017 enrollment: 34; spring 2018 enrollment: 24; fall 2018 enrollment: 29; fall 2019 enrollment: 27; fall 2020 enrollment: 26; fall 2021 enrollment: 17; fall 2022 enrollment: 8; fall 2023 enrollment: 13)
- CE 535 – Polymer Science and Engineering 1 (fall 2008 enrollment: 11)
- CE 537 – Polymer Thermodynamics (fall 2007 enrollment: 5)
- CE 433/534 – Materials Sci & Corrosion (spring 2019 enrollment: 82; spring 2020 enrollment: 77; spring 2022 enrollment: 46; spring 2023 enrollment: 61; spring 2024 enrollment: 48)
- CE 498 – Undergraduate Research (fall 2008 enrollment: 1; spring 2009 enrollment: 1; fall 2009 enrollment: 2; fall 2010 enrollment: 1; spring 2011 enrollment: 2; fall 2011 enrollment: 3; spring 2012 enrollment: 3; summer 2012 enrollment: 2; fall 2012 enrollment: 3; spring 2013 enrollment: 2; fall 2013 enrollment: 2; spring 2014 enrollment: 2; fall 2014 enrollment: 3; spring 2015 enrollment: 1; fall 2015 enrollment: 4; spring 2016 enrollment: 5; fall 2016 enrollment: spring 2017 enrollment: 3; spring 2018 enrollment: 4; fall 2018 enrollment: 1; fall

- 2018 enrollment: 1; spring 2019 enrollment: 2; fall 2019 enrollment: 2; fall 2021 enrollment: 1; summer 2022 enrollment: 1; fall 2022 enrollment: 1)
- CE 501 – Individual Problems (spring 2010 enrollment: 1; spring 2012 enrollment: 1; fall 2014 enrollment: 1)
- CE 502 – Individual Problems (spring 2010 enrollment: 1; spring 2012 enrollment: 1; spring 2014 enrollment: 3; spring 2015 enrollment: 1; spring 2016 enrollment: 3; spring 2017 enrollment: 3; spring 2018 enrollment: 3; spring 2019 enrollment: 3; spring 2020 enrollment: 2; spring 2023 enrollment: 1)
- CE 503 – Engineering Projects (fall 2013 enrollment: 1; fall 2017 enrollment: 3; fall 2021 enrollment: 1)
- CE 504 – Engineering Projects (spring 2016 enrollment: 1; spring 2018 enrollment: 3)
- CE 506 – Master’s Research (summer 2019 enrollment: 5; summer 2020 enrollment: 2; fall 2020 enrollment: 2)
- CE 559 – Thesis (fall 2010 enrollment: 1; summer 2012: 1; fall 2012 enrollment: 1; summer 2014 enrollment: 2; fall 2014 enrollment: 3; summer 2015 enrollment: 1; fall 2015 enrollment: 2; summer 2016 enrollment: 2; fall 2016 enrollment: 2; summer 2017 enrollment: 3; summer 2018 enrollment: 3; fall 2018 enrollment: 3; fall 2020 enrollment: 1; summer 2021 enrollment: 2)
- CE 560 – Thesis (spring 2010 enrollment: 2; spring 2011 enrollment: 1; spring 2013 enrollment: 1; spring 2014 enrollment: 2; spring 2015 enrollment: 3; spring 2016 enrollment: 3; spring 2017 enrollment: 2; spring 2019 enrollment: 3; spring 2021 enrollment: 2)
- CE 596 – Internship/Practicum (summer 2016 enrollment: 4; summer 2017 enrollment: 1; fall 2017 enrollment: 1; spring 2018 enrollment: 5; summer 2018 enrollment: 3; fall 2018 enrollment: 1; winter 2019 enrollment: 1; summer 2019 enrollment: 5; fall 2019 enrollment: 6; winter 2020 enrollment: 2; spring 2020 enrollment: 3; summer 2020 enrollment: 3; fall 2020 enrollment: 3; summer 2021 enrollment: 8; fall 2021 enrollment: 4; winter 2022 enrollment: 2; spring 2022 enrollment: 3; summer 2022 enrollment: 10; fall 2022 enrollment: 5; spring 2023 enrollment: 3; summer 2023 enrollment: 9; fall 2023 enrollment: 4; spring 2024 enrollment: 3; summer 2024 enrollment: 2)
- CE 601 – Individual Problems (fall 2008 enrollment: 1; fall 2013 enrollment: 1; fall 2016 enrollment: 1; fall 2019 enrollment: 3)
- CE 602 – Individual Problems (spring 2009 enrollment: 1; spring 2010 enrollment: 1; spring 2013 enrollment: 1; spring 2014 enrollment: 2; spring 2015 enrollment: 3; spring 2017 enrollment: 1; spring 2020 enrollment: 3; spring 2022 enrollment: 1; spring 2023 enrollment: 1)
- CE 659 – Dissertation (fall 2009 enrollment: 1; fall 2010 enrollment: 3; fall 2011 enrollment: 3; fall 2012 enrollment: 3; fall 2013 enrollment: 2; fall 2014 enrollment: 1; fall 2015 enrollment: 1; fall 2016 enrollment: 3; fall 2017 enrollment: 4; fall 2018 enrollment: 2; fall 2019 enrollment: 4; fall 2021 enrollment: 2; fall 2022 enrollment: 3; fall 2023 enrollment: 3)
- CE 660 – Dissertation (spring 2009 enrollment: 1; spring 2010 enrollment: 1; spring 2011 enrollment: 3; spring 2012 enrollment: 3; spring 2013 enrollment: 4; spring 2014 enrollment: 2; spring 2015 enrollment: 3; spring 2016 enrollment: 1; spring 2017 enrollment: 4; spring 2018 enrollment: 4; spring 2019 enrollment: 2; spring 2020 enrollment: 3; spring 2021 enrollment: 2; spring 2022 enrollment: 3; spring 2023 enrollment: 3; spring 2024 enrollment: 3)
- BE 598 – Individual Problems (fall 2023 enrollment: 1)
- BE 599 – Master’s Research (fall 2023 enrollment: 1)

