BHUVNESH BHARTI

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PROFESSIONAL EXPERIENCE

2026-*present*	*Professor*, Gordon and Mary Cain Chair Endowed Professor, Cain Department of Chemical Engineering, Louisiana State University, Baton Rouge, LA, USA
2022-2026	*Associate Professor*, Robert D. and Adele W. Anding Endowed Professor, Cain Department of Chemical Engineering, Louisiana State University, Baton Rouge, LA, USA
2016-2022	*Assistant Professor*, Cain Department of Chemical Engineering Louisiana State University, Baton Rouge, LA, USA
2023, 2026	*Visiting Scientist*, Physical Sciences Division, Pacific Northwest National Laboratory (PNNL), Richland, WA, USA
2012-2016	*Postdoctoral Research Associate*, Chemical and Biomolecular Engineering, NC State University, Raleigh, NC, USA
2014	*Postdoctoral Research Associate*, Environmental Engineering, Shinshu University, Nagano, Japan
2009-2012	*Graduate Research Assistant*, Institut für Chemie, Stranski Laboratorium, Technische Universität Berlin, Germany
2008-2009	*Undergraduate Research Assistant*, Department of Chemistry, Panjab University, Chandigarh, India

EDUCATION

2009-2012	*Ph.D. – Physical Chemistry***,** Institut für Chemie, Stranski Laboratorium, Technische Universität Berlin, Germany
2007-2009	*Master of Science* (Honors School) Department of Chemistry, Panjab University, Chandigarh, India
2004-2007	*Bachelor of Science* (Honors School) Department of Chemistry, Panjab University, Chandigarh, India

RESEARCH INTERESTS

Energy-environment nexus, soft matter, materials engineering, microplastics, and active colloids.

SUMMARY OF IMPACT

Dr. Bhuvnesh Bharti is a leader in materials engineering and soft matter whose research at the *Energy-Environment Nexus* bridges fundamental science and transformative technologies. He has secured over $5.5 million in competitive federal funding as PI (Total >11.1 million) from DOE, NSF, NASA, EPA, published >80 papers in reputed journals (*JACS*, *Science Advances*, *Nature Communications*), and received prestigious awards including the NSF CAREER Award, *Soft Matter Emerging Investigator Award* by the Royal Society of Chemistry and *Rising Star in Environmental Research Award* by ACS. Dr. Bharti has an *h*-index of 35 and >5,500 citations,

multiple journal covers and invited keynotes at premier national and international meetings including multiple Gordon Research Conferences.

ACADEMIC ACHIEVEMENTS AND AWARDS

- Gordon and Mary Cain Endowed Chair in Chemical Engineering – **2026-*present***
- Robert D. and Adele W. Anding Endowed Professor – **2022-2026**
- Dean's Fellow at the LSU College of Engineering: Discovery Track – **2026**
- Rainmaker Award (Mid-Career Scholar) by LSU and Campus Federal Credit Union – **2026**
- LSU Alumni Association Faculty Excellence Award – **2026**
- Rising Star in Environmental Research Award (*ACS Environmental Au*) – **2025**
- LSU Foundation Distinguished Graduate Faculty Teaching Award – **2025**
- Section Editor of the journal *Current Opinion in Colloid & Interface Science* (Elsevier) – **2023**
- Emerging Investigator in Soft Matter (by Royal Society of Chemistry) – **2023**
- LSU College of Engineering Award for Instructor Excellence – **2022**
- LSU Alumni Association Rising Faculty Award – **2021**
- Faculty Early Career Development Award (CAREER) by National Science Foundation – **2020**
- Dow Chemical Excellence in Teaching Award (ChemE, LSU) – **2019, 2020, 2022**
- Doctoral Young Investigator Award by American Chemical Society – Petroleum Research Fund (ACS – PRF) – **2019**
- Economic Development Assistantship Award (Graduate School, LSU) – **2018**
- Fellowship in Research Triangle Material Research and Engineering Center (RT-MRSEC) by National Science Foundation (NSF) – **2012-2016**
- Postdoctoral Fellowship Award by Japan Society for the Promotion of Science (JSPS) – **2014**
- *Springer Theses Award* to the doctoral thesis – **2014**
- Poster prize in 127th North Carolina ACS local section conference – **2013**
- Travel Grant Award for Young Scientists to attend IACIS conference in Sendai, Japan – **2012**
- Doctoral fellowship award in International Research Training Group (IRTG-1524) by Deutsche Forschungsgemeinschaft (DFG) – **2009-2012**
- Graduate Aptitude Test in Engineering (GATE, India) – **2009**
- CSIR-NET for Junior Research Fellowship (JRF) by Government of India – **2008** and **2009**

