



DAVID THOMAS SIEFKER

SiefkerTDavid@gmail.com • (France) +33 0783067310

EDUCATION

Louisiana State University, Baton Rouge, LA, USA **May 2022**
Doctor of Philosophy (Ph.D.), Chemistry
Research Advisor: Dr. Donghui Zhang
Related Coursework: Macromolecular Systems I & II, Synthesis of Functional Polymers, Physical Organic Chemistry, Elucidation to Organic Materials

University of Southern Mississippi, Hattiesburg, MS, USA **May 2016**
Bachelor of Science (BS), Polymer Science
Advisor: Dr. Charles McCormick, III
Related Coursework: Polymer Chemistry I & II, Introduction, Physical Polymer Chemistry I & II, Introduction to Rheology, Applications of Biomaterials, Polymer Coatings

EXPERIENCE

Undergraduate Research Assistant **September 2013-May 2016**
University of Southern Mississippi, Hattiesburg, MS, USA
Dr. Charles McCormick, III

- Learned basic and advanced laboratory practices for radical polymerizations
- Synthesis stimuli responsive surfactant for hydrocarbon remediation in aqueous solution

Graduate Research Assistant **Fall 2016-Fall 2021**
Louisiana State University Department of Chemistry, Baton Rouge, LA, USA
Dr. Donghui Zhang, Research Lab

- Develop moisture-tolerant and operationally simple synthesis of polypeptides
- Assist in training high school, undergraduate, and junior graduate students
- Coordinate lab safety practices, training, and group meetings

Summer Undergraduate Research Assistant **Summer 2016**
Dr. Donghui Zhang, Research Lab

Graduate Teaching Assistant

Chemistry 1212: General Laboratory **2 Semesters**

- Supervised and educated undergraduate students in General Chemistry laboratory practices
- Grade daily quizzes and laboratory reports, as well as semester exams

Chemistry 2364: Organic Chemistry Lab **4 Semesters**

- Supervised and educated undergraduate students in Organic Chemistry laboratory practices
- Grade quizzes, tests, and exams
- Held independent review and help sessions

Chemistry 4010: Macromolecular Systems I **1 Semester**

- Assisted teaching undergraduate and graduate students in Macromolecular Systems
- Grade quizzes, tests, and exams
- Held independent review and help sessions

Chemistry 4564: Advanced Organic and Inorganic Lab **2 Semesters**

- Assisted in supervising and educating undergraduate and graduate students in advanced lab synthesis, purification, and characterization

Post-Doctoral Research, **January 2022-March 2023**
Sorbonne Universite, Paris, France
Dr. Laurent Bouteiller

- Collaborated with Saclay Universite and University of Le Mans
- Synthesized Nanoparticles via RAFT for physical analysis and drug delivery applications
- Developed method to synthesis tris- urea RAFT CTA with isocyanates
- Functionalized polymers for drug targeting and fluorescent labelling

DAVID THOMAS SIEFKER

SiefkerTDavid@gmail.com • (France) +33 0783067310

Post-Doctoral Research,

CPE Lyon and TotalEnergies, Lyon, France

April 2024-Present

Dr. Franck D'Agosto (CPE), Dr. Muriel Lansalot (CPE), Dr. Maria Rappo (TotalEnergies)

- Worked with experts at TotalEnergies to design and synthesize polymers for testing

SKILLS

Proficient in Microsoft Office, Organic Biomolecule Synthesis, Polymer Synthesis, Post-Polymerization Modification Polymer Characterization, Size Exclusion Chromatography (SEC), Nuclear Magnetic Resonance Spectroscopy (NMR), Fourier Transform Infrared Spectroscopy (FTIR), Matrix-Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF MS), Differential Scanning Calorimetry (DSC); Thermo Gravimetric Analysis (TGA); Electrospray Ionization Mass Spectrometry (ESI-MS), High-performance Liquid Chromatography (HPLC)

ACTIVITIES

- Served on the Department of Chemistry Safety Committee (2016 – 2021)
 - Ambassador for graduate students in department safety meetings for policy and practice updates
- Served on the Macromolecular Chemistry Graduate Student Council as President (2018 -2021)
 - Organize networking opportunities with visiting speakers.