Student/Scholar Advisement

Visiting Scholars: Mohamed Alaa Mohamed (2014 – 2016), Riwei Xu (2015 – 2016), Ningbo Hao (2016 – 2017), Yong Gao (2017 – 2018), Yao Meng (2017 – 2018)

Postdoctoral Students: Jiong Zou (2009 – 2011), Efrosyni Themistou (2009 – 2010), Emmanuel M. Nsengiyumva (2023 – present)

Ph.D. Students: Yukun Li (2008 – 2013), Chih-Kuang Chen (2009 – 2014), Yun Yu (2009 – 2013), Haotian Sun (2013 – 2018), Mohamed Alaa Mohamed (2016 – 2019), Amin Jafari (2014 – 2020), Ziwen Zhang (2019 – present), Mingxuan Zhang (2019 – present), Masoud Zamani (2021 – present)

Master Students: Lu Yu (2010 – 2011), Qing Wang (2011 – 2013), Xiaoni Ma (2012 – 2014), Hangang Zhang (2013 – 2015), Cheng-Kee Lai (2013 – 2016), Runsheng Zhang (2013 – 2016), Boyang Sun (2014 – 2016), Wei-I Cheng (2015 – 2017), Yubo Zhao (2015 – 2017), Iven Yarovoy (2016), Mengqi Ren (2016 – 2018), Haowen Zhang (2016 – 2018), Ziqi Zhang (2016 – 2018), Jiaqi Zhang (2017 – 2019), Fayaz Haneef (2017 – 2019), Ziwen Zhang (2018– 2019; transferred to PhD track), Mingxuan Zhang (2018– 2019; transferred to PhD track), Ming Yang (2018– 2021), Shaheer Momin (2019 – 2021), Yancheng Jiang (2019 – 2021), Justin Giannino (2023 – present)

