LYNETTE CEGELSKI, PH.D.
DEPARTMENT OF CHEMISTRY - STANFORD UNIVERSITY

EDUCATION

2004: Ph.D. Chemistry, Washington University, St. Louis, MO
1998: B.S. Chemistry, *summa cum laude*, Binghamton University (SUNY), Binghamton, NY

APPOINTMENTS

2024-present: Professor of Chemistry, Stanford University
2024-present: Courtesy Professor of Chemical Engineering, Stanford University
2021-present: Director of Graduate Studies, Department of Chemistry, Stanford University
2019-present: Associated Member, "Matters of Activity" Cluster of Excellence, Humboldt Universität zu Berlin
2018-2023: Courtesy Associate Professor of Chemical Engineering, Stanford University
2017-2023: Associate Professor of Chemistry, Stanford University
2014-present: Faculty Fellow, Sarafan ChEM-H Institute, Stanford University
2009-present: Faculty Member, Biophysics Program, Stanford University
2008-2017: Assistant Professor of Chemistry, Stanford University
2004-2008: Postdoctoral Scholar, Molecular Microbiology and Infectious Diseases, Washington University School of Medicine

HONORS

2023: Emerging Leaders Forum, Participant, National Academy of Medicine
2019: Presidential Early Career Award for Scientists and Engineers (PECASE)
2019: Founder's Medal - International Council on Magnetic Resonance in Biological Systems
2018: Chambers Fellowship, Stanford University
2015: NSF CAREER Award
2012: Hellman Faculty Scholar Award
2010: NIH Director's New Innovator Award
2008: Burroughs Wellcome Fund Career Award at the Scientific Interface
2008: Terman Fellowship, Stanford University
2006-2007: NIH NRSA Institutional Research Training Grant, Infectious Disease Division, Department of Internal Medicine, Washington University
2000-2002: NIH Chemistry Biology Interface Pathway Fellow, Washington University
1998-1999: Dean's Graduate Student Academic Fellowship, Washington University
1998: Honorable Mention: National Science Foundation Predoctoral Fellowship Program
1998: B.S. Chemistry *summa cum laude*
1998: American Chemical Society Senior of the Year Award, Binghamton University
1997: Phi Beta Kappa

EMPLOYMENT HISTORY

2024-present: Professor of Chemistry, Stanford University, Stanford, CA
2017-2023: Associate Professor of Chemistry, Stanford University, Stanford, CA
2008-2017: Assistant Professor of Chemistry, Stanford University, Stanford, CA
2004-2008: Postdoctoral Scholar, Washington University School of Medicine, St. Louis MO

UNIVERSITY SERVICE (RECENT)

Director of Graduate Studies, Department of Chemistry (2020 – Present)
Member, Interview Panel for Assistant Director/Biosafety Officer, Stanford University (2023)
Graduate Student Admissions Committee, Department of Chemistry (2009 – 2021)
Seminar Committee, Department of Chemistry (2012 – 2021)
Chair of the Junior Faculty Search Committee, Department of Chemistry (2018 – 2019)

PROFESSIONAL ASSOCIATIONS

Faculty Fellow, Sarafan ChEM-H Institute
Faculty Member, Stanford Biophysics Program
Faculty Member, Stanford Bio-X Interdisciplinary Biosciences Institute
Associated Member of the Cluster of Excellence, "Matters of Activity," Humboldt-Universität zu Berlin.
Member: American Chemical Society, American Society of Microbiology, Biophysical Society

PROFESSIONAL SERVICE

Editorial Advisory Board Member. *ACS Infectious Diseases* (2025-Present).
Conference Session Organizer. "Biopolymers *in vivo*." Biophysical Society Annual Meeting. San Diego, CA. February 15, 2020.
Conference Co-organizer. "Transformative Measurements and Experimental Approaches for Bacterial Biofilms" at the Okinawa Institute for Science and Technology (OIST). Okinawa, Japan. June 28-30, 2017.
Guest Editor: Special Issue on "NMR Spectroscopy for Atomistic Views of Biomembranes and Cell Surfaces" in *Biophysica et Biochimica Acta* (2014).
Conference Session Organizer. "Recent Advances and Applications in NMR Spectroscopy." ACS Western Regional Meeting. Santa Clara, CA. August 16, 2013.

Journal Reviewer: ACS Central Science, ACS Infectious Diseases, Applied and Environmental Microbiology; Biochimica et Biophysica Acta, Biochemistry; Biophysical Journal; Chemical Science; eLife; Infection and Immunity; Journal of the American Chemical Society (JACS); Journal of Bacteriology; Journal of Chemical Education; Journal of Magnetic Resonance; Journal of Structural Biology; Magnetic Resonance in Chemistry; mBio; Molecular Microbiology, Nature; Nature Methods; PLoS One; PLoS Pathogens; PNAS; Solid-State Nuclear Magnetic Resonance; Science.

Other Recent Service (since 2017).

2023	Reviewer, Wu Tsai Postdoctoral Fellowship Program, Stanford University
2023	Member, Interviewing Panel for Assistant Director/Biosafety Officer, Stanford University
2023	Chair, NIH, ZRG1 DCAI-C(90), Topics on Drug Discovery and Molecular Pharmacology A
2022	Reviewer, NIH, ZRG1 F07B-U (20): F31-F32 Fellowship Panel (Infect Dis and Immunol B)
2022	Ad hoc Reviewer, NSF, DMR Biomaterials Program
2022	Reviewer, NSF, Structural and Molecular Biophysics Panel
2020	Organizer, Biopolymers *in vivo* (BIV) Symposium and Chair of the BIV Young Investigator Award Selection Committee at the Biophysical Society Annual Meeting, San Diego, CA
2020	Reviewer, NIH, ZRG1 IDM-A (02), Topics in Drug Disc, Clinical, and Field Research Inf Dis
2020	Ad hoc Reviewer, NIH, P41 (Biomedical Technology Research Resource) Program
2020	Reviewer, NIH, MSFA Study Section
2019	Reviewer, NIH, MSFA Study Section
2019	Ad hoc Reviewer, NSF
2019	Ad hoc Reviewer, DOE
2018	Chair, Junior Faculty Search Committee, Department of Chemistry, Stanford University
2017	Reviewer, NSF, Structural and Molecular Biophysics Panel, and Ad hoc Reviewer
2017	Conference Co-Organizer, "Transformative Measurements and Experimental Approaches for Bacterial Biofilms" at the Okinawa Institute for Science and Technology, Okinawa, Japan
2017	Reviewer, DoD, Peer Reviewed Medical Research Program Panel