FUNDING AND SUPPORT (Total > $11.5M; > $6.0M as PI)

Federal/State government

- PI – National Science Foundation "AI-Integrated Classical Nucleation Theory for Understanding Nanoscale Interactions Driving Water Uptake and Ice Nucleation on Micro/Nanoplastics" ($473k) – **2027-2030** (*recommended*)
- PI – United States Environmental Protection Agency (US-EPA) "Preventing the release of micro/nanoplastics using recycled glass filters" ($750k) – **2025-2028**[*]
- PI – Department of Energy - Basic Energy Sciences (DOE-BES) "Charge fluctuations at nanoscale solid-liquid interfaces and its coupling to reactivity and emergent collective phenomena" ($456k) – **2025-2028**
- PI – Department of Energy - Basic Energy Sciences (DOE-BES) "Pathways to assembly of anisotropic particles in AC electric fields" ($600k) – **2025-2029**

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[*]Recommended for support by EPA.

- Institutional PI – National Science Foundation (NSF-DMREF), "Collaborative Research: DMREF: Adaptive and Responsive Magnetic Swarms (ARMS)" ($500k out of $2.0M) – **2025-2029**
- PI – National Aeronautics and Space Administration (NASA) – Board of Regents (BoR) State of Louisiana "Understanding the electric field driven assembly of colloids and its applications" ($1.50M) – **2024-2027**
- PI – National Aeronautics and Space Administration (NASA) – FINNEST "Designing space-time modulated reconfigurable structures using active colloids" ($150k; No tuition, fee, or overhead) – **2024-2027**
- PI – National Science Foundation (NSF-ENG-CBET) – Faculty Early Career Development Program, "CAREER: Helical propulsion for tunneling through porous membranes" ($556k) – **2020-2026**
- PI – National Science Foundation (NSF) – "RII Track-4: NSF: Understanding the role of surface interactions in co-assembly of spherical and rod-shaped colloids" ($167k) – **2022-2024**
- PI – National Science Foundation (NSF-ENG-CBET) – "Magnetic interactions for selective assembly and reconfiguration of colloids" ($296k) – **2021-2024**
- PI – National Science Foundation (NSF-MPS-ECS) – "CAS-MNP: Understanding the Dispersibility of Aging Micro/Nanoplastics" ($248k) – **2020-2022**
- PI – Louisiana Board of Regents (BoR) – Proof-of-Concept/Prototype (P-o-C/P) Initiative, "Ecofriendly and cost-effective alternative for oil spill cleanup" ($40k) – **2020-2021**
- PI – American Chemical Society - Petroleum Research Fund (ACS-PRF) – "Understanding the effect of nanoconfinement on the assembly and temperature induced demixing of surfactants" ($110k) – **2019-2022**
- PI – LSU LIFT^2 Board of Supervisors – "Lignin nanoparticles as an ecofriendly and cost-effective alternative for oil spill recovery" ($50k) – **2019-2021**
- co-PI – Department of Energy (DOE) – Louisiana Consortium for Neutron Scattering (LaCNS) "Soft matter mediated binding of hard(er) nanoparticles: SANS for understanding the nanocapillary bridging of particles" ($3.8M, $300k to Bharti) – **2018-2020**
- PI – Louisiana Economic Development Assistantship by Graduate School LSU – "Finding cost-effective ecofriendly alternatives for oil spill remediation: Lignin based dispersants for oil herding technology" ($100k, no overhead or tuition) – **2018-2022**
- PI – Chevron Innovative Research Funds, Round VII – "Lignin nanoparticles: A new class of ecofriendly dispersant for enhanced oil recovery" ($48k) – **2018-2019**
- co-PI – National Science Foundation– (NSF-ENG-CBET): Particulate and Multiphase processes, "Establishing the principles and demonstrating the unique properties of novel reconfigurable nano- and microparticle structures bound by liquid bridges" ($293k, $27k to Bharti) – **2016-2020**