Undergraduate Students: Yoonsing Yap (Fall 2008 – Spring 2009), Chyi Chin Hew (Fall 2009), Leela Christian-Tabak (Fall 2010 – Spring 2012), Kwang Ngia Sim (Spring 2011), Jorge W. Mok (Fall 2011 – Spring 2012), Cheng Kee Lai (Fall 2011 – Fall 2012), Vivien Li Fong Fuan (Spring & Fall 2012), Ibrahim Mohamed Ali (Summer 2012), Qinghang Zeng (Summer 2012), Emily K. Weinheimer (Fall 2012 –Spring 2013), David Huang (Spring 2013), Colleen E. Marren (Fall 2013), Eunji Youn (Fall 2013), Ngai Hin Lo (Spring 2014), Deanna Platt (Spring & Fall 2014), Emmanuel Nsengiyumva (Summer 2014), Matthew W. Moskowitz (Fall 2014), Yun Shung Ong (Fall 2014), Alex Commisso (Spring 2015 – Spring 2016), Meghan Capeling (Fall 2015 – Spring 2016), Zachary Manzer (Fall 2015 – Spring 2016), Patrick Krohl (Fall 2015 – Spring 2016), Leigh G. Slyker (Spring 2016 – Spring 2018), Julia S. Caserto (Spring 2017 – Spring 2018), Dillon J. Grabowski (Spring 2017), Erin Jorgensen (Spring 2017), William Thomas Erdman III (Spring & Summer 2018), Jingya Fu (Spring 2018), Andy Lam (Spring 2018), Xiao Ci Lin (Spring 2018), Thomas Pink (Fall 2018), Oluwatoyin Campbell (Spring & Summer 2019), Xuanyu Lu (Spring 2019), Kieryn Hammer (Summer & Fall 2019), Michael P. Blatt (Fall 2019 – Spring 2020), Brandon R. Manley (Summer & Fall 2022)

PROFESSIONAL ACTIVITIES

Professional Society Memberships

- American Chemical Society (ACS; 1998 – present; also with membership of ACS Division of Polymer Chemistry and ACS Division of Polymer Materials: Science and Engineering)
- American Institute of Chemical Engineers (AIChE; 2007 – present)
- American Society for Nanomedicine (ASNMI; 2009 – present)

Peer Review

- Book review: *Principles of Polymerization* (Fourth Edition; written by George Odian)
- Proposal review: U. S. National Science Foundation (Biomaterial program, Biomedical Engineering program, Engineering of Biomed Systems Program, Environmental Sustainability program, Macromolecular, Supramolecular and Nanochemistry program, Process and Reaction Engineering program, and Polymer program), U.S. Department of Energy, National Council for Scientific Research of Romania, ACS Petroleum Research Fund, Marion Milligan Mason Award for Women in the Chemical Sciences.
- Progress Site Review: Science Foundation Ireland
- Journal review: *Journal of the American Chemical Society*, *Angewandte Chemie International Edition*, *Chemical Society Review*, *Nano Today*, *Nano Letter*, *Science Advances*, *Nature Communications*, *Advanced Materials*, *Advanced Functional Materials*, *Advanced Healthcare Materials*, *ACS Nano*, *Progress in Polymer Science*, *Nano Today*, *Chemical Science*, *Biomaterials*, *Journal of Controlled Release*, *Scientific Reports*, *ACS Macro Letters*, *Macromolecules*, *Biomacromolecules*, *ACS Sustainable*

Chemistry & Engineering, Journal of Polymer Science, Part A: Polymer Chemistry, Chemistry of Materials, Langmuir, Soft Matter, Journal of Materials Chemistry B, Small, Nanoscale, Nano Research, Biomaterials Science, Polymer, Polymer Chemistry, Macromolecular Rapid Communications, Macromolecular Chemistry & Physics, Journal of Applied Polymer Science, Molecular Pharmaceutics, European Journal of Pharmaceutics and Biopharmaceutics, Nanomedicine: Nanotechnology, Biology, and Medicine, Current Cancer Drug Targets, European Polymer Journal, Colloids and Surfaces B: Biointerfaces, Applied Surface Science, Dalton Transactions, Topics in Current Chemistry, Industrial & Engineering Chemistry Research, New Journal of Chemistry, Journal of Electronic Materials, and Journal of Drug Delivery Science and Technology, etc.

Editorial Board

- Heliyon, 2015 – present
- AIMS Materials Science, 2013 – present
- Journal of Drug Delivery Science and Technology, 2008 – 2016

Workshop Participation

1. The 15th ASEE Chemical Engineering Division Summer School, University of Maine, Orono, ME, July 21-26, 2012.
2. Pre-Seed Workshop, NYS Center of Excellence in Bioinformatics & Life Sciences, Buffalo, NY, June 4, 5, and 12, 2012.
3. NIH Grant Writing Workshop, University at Buffalo, Buffalo, NY, December 1, 2010.
4. BioEMB Heat & Mass Transfer Workshop, San Jose State University, San Jose, CA, July 30 – August 1, 2009.
5. Nanotechnology in Biology and Medicine, the 2nd annual Integrated Nanostructured Systems (INS) Workshop, University at Buffalo, Buffalo, NY, May 13, 2009.
6. How to Get Your Proposal Funded Workshop, Amherst, NY, October 6, 2008.

