Stanford

Ahanjit Bhattacharya

Postdoctoral Research Fellow, Chemistry

Bio

BIO

I am extremely curious about how life emerges from fundamental chemical and biochemical building blocks. I use a wide range of tools from membrane physics, organic chemistry, and biochemistry to address these questions. I am passionate about communicating science and making it a transformational for betterment of society and humanity.

HONORS AND AWARDS

- Teddy Traylor Award 2018, University of California San Diego
- Reaxys PhD Prize 2020 Finalist, Elsevier

PROFESSIONAL EDUCATION

- Bachelor of Science, Indian Institute of Technology, Kharagpur (2014)
- Master of Science, Indian Institute of Technology, Kharagpur (2014)
- Doctor of Philosophy, University of California San Diego (2020)
- MSc, Indian Institute of Technology Kharagpur , Chemistry (2014)
- PhD, University of California San Diego , Chemistry (2020)

STANFORD ADVISORS

- Steven Boxer, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- Steven Boxer, The Boxer Lab (9/1/2020)

Publications

PUBLICATIONS

- **Enzyme-free synthesis of natural phospholipids in water** *NATURE CHEMISTRY*
  Liu, L., Zou, Y., Bhattacharya, A., Zhang, D., Lang, S. Q., Houk, K. N., Devaraj, N. K.
  2020; 12 (11): 1029-+
- **Lipid sponge droplets as programmable synthetic organelles** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Bhattacharya, A., Niederholtmeyer, H., Podolsky, K. A., Bhattacharya, R., Song, J., Brea, R. J., Tsai, C., Sinha, S. K., Devaraj, N. K.

2020; 117 (31): 18206–15

- **Temperature-Dependent Reversible Morphological Transformations in N-Oleoyl beta-D-Galactopyranosylamine** *JOURNAL OF PHYSICAL CHEMISTRY B*
  Johnson, M., Bhattacharya, A., Brea, R. J., Podolsky, K. A., Devaraj, N. K.
  2020; 124 (26): 5426–33

- **Tailoring the Shape and Size of Artificial Cells** *ACS NANO*
  Bhattacharya, A., Devaraj, N. K.
  2019; 13 (7): 7396–7401

- **Single-Chain beta-D-Glycopyranosylamides of Unsaturated Fatty Acids: Self-Assembly Properties and Applications to Artificial Cell Development** *JOURNAL OF PHYSICAL CHEMISTRY B*
  Bhattacharya, A., Brea, R. J., Song, J., Bhattacharya, R., Sinha, S. K., Devaraj, N. K.
  2019; 123 (17): 3711–20

- **A minimal biochemical route towards de novo formation of synthetic phospholipid membranes** *NATURE COMMUNICATIONS*
  Bhattacharya, A., Brea, R. J., Niederholtmeyer, H., Devaraj, N. K.
  2019; 10: 300

- **Highly Stable Artificial Cells from Galactopyranose-Derived Single-Chain Amphiphiles** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Brea, R. J., Bhattacharya, A., Bhattacharya, R., Song, J., Sinha, S. K., Devaraj, N. K.
  2018; 140 (50): 17356–60

- **In Situ Lipid Membrane Formation Triggered by Intramolecular Photoinduced Electron Transfer** *LANGMUIR*
  Enomoto, T., Brea, R. J., Bhattacharya, A., Devaraj, N. K.
  2018; 34 (3): 750–55

- **De novo vesicle formation and growth: an integrative approach to artificial cells** *CHEMICAL SCIENCE*
  Bhattacharya, A., Brea, R. J., Devaraj, N. K.
  2017; 8 (12): 7912–22

- **Synthesis of functionalised azepanes and piperidines from bicyclic halogenated aminocyclopropane derivatives** *ORGANIC & BIOMOLECULAR CHEMISTRY*
  Chen, C., Kattanguru, P., Tomashenko, O. A., Karpowicz, R., Siemiaszko, G., Bhattacharya, A., Calasans, V., Six, Y.
  2017; 15 (25): 5364–72

- **Spontaneous Phospholipid Membrane Formation by Histidine Ligation** *SYNLETT*
  Brea, R. J., Bhattacharya, A., Devaraj, N. K.
  2017; 28 (1): 108–12

- **Polyaromatic label-assisted laser desorption ionization mass spectrometry (LA-LDI MS): a new analytical technique for selective detection of zinc ion** *RSC ADVANCES*
  Addy, P., Roy, S., Mandal, S., Basak, A.
  2014; 4 (44): 23314–18