Industry

- PI – Idaho Forest Group ~$160k, **2021-2023**

RESEARCH MENTORSHIP

Current members of the research group (2026)

- Research Faculty Associate – One

- Postdoctoral Associate - One
- Graduate students: Nine
- Undergraduate students: Four

Former graduate students (and position after graduation)

PhD

1. Philip J. Brahana – 2026
2. Amrutha Raghu – 2025
3. Kennedy Guillot – 2025
4. Hashir M. Gauri – 2025
5. Ahmed Al Harraq – 2023
6. Amber J. Pete – 2022
7. Yingzhen Ma – 2022
8. Jin Gyun Lee – 2021

MS

- Brishty Deb Choudhury – 2022
- Waan Chulakham – 2021
- Nathan Holley – 2020
- Yusheng Guo – 2020

PROFESSIONAL ORGANIZATIONS

- American Chemical Society (ACS)
- American Institute of Chemical Engineers (AIChE)
- American Association for the Advancement of Science (AAAS)

PEER REVIEWING/CONFERENCE SESSION CHAIRS

- Invited reviewer of articles submitted to *Nature Communications*, *Science Advances*, *Adv. Funct. Mater.*, *Nanoscale*, *J. Am. Chem. Soc.*, *J. Mater. Chem.*, *Langmuir*, *Chem. Commun.*, *Soft matter, New J. Chem., J. Coll. Inter. Sci.,* etc.
- Panel reviewer for NSF, and mail-in reviewer for ACS – PRF
- PhD thesis reviewer for students at Technishe Universität Berlin (2017), and Australian National University (2018).
- Session organizer: ACS Colloids & Surface Science Symposium – 2016-2023, AIChE – 2017-2023; RAMC conference – 2016
- Session chair at 90th, and 88th ACS Colloid and Surface Science Symposium – 2017, 2016, 2014; AIChE – 2019, 2018, 2017.
- Co-organizer of ACS Colloids & Surface Science Symposium in New Orleans, LA scheduled for 2028.

TEACHING

- Chemical Engineering Thermodynamics (ChE 2172) – Fall 2016-2023 (Undergraduate course)
- Advanced Chemical Engineering Thermodynamics (ChE 7120) – Fall 2021-2025 (Graduate course)

- Developed a new course entitled “Colloids and Interfacial Engineering” (ChE 4425) – Spring 2018-2025 (Undergraduate elective course)
- Engineering Measurement Lab (ChE 3104) – Spring 2018, 2019 (Undergraduate course)

OUTREACH AND SERVICES

- Currently member of Graduate Committee, and the Awards, Seminars and Events Committee in the Cain Department of Chemical Engineering at LSU.
- Member of graduate student thesis award committee at College of Engineering.
- Develop new event for visually impaired students at Louisiana School of Visually Impaired. 2017-present.
- Served on three faculty search committees in the department (2023, and 2025)
- Recruitment of underprivileged students from Baton Rouge Community College by bisemester visits and interactions. 2017-present
- Demonstrations entitled “Confused Colloids and Mad Magnetic Materials” developed for middle school students participating in LSU ENGage program – 2017-present
- Invited talk entitled “*Sandcastle-like future nanomaterials*” for general public at Nature Research Center, North Carolina Museum of Natural Sciences, Raleigh, NC – Sept. 2014
- Invited judge for the North Carolina School of Science and Mathematics (NCSSM) Regional Science Fair – Feb. 2015, and summer Research Experience for Undergraduates (REU) symposium at Duke University – July 2015

RESEARCH PRESENTATIONS

Invited departmental seminars:

- Centre de recherches sur les macromolécules végétales (CERMAV), CNRS research unit, Grenoble, France – 2026
- Technische Universitaet Berlin, Germany (Institute for Physical and theoretical Chemistry) – Spring 2026
- University of Stuttgart, Germany (Institute for Physical Chemistry) – Spring 2026
- Indian Institute of Technology Madras, India (Chemical Engineering) – Spring 2026
- Indian Institute of Technology Bombay, Mumbai (Chemical Engineering) – Spring 2026
- Oak Ridge National Laboratory (SNS) – Spring 2026
- University of Arkansas (Chemical Engineering) – Fall 2023
- Brigham Young University (Chemical Engineering) – Spring 2022
- Colorado School of Mines (Chemical Engineering) – Spring 2022
- University of Houston (Chemical Engineering) – Fall 2021
- Texas A&M University (Chemical Engineering) – Fall 2021
- Clemson University (Chemical Engineering) – Spring 2021
- Louisiana State University (Biological Chemistry) – Spring 2021
- Tulane University (Chemical Engineering) – Fall 2019
- Pacific Northwest National Laboratory (Materials Science) – Fall 2019
- University of Washington (Chemical Engineering) – Fall 2019
- Louisiana State University (Petroleum Engineering) – Spring 2019