Symposium Chair/Co-Chair/Organizer

1. Session of Stimuli-Responsive Polymers: Synthesis, Mechanisms and Applications, 245th ACS National Meeting, April 7-11, 2013, New Orleans, LA.
2. Session of Charged and Ion-Containing Polymers, AIChE 2013 Annual Meeting, November 3-8, 2013, San Francisco, CA.
3. Paul J. Flory Polymer Education Award: Symposium in Honor of George Odian, 247th ACS National Meeting, March 16-20, 2014, Dallas, TX.
4. Recent Advance in Functional Polymers with Sophisticated Branched Structures, 252nd ACS National Meeting, August 21-25, 2016, Philadelphia, PA.

UNIVERSITY SERVICE

- SEAS Promotion Committee (2022 – present)
- Departmental Staff Search Committee (2022 – present)
- Organizing Bio-based SEAS Faculty Symposium for School of Engineering and Applied Sciences (SEAS; 2019)
- International travel to China for graduate recruitment enhancement activities for SEAS (2018)
- Preparation of an Early Entry Master's Degree Program Agreement between Department of Chemical and Biological Engineering (UB) and College of Chemical Engineering, Beijing University of Chemical Technology (2017)
- Departmental Graduate Internship Coordinator (2015 – present)
- Preparation of new program proposals for Advanced Certificates for Department of Chemical and Biological Engineering (2015)

- Preparation of a new course proposal for Department of Chemical and Biological Engineering (2015)
- Faculty Advisory Committee for the Shared Instrumentation Facilities, SEAS (2014 – present)
- Departmental Faculty Search Committee (2012-2014)
- Graduate Student Symposium Organization Committee of Department of Chemical and Biological Engineering (2007 – 2013)
- Safety Committee of Department of Chemical and Biological Engineering (2007 – 2012)
- Graduate Committee of Department of Chemical and Biological Engineering (2007 – present)

HONORS AND AWARDS

SEAS Senior Researcher of the Year Award, University at Buffalo (2020)
 UUP Discretionary Awards – University at Buffalo (2020, 2018, 2015)
 ACS-PRF Doctoral New Investigator Award (2009)
 Outstanding Master's Thesis Award – Beijing University of Chemical Technology (1996)
 Outstanding Graduate Award – Beijing University of Chemical Technology (1996)
 Outstanding Undergraduate Awards – Hefei University of Technology (1992, 1993)

GRANT SUPPORT

Startup Research Support (2007 – 2013)

\$260,000 startup funding for equipment, supplies, and instrumental usage from UB

Awarded Grants

1. C. Cheng (PI), Anti-Ice Coatings for Wind Turbine Blades, Center of Excellence in Material Informatics at University at Buffalo, effective date: 07/01/2023 - 06/30/2024, total funding amount: \$49,677.
2. S. T. Andreadis (Contact PI), Fraser J. Sim (PI), C. Cheng (Co-I), Programmable Hydrogels for Optimized Human Oligodendrocyte Transplantation in Demyelinating Disease, National Institutes of Health, effective date: 7/1/2023 – 6/30/2028, total funding amount: \$2,848,905.
3. C. Cheng (PI), Y. Wu (Co-I), E. Y.-X. Chen (Co-I), Multifunctional Biodegradable Zwitterionic Polymer-Drug Conjugates for Multidrug Co-Delivery, National Institutes of Health, effective date: 4/1/2023 – 3/31/2027, total funding amount: \$2,388,081.
4. C. Cheng (Contact PI), Y. Wu (PI), Zwitterionic Dendrimer-modified PEG for Protein Conjugation, National Institutes of Health, effective date: 9/15/2021 – 6/31/2024, total funding amount: \$433,902.
5. H. Lin (PI), C. Cheng (Co-PI), Tunable Two-Dimensional (2D) Porous Material/Polymer Composite Hollow Fiber Membranes for Advanced Water Resource Recovery, U. S. Department of Energy, effective date: 9/1/2021 – 8/31/2024, total funding amount: \$1,350,000
6. C. Cheng (PI), D. Chung (Co-PI), Comprehensive Study of Advanced Polymer-Inorganic Particle Composites, Jiangsu Qunxin Powder Technology Co., LTD, effective date: 5/1/2020 – 4/30/2022, total funding amount: \$190,000.
7. C. Cheng (Contact PI), C. Sabatini (PI), V. Michelle (Co-I), M. Swihart (Co-I), Polymer-Antibiotic Conjugates as Antibacterial Additives for Dental Resins, National Institutes of Health, effective date: 7/9/2019 – 6/31/2022, total funding amount: \$433,995.
8. Y. Wu (PI), C. Cheng (Co-PI), R. Zhao (Co-PI), An Integrated Platform for Nanomedicine Evaluation, University at Buffalo, effective date: 05/23/2019-06/1/2022, total funding amount: \$60,000.
9. C. Cheng (PI), J. Rzayev (Co-PI), C. Zhou (Co-PI), Proof-of-Concept Study of DLP-3D Printable Aligner Materials, 3Digital Inc., effective date: 10/2/2017-12/22/2017, total funding amount: \$60,000.
10. Cheng (Contact PI), Y. Wu (PI), Synthetic Biodegradable Zwitterionic Polymers, National Health Institutes, effective date: 6/1/2017-5/31/2019, total funding amount: \$433,158.