PUBLICATIONS (ALL ARTICLES ARE IN PEER-REVIEWED JOURNALS; 3 BOOK CHAPTERS NOT PEER-REVIEWED AS INDICATED)

1. Li Y, Poliks B, Cegelski L, Poliks M, Gryczynski Z, Piszczek G, Jagtap PG, Studelska DR, Kingston DGI*, Schaefer J*, Bane S*. **Conformation of Microtubule-Bound Paclitaxel Determined by Fluorescence Spectroscopy and REDOR NMR.** *Biochemistry* (2000) 39, 281-291.
2. Kim SJ, Cegelski L, Studelska DR, O'Connor RD, Mehta AK, Schaefer J*. **REDOR Characterization of Vancomycin Binding Sites in *S. aureus*.** *Biochemistry* (2002) 41, 6967-6977.
3. Cegelski L, Hing AW, Kim SJ, Studelska DR, O'Connor RD, Mehta AK, Schaefer J*. **REDOR Characterization of Vancomycin Mode of Action in *S. aureus*.** *Biochemistry* (2002) 41, 13053-13058.
4. Mehta AK, Cegelski L, O'Connor RD, Schaefer J*. **REDOR with a Relative Full-Echo Reference.** *Journal of Magnetic Resonance* (2003) 163, 182-187.
5. Cegelski L, Rice CV, O'Connor RD, Caruano AL, Tochtrop GP, Cai ZY, Covey DF*, Schaefer J*. **Mapping the Locations of Estradiol and Potent Neuroprotective Analogues in Phospholipid Bilayers by REDOR.** *Drug Development Research* (2005) 66, 93-102.
6. Cegelski L and Schaefer J*. **Glycine Metabolism in Intact Leaves by *in vivo* $^{13}CO_2$ and ^{15}N Labeling.** *Journal of Biological Chemistry* (2005) 280, 39238-39245.
7. Cegelski L and Schaefer J*. **Photorespiration in Intact Leaves by *in vivo* $^{13}CO_2$ Labeling.** *From the cover. Journal of Magnetic Resonance* (2006) 178, 1-10.
8. Toke O*, Cegelski L*, Schaefer J. **Peptide Antibiotics in Action: Investigation of Polypeptide Chains in Insoluble Environments by REDOR.** Review: *Biochimica et Biophysica Acta* (2006) 1758, 1314-1329.
9. Cegelski L, Steuber D, Mehta AK, Kulp DW, Axelsen PH, Schaefer J*. **Conformational and Quantitative Characterization of Oritavancin–Peptidoglycan Complexes in Whole Cells of *Staphylococcus aureus* by *in vivo* ^{13}C and ^{15}N Labeling.** *Journal of Molecular Biology* (2006) 357, 1253-62.
10. Kim SJ, Cegelski L, Preobrazhenskaya MN, Schaefer J*. **Structures of *Staphylococcus aureus* Cell-wall Complexes with Vancomycin, Eremomycin, and Oritavancin Analogues by $^{13}C\{^{19}F\}$ and $^{15}N\{^{19}F\}$ Rotational-echo Double Resonance.** *Biochemistry* (2006) 45, 5235-5250.
11. Bann JG, Cegelski L, Hultgren SJ*. **LRP6 Holds the Key for the Entry of Anthrax Toxin.** *Cell* (2006) 124, 3-5.
12. Paik Y, Yang C, Metaferia B, Tang S, Bane S, Ravindra R, Shanker N, Alcaraz AA, Johnson SA, Schaefer J, O'Connor RD, Cegelski L, Snyder JP, Kingston DGI*. **REDOR NMR Distance Measurements for the Tubulin-Bound Paclitaxel Conformation.** *Journal of the American Chemical Society* (2007) 129, 361-370.
13. Kim SJ, Cegelski L, Stueber D, Singh M, Dietrich E, Tanaka KS, Parr TR, Farand AR, Schaefer J*. **Oritavancin Exhibits Dual Mode of Action to Inhibit *S. aureus* Peptidoglycan Biosynthesis.** *Journal of Molecular Biology* (2008) 377, 281-293.
14. Cegelski L, Marshall GR, Eldridge GR, Hultgren SJ*. **The Biology and Future Prospects of Anti-Virulence Therapies.** *Nature Reviews Microbiology* (2008) 6, 17-27.
15. Justice SJ, Hunstad DH, Cegelski L, Hultgren SJ*. **Morphological Plasticity as a Bacterial Survival Strategy.** *Nature Reviews Microbiology* (2008) 6, 162-168.
16. Cegelski L, Pinkner JS, Hammer ND, Cusumano CK, Hung CS, Chorell E, Åberg V, Walker JN, Seed PC, Almqvist F, Chapman MR, Hultgren SJ*. **Small Molecule Inhibitors Target *E. coli* Amyloid Biogenesis and Biofilm Formation.** *Nature Chemical Biology* (2009) 5, 913-919.
17. Cegelski L, Smith CL, Hultgren SJ*. **Adhesion, Microbial**. In *The Encyclopedia of Microbiology*, 3rd Edition, edited by Moselio Schaechter, Elsevier (2009) 2-10. (Book chapter; not peer reviewed)