- University of Rhode Island (Chemical Engineering) – Fall 2018
- University of Arkansas (Chemical Engineering) – Spring 2018
- Louisiana State University (Louisiana Center for Neutron Scattering) – Spring 2017

Invited keynote speaker at conferences:

- Complex Fluids – CompFlu conference, Indian Institute of Technology, Ropar, Punjab, India – Fall 2026
- Gordon Research Conference on Chemistry and Physics of Liquids, Holderness, NH – Summer 2025
- The International Polymer Colloids Group Conference, Sète, France – Summer 2025
- ACS National Spring Meeting, San Diego, CA – Spring 2025
- ACS Colloids and Surface Science Symposiym, Seatle, WA – Summer 2024
- "Soft matter in space" virtual seminar series by NASA-BPS – Spring 2023
- Physical Sciences Division at PNNL, Richland, WA – Spring 2023
- Materials Research Society meeting, Boston, MA - Spring 2023
- U.S. National Congress on Theoretical and Applied Mechanics (USNCTAM), Austin, TX – Summer 2022
- Polymer Colloids, ACS Division of Polymer Chemistry, San Diego, CA – Spring 2022
- Texas Soft Matter Meeting, Houston, TX – Fall 2021
- Gordon Research Conference on Colloidal, Macromolecular and Polyelectrolyte Solutions, Ventura, CA – Spring 2020
- Southeast Symposium on Contemporary Engineering Topics (SSCET), New Orleans, LA – Fall 2019
- Colloquim at International Research Training Group at TU Berlin, Germany – Fall 2017
- 4th Recent Advances in Microbial Control (RAMC), San Diego, CA – Fall 2016
- ACS Southwest Regional Meeting, Galveston, TX – Fall 2016

Additional >50 talks at AIChE Annual Meetings, ACS National Meetings, ACS Colloids and Surface Science Symposia and other conferences.

PATENTS

1. B. Bharti, S. Neupane, "Microfluidic Devices and Methods for Separating Particles", **2026** USPTO Application No. 64/122,946
2. B. Bharti, K. T. Valsaraj, N. P. Holley, "Zein-Based Low Density Porous Absorbent" **2025**, Patent number US 12,397,279 B2.
3. B. Bharti, J. G. Lee, "Lignin Composition, Methods of Making and Using the Composition for adsorption onto Petrochemical Oil and Oil Removal from Water Surface" **2023**, Patent number US 2023/0219056 A1.

PUBLICATIONS – Google Scholar (>5,000 citations, *h*-index 35) Link
Publications in reputed journals including *Science Advances, Nature Communications, Advanced Science, Small, JACS Au,* and *Environ. Sci. Technol. Lett.*

At LSU (*corresponding author)

Under review

1. R. Patel, B. Bharti*, “Field-driven active colloids as distributed micromachines: Bridging physics, control, and function across length scales”, *Adv. Sci.*, **2026**, DOI: 10.1002/advs.78065 – Invited Article