11. C. Cheng (PI), Y. Wu (Co-PI), Cationic Diblock Polymer-Drug Conjugate-Based Nanoparticles for Drug-Gene Co-Delivery, National Science Foundation, effective date: 9/15/2016-8/31/2020, total funding amount: \$420,000.
12. C. Sabatini (PI), M. Swihart (Co-PI), C. Cheng (Co-PI), Improved Dental Restorative Materials using Novel Antibacterial Polymer Surfactants, UB Innovative Micro-Programs Accelerating Collaboration in Themes (IMPACT), effective date: 7/15/2016-7/14/2017, total funding amount: \$27,000
13. C. Cheng (PI), J. Hachmann (Co-PI), A Chemical and Materials Informatics Approach for the Development of Polymers with Environmental Degradability, UB NYS Center of Excellence of in Bioinformatics & Life Sciences, effective date: 11/1/2015-6/30/2016, total funding amount: \$40,000
14. G. Wu (PI), C. Cheng (Co-PI), J. Hachmann (Co-PI), Three-Dimensional Porous Nanographene for Highly Efficient Energy Storage in Li-Ion Batteries, National Science Foundation, effective date: 10/1/2015-9/30/2018, total funding amount: \$299,998
15. H. Lin (PI) and C. Cheng (Co-PI), Feasibility Study of Antifouling Membranes for Wastewater Reuse, The New York State Pollution Prevention Institute, effective date: 9/1/2014-8/31/2016, total funding amount: \$93,925
16. C. Cheng (PI), Collaborative Research: Well-Defined Polyelectrolyte Nanocages via Crystallized Miniemulsion Nanodroplets, National Science Foundation, effective date: 9/1/2014-8/31/2017, total funding amount: \$300,000
17. C. Cheng (PI), Well-Defined Polyriings via Diyne-Functionalized Cyclic Monomers, ACS-Petroleum Research Fund, effective date: 1/1/2014-8/31/2016, total funding amount: \$100,000
18. C. Cheng (PI) and P. N. Prasad (Co-PI), Multifunctional pH-Sensitive Biodegradable Brush Polymer-Drug Conjugates, National Science Foundation, effective date: 8/15/2012-7/31/2015, total funding amount: \$450,000
19. C. Cheng (PI) and P. N. Prasad (Co-PI), Biodegradable Nanomaterials by Thiol-Ene Miniemulsion Reactions, National Science Foundation, effective date: 9/1/2011-8/31/2014, total funding amount: \$315,470
20. C. Cheng (PI), EAGER: Crosslinked Biodegradable Nanoparticles by Thiol-ene Miniemulsion Reaction, National Science Foundation, effective date: 3/1/2010 – 2/28/2011, total funding amount: \$50,000
21. C. Cheng (PI), Templating Synthesis of Polymeric Nanocages via Interfacial Polymerization of Monomer-Functionalized Surfactant Monolayer Absorbed on Crystallized Microemulsion Nanodroplets, American Chemical Society (ACS) Petroleum Research Fund (PRF) Doctoral New Investigator (DNI) Grant, effective date: 7/1/2009 – 8/31/2011, total funding amount: \$100,000