18. Cegelski L*, O'Connor RD, Stueber D, Singh M, Poliks B, Schaefer J. **Plant Cell-Wall Cross-Links by REDOR NMR Spectroscopy.** *Journal of the American Chemical Society* (2010) 132, 16052-16057.
19. Toke O and Cegelski L*. **REDOR Applications in Biology: an Overview.** In *Solid-State NMR Studies of Biopolymers (2010).* McDermott, AE and Polenova, T (eds). John Wiley & Sons Ltd, Chichester, UK, pp 473-490. (Book chapter; not peer reviewed)
20. Lim JY, May J, Cegelski L*. **DMSO and Ethanol Elicit Increased Amyloid Biogenesis and Amyloid-integrated Biofilm Formation in *E. coli*.** *Journal of Applied and Environmental Microbiology* (2012) 78, 3369-3378.
21. Wu C, Lim JY, Fuller G, Cegelski L*. **Quantitative Analysis of Amyloid-integrated Biofilms Formed by Uropathogenic *E. coli* at the Air-liquid Interface.** *Biophysical Journal* (2012) 103, 464-471.
22. Zhou X and Cegelski L*. **Nutrient-Dependent Structural Changes in *S. aureus* Peptidoglycan Revealed by Solid-State NMR Spectroscopy.** *Biochemistry* (2012) 51, 8143-8153.
23. Wu C, Lim JY, Fuller G*, Cegelski L*. **Disruption of *E. coli* Amyloid-Integrated Biofilm Formation at the Air-Liquid Interface by a Polysorbate Surfactant**. *Langmuir* (2013) 29, 920–926.
24. McCrate OA, Zhou X, Cegelski L*. **Curcumin as an Amyloid-specific Dye**. *Chemical Communications* (2013) 49, 4193-4195.
25. McCrate OA, Zhou X, Reichhardt, CCR, Cegelski L*. **Sum of the Parts: Composition and Architecture of the Bacterial Extracellular Matrix**. *Journal of Molecular Biology* (2013) 425: 4286-4294.
26. Cegelski L*. **REDOR NMR for Drug Discovery.** *Bioorganic & Medicinal Chemistry Letters* (2013) 23, 5767-5775.
27. Lim JY, Pinkner J, and Cegelski L*. **Community Behavior and Amyloid-associated Phenotypes, among a Panel of Uropathogenic *E. coli***. *Biochemical and Biophysical Research Communications* (2014) 443, 345-350.
28. Reichhardt C and Cegelski L*. **Solid-State NMR for Bacterial Biofilms.** *Molecular Physics* (2014) 112, 887-894.
29. Saggu M, Carter B, Zhou X, Faries K, Cegelski L, Holten D, Boxer SG, Kirmaier C*. **Putative Hydrogen Bond to Tyrosine M208 in Photosynthetic Reaction Centers from *Rhodobacter capsulatus* Significantly Slows Primary Charge Separation.** *Journal of Physical Chemistry B* (2014) 118, 6721-6732.
30. Hollenbeck E, Fong JCN, Lim JY, Yildiz F*, Fuller GG*, Cegelski L*. **Molecular Determinants of Mechanical Properties of *V. cholerae* Biofilms at the Air-Liquid Interface.** *Biophysical Journal* (2014) 107, 2245-2252.
31. Reichhardt C, Fong JCN, Yildiz F, Cegelski L*. **Characterization of the *Vibrio cholerae* Extracellular Matrix: A Top-Down Solid-State NMR Approach.** *Biochimica et Biophysica Acta* - Special Issue on "NMR Spectroscopy for Atomistic Views of Biomembranes and Cell Surfaces" (2015) 1848, 378-383.
32. Cegelski L* and Weliky D*. **NMR Spectroscopy for Atomistic Views of Biomembranes and Cell Surfaces.** *Biochimica et Biophysica Acta* (2015) 1848, 201-202.
33. Loy BA, Lesser AB, Staveness D, Billingsley KL, Cegelski L, Wender PA*. **Toward a Biorelevant Structure of Protein Kinase C Bound Modulators: Design, Synthesis, and Evaluation of Labeled Bryostatin Analogues for Analysis with Rotational Echo Double Resonance NMR Spectroscopy**. *JACS* (2015) 137, 3678-3685.
34. Cegelski L*. **Bottom-Up and Top-Down Solid-State NMR Approaches for Bacterial Biofilm Matrix Composition.** *Journal of Magnetic Resonance* (2015) 253, 91-97.

35. Nygaard R, Romaniuk JAH, Rice DM, Cegelski L*. **Spectral Snapshots of Bacterial Cell-Wall Composition and the Influence of Antibiotics by Whole-Cell NMR**. *Biophysical Journal* (2015) 108, 1380-1389.
36. Reichhardt C, Ferreira JAG, Joubert L, Clemons KV, Stevens DA, Cegelski L*. **Analysis of the Aspergillus fumigatus Biofilm Extracellular Matrix by Solid-State Nuclear Magnetic Resonance Spectroscopy**. *Eukaryotic Cell* (2015) 14, 1064-1072.
37. Jones C, Utada A, Davis KR, Thongsomboon W, Sanchez DZ, Banakar V, Cegelski L, Wong GCL*, Yildiz FH*. **Cyclic-di-GMP Regulates Motile to Sessile Transition by Modulating MshA Pili Biogenesis and Near-Surface Motility Behavior in *Vibrio cholerae*.** *PLoS Pathogens* (2015) 11, e1005068.
38. Romaniuk JAH and Cegelski L*. **Bacterial Cell Wall Composition and the Influence of Antibiotics by Cell-Wall and Whole-Cell NMR.** *Philosophical Transactions of the Royal Society* (2015) 370:20150024.
39. Maher MC, Lim JY, Gunawan C, Cegelski L*. **Cell-Based High-Throughput Screening Identifies Rifapentine as an Inhibitor of Amyloid and Biofilm Formation in *E. coli.*** *ACS Infectious Diseases* (2015) 1, 460-468.
40. Rice DM, Romaniuk JAH, Cegelski L*. **Frequency selective REDOR-Spin Diffusion Relays in Uniformly Labeled Whole Cells.** *Solid-state Nuclear Magnetic Resonance* (2015) 72, 132-139.
41. Reichhardt C, Jacobcon AN, Maher MC, Uang J, McCrate OA, Eckart M, Cegelski L*. **Congo Red Interactions with Curli-producing *E. coli* and Native Curli Amyloid Fibers.** *PLoS One* (2015) DOI: 10.1371/journal.pone.0140388.
42. Hollenbeck E, Douarche C, Allain J, Roger P, Regeard C, Cegelski L, Fuller GG, Respaud E*. **Mechanical Behavior of a *Bacillus subtilis* Pellicle.** *Journal of Physical Chemistry B* (2016) 120, 6080-6088.
43. Reichhardt C, DA Stevens, and Cegelski L*. **Fungal Biofilm Composition and Opportunities in Drug Discovery.** *Future Medicinal Chemistry* (2016) 8, 1455-1468.
44. Reichhardt C, McCrate OA, Zhou X, Lee J, Thongsomboon W, Cegelski L*. **Influence of the Amyloid Dye Congo Red on Curli, Cellulose, and the Extracellular Matrix in *E. coli* during Growth and Matrix Purification.** *Analytical and Bioanalytical Chemistry* (2016) 408, 7709-7717.
45. Joubert L*, Ferreira JAG, Stevens DA, Cegelski L. **Visualization of *Aspergillus fumigatus* Biofilms with Scanning Electron Microscopy and Variable Pressure-Scanning Electron Microscopy: a Comparison of Processing Techniques**. *Journal of Microbiological Methods* (2016) 132, 46-55.
46. Cegelski L*. **Disentangling Nanonets: Human α-Defensin 6 Targets *C. albicans* Virulence**. *Biochemistry* (2017) 56, 1027-1028.
47. Chen Z, Mercer JAM, Zhu X, Romaniuk JAH, Pfattner R, Cegelski L, Martinez TJ*, Burns NZ*, Xia Y*. **Mechanochemical Unzipping of Insulating Polyladderene to Semiconducting Polyacetylene**. *Science* (2017) 357, 475-479.
48. Nygaard R, Romaniuk JAH, Rice DM, Cegelski L*. **Whole Ribosome NMR: Dipolar Couplings and Contributions to Whole Cells**. *Journal of Physical Chemistry B* (2017) 121, 9331-9335.
49. Nazik H, Joubert LM, Secor PR, Sweere JM, Bollyky PL, Sass G, Cegelski L, Stevens DA*. ***Pseudomonas* Phage Inhibition of *Candida albicans*.** *Microbiology* (2017) 163, 1568-1577.
50. Bartlett C, Bansal S, Burnett A, Suits M, Schaefer J, Cegelski L*, Horsman G*, Weadge J*. **Whole-cell Detection of C-P bonds in Bacteria**. *Biochemistry* (2017) 56, 5870-5873.
51. Yang H, Staveness D, Ryckbosch SM, Loy BA, Axtman AD, Barnes AB, Pande VS, Schaefer J*, Wender PA*, Cegelski L*. **REDOR NMR Reveals Multiple Conformers for a Protein Kinase C Ligand in a Membrane Environment.** *ACS Central Science* (2018) 4, 89-96.
52. Thongsomboon W, Serra DO, Possling A, Hadjineophytou C, Hengge R*, Cegelski L*. **Phosphoethanolamine Cellulose: a Naturally Produced Chemically Modified Cellulose**. *Science* (2018) 359, 334-338.