Published

2. R. Patel, G. Rother, N. Pesika, G. A. Kimmel, Y. Levin, G. K. Schenter, C. J. Mundy, J. Chun*, and B. Bharti*, “Molecular surface chemistry drives anomalous clustering of ultrasmall silica nanoparticles”, *J. Phys. Chem. Lett.*, **2026**, *17*, 8270-8276.
3. H. M. Gauri, K. M. Kreienbrink, J. G. Lee, C. W. Shields*, B. Bharti*, “Shape-dependent disassembly of polygonal microparticles in two-dimensions”, *Soft Matter*, **2026**, *22*, 4958-4967.
4. A. Raghu, K.J.M. Bishop*, B. Bharti*, Steady Rotation and Wall-Mediated Dynamics of Magnetic Janus Particles in Oscillating Fields, *Soft Matter*, **2026**, *22*, 3156-3164. Link – Journal cover
5. H. M. Gauri, S. Neupane, B. Bharti*, Surface topography-guided locomotion of magnetic microbots enabled by vision-based adaptive control, *Cell Rep. Phys. Sci.*, **2026**, *7*, 103085. Link
6. K. A. Guillot, P. J. Brahana, J. C. Romanos, G. Rother, M. G. Benton, B. Bharti*, Fatty acid foams for nonselective physical removal of microplastics from aqueous solutions, *Soft Matter*, **2025**, *21*, 8771-8780. Invited Article for Themed Issue “*Underpinning of Micro- and Nanoplastics*” – Journal Cover. Link
7. P. J. Brahana, B. Bharti*, Water salinity impacts aggregation, settling, and deposition of fluvial sediment, ACS *Environmental Au*, **2025**, *5*, 616-624. Invited article as one of the *2025 Rising Stars in Environmental Research* – Journal Cover. Link
8. T. Wang, S. Nag, R. Patel, S. Timilsina, B. Bharti, Y-F. Su, Y. An*, Salt-responsive behaviors of PVBTACl, NaPSS, and their complex by molecular dynamics simulations and experiments, *Soft Matter*, **2025**, *21*, 7333-7343. Link
9. C-C. G. Yeh, H. W. Hatch, A. N. Sreenivasan, B. Bharti, V. K. Chen., Z. M. Sherman, T. M. Truskett*, Colloidal monolayers with short-range attractions and dipolar repulsions, *J. Phys. Chem. B*, **2025**, *129*, 6428-6438. Link
10. M. Iftesum, M. Dey, A. Prasad, J. Lee, R. Devireddy, B. Bharti, and M. Gartia*, pH-tuned reversible self-assembly of janus particles for enhanced Raman imaging and sensing, *Anal. Bioanal. Chem.*, **2025**, (DOI: 10.1007/s00216-025-05887-z) Link
11. A. Al Harraq, P. J. Brahana, B. Bharti*, Colloid and interface science for understanding microplastics and developing remediation strategies, *Langmuir*, **2025**, 41, 4412-4421. Link – Invited perspective article.
12. Q. Wang, Y. Fu, E. Miller, D. Song, P. J. Brahana, Z. Xu, G. Johnson, B. Bharti, M. Sushko, and E. Nakouzi*, “ Selective recovery of critical minerals from simulated electronic wastes via reaction-diffusion coupling” *ChemSusChem.*, **2025**, *18*, e202402372. Link
13. A. Al Harraq, R. Patel, J. G. Lee, O. Owoyele, J. H. Chun, and B. Bharti*, “Non-reciprocal interactions, metastability, and dynamic reconfiguration in co-assembly of active and passive particles” *Advanced Science*, **2025**, *12*, 2409489. Link
14. R. Patel, P. J. Brahana, and B. Bharti*, “Enhanced Removal of Ionic Pollutants Using Active Propulsion of Patchy ZIF-8 Microparticles in Electric Field”, *ACS Appl. Eng. Mater.* **2024**, *2*, 2777-2789. Link – Invited article