AFFILIATIONS

- American Chemical Society 2014-Present
- Safety Committee- Dept. of Chemistry, Louisiana State University 2016-2021

PUBLICATIONS

Peer-Reviewed:

1. **Siefker, D.:** Chan, B. A.; Nho, J.; Chao, A.; Zhang, D., Facile Synthesis and Characterization of Well-Defined Cyclic Polysarcosine by 1,1,3,3-Tetramethylguanidine-Mediated Zwitterionic Ring-Expansion Polymerization of Sarcosine-Derived N-thiocarboxyanhydride. *Macromolecules*. 2022, 55(7),2509-2516.
2. **Siefker, D.;** Williams, A. Z.; Stanley, G.; Zhang, D.; Organic Acid Promoted Controlled Ring-Opening Polymerization of α -Amino Acid-Derived N-thiocarboxyanhydrides (NTAs) towards Well-defined Polypeptides. *ACS Macro Lett.* **2018**, 7(10), 1272-1277.
3. Kalem, S.; **Siefker, D.;** Ji, M.; Guigner, J.; Schweins, R.; Pensec, S.; Rieger J.; Bouteiller, L.; Nicol, E.; Colombani, O.; Supramolecular Janus Nanocylinders: Controlling Their Characteristics by Self-Assembly Process. *Macromol Rapid Commun.* **2025**, 46 (1).
4. Cao, J.; **Siefker, D.;** Chan, B. A.; Yu, T.; Lu, L.; Saputra, M. A.; Fronczek, F. R.; Xie, W.; Zhang, D., Interfacial Ring-Opening Polymerization of Amino-Acid-Derived N-Thiocarboxyanhydrides Toward Well-Defined Polypeptides. *ACS Macro Lett.* **2017**, 6 (8), 836-840.
5. Pickett, P.; Kasprzak, C.; **Siefker, D.;** Abel, B.; Dearborn, M.; McCormick, C., Amphoteric, Sulfonamide-Functionalized "Polysoaps": CO₂-Induced Phase Separation for Water Remediation. *Macromolecules*. **2019**, 51 (21), 9052-9059.
6. Kalem, S.; Ji, M.; Gonzalez, A.; **Siefker, D.;** Guigner, J.; Schweins, R.; Pensec, S.; Rieger J.; Bouteiller, L.; Nicol, E.; Colombani, O.; Tuning the Diameter of Supramolecular Nanocylinders: Balancing Long and Short Polymer Arms for Optimized Self-Assembly. *Journal of Polymer Science*. **2025**, Accepted.

Book Chapter

1. **Siefker, D.;** Zhang, D. Ring-opening Polymerization of N-carboxyanhydrides Using Organic Initiators or Catalysts. *Organic Catalysis for Polymerisation*. Ed. Dove, D.; Sardon, H.; Nauman, S. 2019, Chapter 9, 367-405.

DAVID THOMAS SIEFKER

SiefkerTDavid@gmail.com • (France) +33 0783067310

Patent

1. Zhang, D.; Cao, J.; Chan, B. and **Siefker D.** (2018). *Methods of Making Polypeptides*. 20180057634

Presentations

- American Chemistry Society National Meeting 2018

AWARDS

- Best Poster Award, Nanopol Conference Orleans France 2023

DAVID THOMAS SIEFKER

15 Jourdan Blvd. Paris, France 75014 • SiefkerTDavid@gmail.com • (France) +33 0783067310

- PCI Magazine Student of the Month, March 2016
- 2nd Place, Best Poster Presentation (Mississippi Academy of Science) 2015