53. Romaniuk JAH and Cegelski L*. **Peptidoglycan and Teichoic Acid Levels and Alterations in *S. aureus* by Cell-Wall and Whole-Cell NMR.** *Biochemistry* (2018) 57, 3966-3975.
54. Reichhardt C and Cegelski L*. **The Congo Red Derivative FSB Binds to Curli Amyloid Fibers and Specifically Stains Curliated *E. coli*.** *PLoS One* (2018) 13(8):e0203226.
55. Su JK, Feist JD, Yang J, Mercer JAM, Romaniuk JAH, Chen Z, Cegelski L, Burns NZ, Xia Y*. **Synthesis and Mechanochemical Activation of Ladderene-Norbornene Block Copolymers.** *Journal of the American Chemical Society* (2018) 140, 12388-12391.
56. Hollenbeck EC, Antonoplis A, Chai C, Thongsomboon W, Fuller G*, Cegelski L*. **Phosphoethanolamine Cellulose Enhances Curli-Mediated Adhesion of Uropathogenic *Escherichia coli* to Bladder Epithelial Cells**. *PNAS* (2018) 115, 10106-10111.
57. Antonoplis A, Zang X, Huttner MA, Chong K, Lee YB, Co JY, Amieva M, Kline KA, Wender PA*, Cegelski L*. **A Dual Function Antibiotic-Transporter Conjugate Exhibits Superior Activity in Sterilizing MRSA Biofilms and Killing Persister Cells.** *Journal of the American Chemical Society* (2018) 140, 16140-16151.
58. Reichhardt C, Joubert LM, DA Stevens, and Cegelski L*. **Integration of Electron Microscopy and Solid-state NMR Analysis for New Views and Compositional Parameters of Aspergillus fumigatus Biofilms.** *Medical Mycology* (2019) 57, S239-S244.
59. Beebout CJ, Eberly AR, Werby SH, Reasoner S, Brannon JR, De S, Fitzgerald MJ, Huggins MM, Clayton DB, Cegelski L, Hadjifrangiskou M*. **Respiratory Heterogeneity Shapes Biofilm Formation and Host Colonization in Uropathogenic *Escherichia coli*.** *mBio* (2019) 10(2) e02400-18.
60. Zamorano-Sanchez D, Xian W, Lee C, Salinas M, Thongsomboon W, Cegelski L, Wong G, Yildiz F*. **Functional Specialization in Vibrio cholerae Diguanylate Cyclases: Distinct Modes of Motility Suppression and c-di-GMP Production**. *mBio* (2019) 10(2) e00670-19.
61. Yang J, Horst M, Romaniuk JAH, Jin Z, Cegelski L, Xia Y*. **Benzoladderene Mechanophores: Synthesis, Polymerization, and Mechanochemical Transformation.** *Journal of the American Chemical Society* (2019) 141, 6479-6483.
62. Werby S and Cegelski L*. **Spectral Comparisons of Mammalian Cells and Intact Organelles by Solid-State NMR.** *Journal of Structural Biology* (2019) 206, 49-54.
63. Werby S and Cegelski L*. **Design and Implementation of a Six-Session CURE Module using Biofilms to Explore the Chemistry-Biology Interface.** Werby SH and Cegelski L*. *Journal of Chemical Education* (2019) 96, 2050-2054.
64. Rabiah NI, Romaniuk JAH, Fuller GG, Scales CW, Cegelski L*. **Carbon Compositional Analysis of Hydrogel Contact Lenses by Solid-State NMR Spectroscopy.** *Solid-State NMR* (2019) 102, 47-52.
65. Jeffries J, Fuller GG, Cegelski L*. **Unraveling *E. coli*'s Cloak: Identification of Phosphoethanolamine Cellulose, its Functions, and Applications.** *Microbiology Insights* (2019) https://doi.org/10.1177/1178636119865234.
66. Antonoplis A, Zang X, Wegner T, Wender PA*, Cegelski L*. **A Vancomycin-Arginine Conjugate Inhibits Growth of Carbapenem-resistant *E. coli* and Targets Cell-Wall Synthesis.** *ACS Chemical Biology* (2019) 14, 2065-2070.
67. Shen J, Gurtner GC, Cegelski L, Yang YP*. **Mechanisms of Action and Chemical Origins of Biologically Active Antimicrobial Polymers.** Book chapter *in* Racing for the Surface: Pathogenesis of Implant Infection and Advanced Antimicrobial Strategies (2019).(Book chapter; not peer reviewed)
68. Abriat C, Enriquez K, Virgilio N, Cegelski L, Fuller GG, Daigle F, Heuzey M*. **Mechanical and Microstructural Insights of *Vibrio cholerae* and *Escherichia coli* Dual-species Biofilm at the Air-liquid Interface**. *Colloids and Surfaces B: Biointerfaces* (2020) 188, 110786.