15. P. J. Brahana, M. Zhang, E. Nakouzi, and B. Bharti*, “Weathering influences the ice nucleation activity of microplastics” *Nature Communications*, **2024**, *15*, 9579. Link
16. H. M. Gauri, R. Patel, N. S. Lombardo, M. A. Bevan* and B. Bharti*, “Field-directed motion, cargo capture, and controlled navigation of microellipsoids”, *Small*, **2024**, *20*, 20240307 (1-20). Link
17. Y. An*, T. Gao, T. Wang. D. Zhang, and B. Bharti, “Effects of charge asymmetry on the liquid-liquid phase separation of polyampholytes and their condensate properties”, *Soft Matter*, **2024**, *20*, 6150-6159. Link
18. P. J. Brahana, R. Patel, B. Bharti*, “Surface science view of perfluoroalkyl acids (PFAAs) in the environment”, *ACS Environmental Au*, **2024**, *4* (4), 173-185. Link
19. A. Al Harraq, M. Feng, H. M. Gauri, R. Devireddy, A. Gupta, Q. Sun*, and B. Bharti*, “Magnetic control of non-magnetic living organisms”, *ACS Appl. Mater. Interfaces*, **2024**, *16* (14), 17339–17346. Link
20. K. A. Guillot, P. J. Brahana, A. Al Harraq, N. D. Ogbonna, N. S. Lombardo, J. Lawrence, Y. An, M. G. Benton, B. Bharti*, “Selective vapor condensation for the synthesis and assembly of spherical colloids with precise rough patch”, *JACS Au*, **2024**, *4*, 1107-1117. Link
21. R. Patel, L. E. Saab, P. J. Brahana, K. T. Valsaraj, B. Bharti*, “p*K*a and interfacial activity of perfluoroalkyl carboxylic acids (PFCAs)”, *Langmuir*, **2024**, *40*, 3651-3658. Link
22. P. J. Brahana, A. Al Harraq, L. E. Saab Castellanos, R. Roberg, K. T. Valsaraj, B. Bharti*, “Uptake and release of perfluoroalkyl carboxylic acids (PFCAs) from macro and microplastics”, *Environ. Sci.: Processes Impacts*, **2023**, *25*, 1519-1531. Link
23. Y. C, Bae, H. Esmaeili, S. Zamin, M. J. Seol, E. Hwang, S. K. Beak, Y. Song, B. Bharti, J. Jung*, “Quantification of Solution-Free Blood Cell Staining by Sorption Kinetics of Romanowsky Stains to Agarose Gels”, *Anal. Methods* **2023**, *15*, 5369-5379. Link
24. A. J. Pete, J. G. Lee, M. G. Benton*, B. Bharti*, “Chitosan-Coated Lignin Nanoparticles Enhance Adsorption and Proliferation of *Alcanivorax borkumensis* at the Hexadecane–Water Interface”, *ACS EST Eng.* **2023**, *3*, 1339-1349. Link
25. H. M. Gauri, Z. Sherman, A. Al Harraq, T. M. Truskett, B. Bharti*, “Magnetic field enabled in-situ control over structure and dynamics of colloids interacting via SALR potentials” *Soft Matter*, **2023**, *19*, 4439-4448. Link (Invited article: “Emerging Investigator in Soft Matter”) – Journal front cover
26. K. J. M. Bishop*, S. L. Biswal, B. Bharti, “Active colloids as models, materials, and machines” *Annu. Rev. Chem. Biomol. Eng.*, **2023**, *14*, 1-30. Link
27. Y. Ma, C. Heil, G. Nagy, W. T. Heller, Y. An, A. Jayaraman, B. Bharti*, “Synergistic role of temperature and salinity in aggregation of nonionic surfactant coated silica nanoparticles”, *Langmuir*, **2023**, *39*, 5917-5928. Link
28. C. Heil, Y. Ma, B. Bharti, A. Jayaraman*, “Computational Reverse-Engineering Analysis for Scattering Experiments for Form Factor and Structure Factor Determination (‘P(q) and S(q) CREASE’)” *JACS Au*, **2023**, 3, 889-904. Link
29. A. J. Pete, P. J. Brahana, M. Bello, M. G. Benton, and B. Bharti*, “Biofilm Formation Influences the Wettability and Settling of Microplastics” *Env. Sci. Technol. Lett.*, **2023**, 10, 159-164. Link – Journal front cover, and Best Paper of 2023 Award by the journal
30. A. Al Harraq, M. Bello, B. Bharti*, “A guide to Design the Trajectory of Active Particles: From Fundamentals to Applications” *Curr. Opin. Colloid Interface Sci.*, **2022**, *61*, 101612. Link
31. A. Al Harraq, A. A. Hymel, B. Bharti*, “Dual Nature of Magnetic Nanoparticle Dispersions Enables Control Over Short-range Attraction and Long-range Repulsion Interactions” *Commun. Chem.*, **2022**, *5*, 72. Link
32. A. Al Harraq, B. D. Choudhury, B. Bharti*, “Field-Induced Assembly and Propulsion of

Colloids" *Langmuir* **2022**, *38*, 3001-3016. Invited Featured Article – ACS editor's choice Link