69. Thongsomboon W, Werby SH, Cegelski L*. **Evaluation of Phosphoethanolamine Cellulose Production among Bacterial Communities using Congo Red Fluorescence.** *Journal of Bacteriology* (2020) 202, e00030-20.
70. Yang H, Horst M, Werby SH, Cegelski L, Burns NZ, Xia Y*. **Bicyclohexene-*peri*-naphthalenes: Scalable Synthesis, Diverse Functionalization, Efficient Polymerization, and Facile Mechanoactivation of Their Polymers**. *Journal of the American Chemical Society* (2020) 142, 14619-14626.
71. Jeffries J, Thongsomboon W, Visser JA, Enriquez K, Yager D, Cegelski L*. **Variation in the Ratio of Curli and Phosphoethanolamine Cellulose Associated with Biofilm Architecture and Properties**. *Biopolymers* (2020) e23395.
72. Boswell BR, Mansson CMF, Cox JM, Jin Z, Romaniuk JAH, Lindquist KP, Cegelski L, Xia Y, Lopez SA, Burns NZ*. **Mechanochemical Synthesis of an Elusive Fluorinated Polyacetylene**. *Nature Chemistry* (2021) 13, 41-46.
73. Neville LF, Shalit I, Warn PA, Scheetz MH, Sun J, Chosy MB, Wender PA, Cegelski L, Rendell JT*. ***In vivo* Targeting of *E. coli* with Vancomycin-arginine**. *Antimicrobial Agents and Chemotherapy* (2021) 65, e02416-20.
74. Acheson JF, Ho R, Goularte NF, Cegelski L, Zimmer J*. **Molecular Organization of the *E. coli* Cellulose Synthase Macrocomplex.** *Nature Structural and Molecular Biology* (2021) 28, 310-318.
75. Wells DH, Goularte NF, Barnette MJ, Cegelski L*, Long SR*. **Identification of a Novel Pyruvyltransferase using ^{13}C Solid-state NMR to Analyze Rhizobial Exopolysaccharides.** *Journal of Bacteriology* (2021) 203, e00403-21.
76. Goularte NF, Kallem T, Cegelski L*. **Chemical and Molecular Composition of the Chrysalis Reveals Common Chitin-rich Structural Framework for Monarchs and Swallowtails.** *Journal of Molecular Biology* (2022). 434, 167456.
77. Joshi CS, Cegelski L, Mysorekar IM*. **PITing it forward: A new link in the journey of uropathogenic *E. coli* in the urothelium.** *Cell Reports* (2022) *39*(4), 110758.
78. Kallem T and Cegelski L*. **Catching Threads in Bacterial Cell Walls.** *ACS Central Science* (2022) 8, 1376-1379.
79. Visser JA, Yager D, Chambers SA, Lim JY, Cao X, Cegelski L*. **Nordihydroguaiaretic Acid (NDGA) Inhibits CsgA Polymerization, Bacterial Amyloid Biogenesis, and Biofilm Formation**. *ChemBioChem* (2023) e202300266.
80. Werby SH, Brčić J, Chosy MB, Sun J, Render JT, Neville LF, Wender PA, Cegelski L*. **Detection of Intact Vancomycin-Arginine as the Active Antibacterial Conjugate in *E. coli* by Whole Cell Solid-State NMR**. *RSC Medicinal Chemistry* (2023) *14*, 1192-1198.
81. Liu X, Brčić J, Cassell G, Cegelski L*. **CPMAS NMR Platform for Direct Compositional Analysis of Mycobacterial Cell-wall Complexes and Whole Cells.** *Journal of Magnetic Resonance Open* 16-17 (2023) 100127.
82. Brčić J, Tong A, Wender PA*, Cegelski L*. **Conjugation of Vancomycin with a Single Arginine Improves Efficacy Against Mycobacteria by More Effective Peptidoglycan Targeting.** *Journal of Medicinal Chemistry* (2023) *66*(15), 10226-10237.
83. Chosy MB, Sun J, Rahn HP, Brčić J, Wender PA*, Cegelski L*. **Vancomycin-Polyguanidino Dendrimer Conjugates Inhibit Growth of Antibiotic-Resistant Gram-Positive and Gram-Negative Bacteria and Eradicate Biofilm-Associated *S. aureus.*** *ACS Infectious Diseases* (2024) 10, 384-397.
84. Rahn HP, Liu X, Chosy MB, Sun Jiuzhi, Cegelski L*, Wender PA*. **Biguanide-Vancomycin Conjugates are Effective Broad-Spectrum Antibiotics against Actively Growing and Biofilm-Associated Gram-Positive and Gram-Negative ESKAPE Pathogens and Mycobacteria.** *Journal of the American Chemical Society* (2024) 146, 22541-22552.

85. Liccardo G, Cendejas M, Mandal S, Stone M, Porter S, Nhan B, Kumar A, Smith J, Plessow P, Cegelski L, Osio-Norgaard J, Abild-Pedersen F, Chi M, Datye A, Bent S, Cargnello M. **Unveiling the Stability of Encapsulated Pt Catalysts using Nanocrystals and Atomic Layer Deposition**. *Journal of the American Chemical Society* (2024) 146, 23909-23922.
86. Verma P, Ho R, Chambers SA, Cegelski L*, Zimmer J*. **Insights into Phosphoethanolamine Cellulose Synthesis and Secretion across the Gram-Negative Cell Envelope.** *Nature Communications* (2024) 15, 7798.
87. Weeresekera R, Moreau A, Huang X, Nam K-M, Hinbest A, Yun H, Liu X, Ashwood C, Pepi LE, Cegelski L, Yan J*, Olson R*. ***Vibrio cholerae*** **RbmB is an α-1,4-Polysaccharide Lyase with Biofilm-Dispersal Activity against Vibrio Polysaccharide (VPS** *PLoS Pathogens* (2024) 20, e1012750.
88. Thappeta Y, J. Cañas-Duarte S, Kallem T, Fragasso A, Xiang Y, Gray W, Lee C, Cegelski L, Jacobs-Wagner C*. **Glycogen Phase Separation Drives Macromolecular Rearrangement and Asymmetric Division in *E. coli*.** *bioRxiv [Preprint]. (*2024) doi: 10.1101/2024.04.19.590186.