33. A. Al Harraq, P. Brehana, O. Arcemont, D. Zhang, K. T. Valsaraj, B. Bharti*, "Effects of Weathering on Microplastic Dispersibility and Pollutant Uptake Capacity" *ACS Environmental Au*, **2022**, *2*, 549-555. Link – Highlighted by the NSF on their podcast *The Discovery Files* on Oct 17, 2022. – Journal front cover
34. Y. Ma, G. Nagy, M. Siebenbuerger, R. Kaur, K. M. Dooley, B. Bharti*, "Adsorption and Catalytic Activity of Gold Nanoparticles in Mesoporous Silica: Effect of Pore Size and Dispersion Salinity" *J. Phys. Chem. C* **2022**, *126*, 2531-2541. Link
35. A. Al Harraq, B. Bharti*, "Microplastics Through the Lens of Colloid Science" *ACS Environmental Au*, **2022**, *2*, 3-10. Link
36. E. Ewins, K. Han, B. Bharti, T. Robinson, O. D. Velev, R. Dimova*, "Controlled adhesion, membrane pinning and vesicle transport by Janus particles" *Chem. Commun.* **2022**, *58*, 3055-3058 Link
37. N. D. Ogbonna, M. Dearman, C-T, Cho, B. Bharti, A. Peters, J. Lawrence*, "Topologically Precise and Discrete Bottlebrush Polymers: Synthesis, Characterization, and Structure-Property Relationships" *JACS Au*, **2022**, *2*, 898-905. Link
38. N. D. Ogbonna, M. Dearman, B. Bharti, A. Peters, J. Lawrence*, "Elucidating the Impact of Side Chain Dispersity on the Assembly of Bottlebrush Polymers at the Air-Water Interface" *J. Poly. Sci.*, **2021**, *59*, 2458-2467. Link
39. N. I. Castellanos, B. Bharti, O. D. Velev*, "Field-driven Reversible Alignment and Gelation of Magneto-responsive Soft Anisotropic Microbeads" *J. Phys. Chem. B* **2021**, *125,* 7900-7910. Link
40. A.-L. Fameau*, Y. Ma, M. Siebenburger, B. Bharti*, "Foamitizer: High ethanol content foams using fatty acid crystalline particles" *J. Coll. Interf. Sci.* **2021**, *600*, 882-886. Link
41. A. J. Pete, B. Bharti*, M. G. Benton*, "Nano-enhanced Bioremediation for Oil Spills: A Review" *ACS EST Eng.* **2021**, *1*, 928-946. Link
42. J. G. Lee, A. A. Harraq, K. J. M. Bishop, B. Bharti*, "Fabrication and Electric Field-driven Propulsion of Patchy Microellipsoids" *J. Phys. Chem. B* **2021**, *125*, 4232-4240. Link – *Invited article*
43. J. G. Lee, Y. Guo, J. A. Belgodere, A. Al Harraq, A. A. Hymel, A. J. Pete, K. T. Valsaraj, M. G. Benton, M. G. Miller, J. P. Jung, B. Bharti*, "Lignin-Zein Composite: Synthesis, 3D printing and microbial degradation" *ACS Sustain. Chem. Eng.* **2021**, *9*, 1781-1789. Link
44. N. P. Holley, J. G. Lee, K. T. Valsaraj*, B. Bharti*, "Synthesis and Characterization of ZEin-based Low Density porous Absorbent (ZELDA) for Oil Spill Recovery" *Colloids Surf. A Physicochem. Eng. Asp.* **2021**, *614*, 126148 (1-10). Link
45. Y. Ma, W. T. Heller, L. He, W. A. Shelton, G. Rother, B. Bharti*, "Characterisation of Nano-assemblies Inside Mesopores Using Neutron Scattering" *Molecul. Phys.* **2021** e1905190 (1-10). Link – *Invited Article*
46. J. G. Lee, K. Lannigan, W. A. Shelton, J. Meissner, B. Bharti*, "Adsorption of Myoglobin and Corona Formation on Silica Nanoparticles" *Langmuir* **2020**, *36*, 14157-14165. Link
47. A. Al Harraq, B. Bharti*, "Onset and suppression of buckling in drying suspensions of rod-shaped particles" *Soft Matter* **2020**, *16*, 9643-9647. Link – Journal cover
48. A. Al Harraq, J. G. Lee, B. Bharti*, "Magnetic Field Driven Assembly and Reconfiguration of Multicomponent Supraparticles", *Science Advances*, **2020**, *6*, eaba5337. Link
49. K. Han, C. W. Shields IV, B. Bharti, P. Arratia, O.D. Velev*, "Active Reversible Swimming of Magnetically Assembled Microscallops in Non-Newtonian Fluids", *Langmuir*, **2020**, *36*, 7148-7154. Link

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