PATENTS AND PATENT APPLICATIONS

1. **"Methods for Microbial Biofilm Destruction."** Cegelski L, Lim J. U.S. Patent No: 9,271,493 (2016).
2. **"Production and Use of Phosphoethanolamine Cellulose and Derivatives."** Cegelski L, Thongsomboon W. International Patent Application: U.S. Patent No: 11667898 (2023).
3. **"Composition and Method for New Antimicrobial Agents with Secondary Mode(s) of Action Provided by Conjugation of an Antimicrobial to a Guanidinium-rich Molecular Transporter."** Huttner M, Wender PA, Cegelski L, Zang X, Antonoplis A. Patent Application: US 62/633,368 (2018).

TALKS (2008 – PRESENT)

1. "From the Chemical Biology Toolbox: Whole-cell NMR for the Microbiologist." **Washington University Infectious Diseases Seminar Series.** St. Louis, MO. 2/14/08.
2. "Targeting Bacterial Amyloid Assembly and Biofilm Formation." **Annual Meeting of the American Society of Microbiology.** Boston, MA. 6/5/08.
3. "The Biological Chemistry Track at Stanford University." **Howard Hughes Medical Institute Professors Meeting.** Chevy Chase, MD. 6/7/09.
4. "Novel Strategies in Drug Development." **Santa Clara Valley/Northern California Meeting of the American Chemical Society.** South San Francisco, CA. 9/23/10.
5. "The Chemistry and Biology of Bacterial Biofilms." **San Francisco State University.** Department of Chemistry and Biochemistry. 4/29/11.
6. "Probing the Bacterial Cell Surface by Solid-state NMR and Chemical Biology." **Portland State University.** Department of Chemistry. 5/13/11.
7. "Probing the Bacterial Cell Surface by Solid-state NMR and Chemical Biology." **University of California Santa Cruz.** Department of Chemistry and Biochemistry. 5/18/11.
8. "Assembly, Function, and Inhibition of Uropathogenic *E. coli* Amyloid-integrated Biofilms." **Stanford University.** Department of Urology. 9/26/11.
9. "Charting the Landscape of the Bacterial Biofilm Matrix: where Chemical Biology Meets Solid-state NMR." **Wichita State University.** Department of Chemistry. 2/15/12.
10. "Charting the Landscape of the Bacterial Biofilm Matrix: where Chemical Biology Meets Solid-state NMR." **San Jose State University.** Department of Chemistry. 3/13/12.
11. "Sum of the Parts: Bacterial Biofilms by Solid-state NMR." **Samuel I. Weissman Lecture and Symposium. Washington University.** St. Louis, MO. 5/11/12.

12. "Structure and Function of Bacterial Amyloid Fibers and Biofilms." **Rocky Mountain Conference on Analytical Chemistry.** Copper Mountain, CO. 7/17/12.
13. "Structure and Function of Bacterial Amyloid Fibers and Biofilms." **Frontiers of NMR in Biology-Keystone Symposium.** Snowbird, UT. 1/15/13.
14. "Structure and Function of Bacterial Amyloid Fibers and Biofilms." **Biophysical Society Meeting.** Philadelphia, PA. 2/8/13.
15. "Charting the Landscape of the Bacterial Biofilm Matrix: where Chemical Biology Meets Solid-state NMR." **Sixth International Conference on Advanced Materials and Nanotechnology (AMN-6).** Auckland, New Zealand. 2/14/13.
16. "Structure, Function, and Inhibition of Bacterial Biofilms." **Annual Symposium of the Stanford University Center for Molecular Analysis and Design**. Stanford, CA. 5/3/13.
17. "Bacterial Biofilms by Solid-State NMR." **Atomic View of Biomolecular Function. University of Michigan.** Ann Arbor, MI. 7/12/13.
18. "Sum of the Parts: Composition and Architecture of the Bacterial Extracellular Matrix." **GRC: Microbial Adhesion and Signal Transduction.** Salve Regina. Newport, RI. 7/22/13.
19. "Structure, Function, and Inhibition of Bacterial Biofilms." **ISACS11: Challenges in Chemical Biology Conference. MIT.** Boston, MA. 7/24/13.
20. "Sum of the Parts: Composition and Architecture of the Bacterial Extracellular Matrix." **ACS National Meeting.** Indianapolis, IN. 9/8/13.
21. "Sum of the Parts: Composition and Architecture of the Bacterial Extracellular Matrix." **Western Regional ACS Meeting.** Santa Clara, CA. 10/3/13. ***Session organizer and speaker.***
22. "Bacterial Biofilms by Solid-State NMR." **Southwest Regional ACS Meeting.** Waco, TX. 11/19/13.
23. "Structure, Function, and Inhibition of Bacterial Biofilms: Insights from Small Molecules and a Big Magnet." **University of the Pacific.** Department of Chemistry. 1/21/14.
24. "Finding New Antibiotics: Adventures at the Interface of Chemistry and Biology." **Castro Valley Educational Foundation Lecture. Castro Valley Center for the Arts.** Castro Valley, CA. 1/29/14.
25. "Structure, Function, and Inhibition of Bacterial Biofilms: Insights from Small Molecules and a Big Magnet." **Washington University School of Medicine**. Department of Biochemistry. 3/4/14.
26. "Bacterial Biofilms: Mapping the Extracellular Matrix by Solid-State NMR." **Experimental NMR Conference.** Boston, MA. 3/28/14.
27. "Structure, Function, and Inhibition of Bacterial Biofilms: Lessons from Small Molecules and a Big Magnet." **Science at the Edge Seminar Series. Michigan State University.** East Lansing, MI. 4/18/14.
28. "Structure, Function, and Inhibition of Bacterial Biofilms: Lessons from Small Molecules and a Big Magnet." **UC Santa Barbara.** Department of Chemistry. Santa Barbara, CA. 4/30/14.
29. "Rheology of Bacterial Biofilms: A Tale of Two Microbes." **Industrial Partnership for Research in Interfacial and Materials Engineering (IPRIME) Annual Meeting. University of Minnesota.** Minneapolis, MN. 5/27/14.
30. "Structure, Function, and Inhibition of Bacterial Biofilms: Lessons from Small Molecules and a Big Magnet." **University of Minnesota.** Minneapolis, MN. 5/28/14.
31. "Spectral Insights into Composition in Bacterial Cell Walls and Biofilms." **Canadian Society for Chemistry Annual Meeting.** Vancouver, B.C. 6/2/14.
32. "Composition and Bacterial Cell Walls and Biofilms: Insights from Small Molecules and a Big Magnet." **GRC: Bacterial Cell Surfaces.** Mount Snow, Vermont. 6/23/14.
33. "Structure, Function, and Inhibition of Bacterial Biofilms: Lessons from Small Molecules and a Big Magnet." **International Conference on Magnetic Resonance in Biological Systems.** Dallas, Texas. 8/25/14.
34. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **Emory University.** Department of Chemistry. Atlanta, Georgia. 10/6/14.
35. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **UC Berkeley.** Magnetic Resonance Seminar Series. Berkeley, CA. 10/10/14.
36. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **University of Oregon.** Department of Biochemistry. Eugene, OR. 10/17/14.

37. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **MIT.** Department of Chemistry. Boston, MA. 10/27/14.
38. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **Brandeis University.** Department of Chemistry. Boston, MA. 10/28/14.
39. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **University of Illinois Urbana-Champaign.** Department of Biochemistry. Urbana, IL. 5/1/15.
40. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **University of Toronto.** Department of Chemistry. Toronto, Canada. 5/14/15.
41. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **Caltech.** Department of Chemistry. Pasadena, CA. 5/27/15.
42. "Bacterial Biofilms: Lessons from Small Molecules and a Big Magnet." **Montana State University.** Center for Biofilm Engineering. Bozeman, MT. 10/15/15.
43. "Physical and Biochemical Tools for Biofilm Matrix Composition and Function." **7th ASM Conference on Biofilms**. Chicago, IL. 10/27/15.
44. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **University of Washington.** Department of Chemistry. Seattle, WA. 12/2/15.
45. "Spectral Snapshots of Bacterial Cell-Wall Composition and the Influence of Antibiotics by Whole-Cell NMR." **Pacifichem 2015.** Advances in Biological Solid-State NMR. Honolulu, HI. 12/15/15.
46. "Structure, Function, and Inhibition of Bacterial Cell Walls and Biofilms: Lessons from Small Molecules and a Big Magnet." **UC Davis.** Department of Chemistry. Davis, CA. 5/17/16.
47. "Molecular Contributions to *E. coli* Adhesion in the Bladder and Opportunities in Drug Discovery." **Stanford Institute for Immunity, Transplantation and Infection Seed Grant Awards Symposium**. Stanford, CA. 6/1/16.
48. "*E. coli* Extracellular Matrix Components, Inhibitors, and Implications for UTI." **Clinical and Scientific Advances in Urinary Tract Infection**. Columbus, OH. 8/27/16.
49. "Biosynthetic Modification of Cellulose for Improved Cellulose-to-Ethanol Conversion." **Stanford. Precourt Institute Energy Seed Project Annual Workshop**. Stanford, CA. 09/28/16.
50. "Bacterial Cell-Wall and Biofilm Discoveries with Small Molecules and a Big Magnet." **Stanford.** Department of Chemistry. Stanford, CA. 10/4/16.
51. "Entanglements of Art with Science." **The Pill: Chemistry, Art & Art History and the Legacy of Carl Djerassi.** Stanford, CA. 10/20/17.
52. "Biosynthetic Modification of Cellulose for Improved Cellulose-to-Ethanol Conversion." **Stanford. Precourt Institute Energy Advisory Council Meeting.** Stanford, CA. 12/6/16.
53. "Bugs, Films and Leaves." **Celebration Symposium in Honor of Professor Jacob Schaefer. Washington University.** St. Louis, MO. 1/6/17.
54. "Isotopic Labeling and Solid-State NMR Detection Strategies for Intact Plant Leaves, Bacterial Whole Cells and Biofilms." **Advanced Isotopic Labeling Methods for Integrated Structural Biology**. Grenoble, France. 3/6/17.
55. "A Newly Discovered Modified form of Cellulose Produced by *E. coli*: Structure, Biosynthesis, and Implications." **Cellulose Structure and Biosynthesis Symposium. CELL Division of the ACS Meeting**. San Francisco, CA. 4/2/17.
56. "Composition and Architecture in Intact Bacterial Cells, Cell Walls and Biofilms." **Chemical Biophysics Symposium. University of Toronto.** Toronto, CANADA. 5/4/17.
57. "Discoveries in the Bacterial Extracellular Matrix: a Naturally Produced Chemically Modified Cellulose." **3M.** Minnesota, MN. 5/18/17.
58. "Biofilm Structure, Function and Inhibition: Discoveries with Small Molecules and a Big Magnet." **Biofilms: Stuck On You, Biofilm Symposium.** University of Minnesota. Minnesota, MN. 5/19/17.
59. "Composition and Architecture in Intact Bacterial Cells, Cell Walls and Biofilms." **International Society of Magnetic Resonance (ISMAR) Conference**. Quebec City, Canada. 7/25/17.

60. "New Chemistry in Bacterial Biofilms: Discoveries with Small Molecules and a Big Magnet." **Symposium Co-organizer. Transformative Measurements and Experimental Approaches for Bacterial Biofilms. Okinawa Institute of Science and Technology**. Okinawa, Japan. 8/29/17.
61. "Biosynthetic Modification of Cellulose for Improved Cellulose-to-Ethanol Conversion." **Stanford. Precourt Institute Energy Seed Project Annual Workshop**. Stanford, CA. 09/28/17.
62. "Discovery of a Naturally Produced Chemically Modified Cellulose and Implications for Energy Research." **Innovators to Watch. Annual GCEP Symposium. Stanford.** Stanford, CA. 10/18/17.
63. "Targeting Biofilms: Views of *Aspergillus fumigatus* with a Strong Microscope and a Big Magnet." **8th Advances Against Aspergillus Conference.** Lisbon, Portugal. 02/03/18.
64. "Macromolecular and Whole Cell NMR for Biological Discovery." **Biophysical Society Conference**. San Francisco, CA. 02/20/18.
65. "New Views of Bacterial Cell Walls and Biofilms: Discovery at the Chemistry-Biology Interface." **Department of Microbiology, University of Indiana**. Indianapolis, IN. 03/20/18.
66. "New Views of Bacterial Cell Walls and Biofilms." **Department of Chemistry and Chemical Biology, Harvard**. Boston, MA. 04/09/18.
67. "New Views of Bacterial Cell Walls and Biofilms." **59th Experimental NMR Conference**. Orlando, FL. 05/01/18.
68. "New Ways of Looking at Polysaccharides in Bacterial Cell Walls and Biofilms." **FASEB Microbial Glycobiology.** Scottsdale, AZ. 06/20/18.
69. Invited Lecturer and Faculty Participant at "**Frontiers of Biophysics," 16th Course of the International School for Biological Magnetic Resonance**. Erice-Sicily, ITALY. 08/01/18-08/08/18.
70. "New Views of Bacterial Cell Walls and Biofilms." **International Council on Magnetic Resonance in Biological Systems Conference, Founder's Medal Lecture.** Dublin, IRELAND. 08/19/18.
71. "New Chemistry at the Bacterial Cell Surface: Targeting Virulence and Host-Pathogen Interactions." **New York Academy of Sciences Symposium: New Therapeutic Strategies to Target Antibacterial Resistance.** New York, NY. 10/23/18.
72. "New Views of Bacterial Cell Walls and Biofilms." **Department of Chemistry, San Jose State University**. San Jose, CA. 10/18/19.
73. "New Discoveries and New Chemistry at the Bacterial Cell Surface." **Pomona College Science Seminar**. Claremont Colleges, Ontario, CA. 02/12/19.
74. "Cell Walls and Biofilms: Discovery and New Chemistry at the Bacterial Cell Surface." **Molecular Biophysics Discussion Group – Student Invited Speaker, University of Texas Southwestern Medical Center.** Dallas, TX. 02/28/19.
75. "Cell Walls and Biofilms: Discovery and New Chemistry at the Bacterial Cell Surface." **Vanderbilt Institute of Chemical Biology Seminar.** Vanderbilt University. Nashville, TN. 03/27/19.
76. "Cell Walls and Biofilms: Discovery and New Chemistry at the Bacterial Cell Surface." **FDA**. Silver Spring, MD. 05/07/19.
77. "Plowing Time in the Field of Opportunity." **Stanford ChEM-H Postdoc Retreat**. Sonoma, CA. 05/13/19.
78. "Stronger Together: Bacterial Weaving of Functional Amyloid and Polysaccharide Composites to Assemble Multicellular Biofilm Communities." **EuroISMAR, Plenary Lecture**. Berlin, Germany. 08/28/19.
79. "Bacterial Weaving of Functional Amyloid and Polysaccharide Composites to Assemble Multicellular Biofilm Communities." **Institute of Biology/Microbiology, Humboldt University.** Berlin, Germany. 08/29/19.
80. "Entanglements of Art and Science." **Matters of Activity - Cluster of Excellence Seminar, Humboldt University**. Berlin, Germany. 08/30/19.
81. "Discovery and New Chemistry at the Bacterial Cell Surface." **Scientific Oktoberfest - Center for Integrated Protein Science, Technische Universität München.** Munich, Germany. 09/19/19.
82. "Discovery and New Chemistry at the Bacterial Cell Surface." **Department of Chemistry, University of Wisconsin.** Madison, WI. 10/08/19.
83. "Discovery and New Chemistry at the Bacterial Cell Surface." **NSF CAREER Awardees Symposium. Division of Molecular and Cellular Biosciences, NSF.** Alexandria, VA. 10/29/19.

84. "Discovery and New Chemistry at the Bacterial Cell Surface." **UCSD Vold Lecture.** Zoom. 11/05/20.
85. "Discovery and New Chemistry at the Bacterial Cell Surface." **Stanford 2021 Biology-Chemistry Colloquium.** Zoom. 01/19/21.
86. "Solid-state NMR for New Discoveries in Bacterial Whole Cells and Biofilms." **IVAN NMR Symposium at the Annual Experimental NMR Conference.** Zoom. 03/28/21.
87. "Form and Function of Curli Bacterial Amyloid Fibers." **Spring 2021 Meeting of the American Chemical Society**. Zoom. 04/05/21.
88. "Vancomycin Conjugates Yield Extraordinary New Activities against Gram-positive and Gram-negative Bacteria." **ASPET Symposium on Experimental Approaches for the Treatment of Infectious Disease, Annual Meeting of Experimental Biology.** Zoom. 04/27/21.
89. "New Discoveries in Bacterial Polysaccharides and Biofilms." **ISMAR-APNMR Conference**. Zoom. 08/22/21.
90. "Discovery and New Chemistry at the Bacterial Cell Surface." **13th International Symposium on Lactic Acid Bacteria.** Zoom. 08/23/21.
91. "Discovery and New Chemistry at the Bacterial Cell Surface." **Tri-Institutional Chemical Biology Seminar**. Memorial Sloan Kettering, Weill Cornell Medicine, The Rockefeller University. New York, NY. 04/18/22
92. "Unraveling Bacterial Amyloids and Polysaccharides with Small Molecules and a Big Magnet." **International Conference on Magnetic Resonance in Biological Systems (ICMRBS) Conference**. Boston, MA. 08/24/22
93. "New Discovery and New Chemistry in Bacterial Polysaccharides and Biofilms." **Advanced Isotopic Labeling Methods for Integrated Structural Biology**. Grenoble, France. 09/14/22.
94. "Discovery and New Chemistry at the Bacterial Cell Surface." **Stanford University – Seoul National University Chemistry Symposium**. Seoul, Korea. 11/3/22.
95. "Balancing Biopolymers: Decoding *E. coli* Biofilm Matrix Composition and Function." **2022 ASM Conference on Biofilms**. Charlotte, NC. 11/14/22.
96. Panelist for Discussion Panel, "Higher NMR Fields for Solids: Utopia or Dystopia?" **2023 Alpine Conference on Magnetic Resonance in Solids**. Chamonix-Mont-Blanc, France. 09/12/23.
97. "Discovery and New Chemistry at the Bacterial Cell Surface." **Yale University Microbiology Graduate Program Symposium.** New Haven, CT. 11/09/23.
98. "Unraveling Threads in Bacterial Cell Walls by Cell-Wall and Whole-Cell NMR." **Rocky Mountain Conference on Magnetic Resonance**. Copper Mountain, CO. 08/04/24.
99. "Microbiome Friend or Foe?: Unique Chemistry, Function, and Inhibition of Bacterial Amyloid and Cellulose Architectures." **Fall 2024 ACS Symposium on "Defining the Chemistry of Microbiomes."** Denver, CO. 08/18/24.
100. "Discovery and New Chemistry at the Bacterial Cell Surface." **International Symposium on New Horizons in Membrane Biology**. Goethe University Frankfurt (Collaborative Research Center 1507). Frankfurt, Germany. 10/11/24.
101. "Discovery and New Chemistry at the Bacterial Cell Surface." **Northwestern University Chemistry in Life Processes Student-Hosted Colloquium**. Evanston, IL 10/21/24.