

# CHRISTOPHER B. TRIVEDI

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Interface Geochemistry – Section 3.5  
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## EDUCATION

- Ph.D.** - Environmental Engineering Science, **Colorado School of Mines**, Golden, Colorado **August 2018**  
Thesis: *The Microbiology of the Sulfur-Dominated Glacial Ecosystem Borup Fiord Pass, and High Arctic Low-Temperature Spring Associated Microbial Mats*
- M.S.** - Environmental Engineering Science, **Colorado School of Mines**, Golden, Colorado **December 2013**
- B.S.**, Major – Biology, **University of Colorado Denver**, Denver, Colorado **December 2006**

## RESEARCH ACTIVITIES

- GFZ German Research Centre for Geosciences**, Potsdam, Germany **Jan 2019 - Present**  
*Postdoctoral scholar*  
Advisor: Prof. Dr. Liane Benning
- Colorado School of Mines**, Golden, Colorado **Aug 2018 - Dec 2018**  
*Postdoctoral scholar*  
Advisor: Dr. John Spear

## PUBLICATIONS

- 2019** **Trivedi, C. B.**, Stamps, B. W., Lau, G. E., Grasby, S. E., Templeton, A. S., Spear, J. R. (2018). 16S rRNA Gene Sequencing Survey of Microbial Mats from the Canadian High Arctic. *mBio*. In prep.
- Trivedi, C. B.**, Stamps, B. W., Lau, G. E., Grasby, S. E., Templeton, A. S., Spear, J. R. (2018). Metagenomic Insights into Microbial Metabolisms of a Subaerial Sulfur-Dominated Glacial Ecosystem. *Applied and Environmental Microbiology*. In prep.
- 2018** **Trivedi, C. B.**, Lau, G. E., Grasby, S. E., Templeton, A. S., & Spear, J. R. (2018). Low-temperature sulfidic-ice microbial communities, Borup Fiord Pass, Canadian high Arctic. *Frontiers in microbiology*, 9. <https://doi.org/10.3389/fmicb.2018.01622>
- 2017** Bradley, J.A.\* , Daille, L.K.\* , **Trivedi, C.B.\***, Bojanowski, C.L., Stamps, B.W., Stevenson, B.S., Nunn, H.S., Johnson, H.A., Loyd, S.J., Berelson, W.M. and Corsetti, F.A. Spear, J.R. (2017). Carbonate-rich dendrolitic cones: insights into a modern analog for incipient microbialite formation, Little Hot Creek, Long Valley Caldera, California. *NPJ biofilms and microbiomes*, 3(1), 32. <https://doi.org/10.1038/s41522-017-0041-2>  
\*Co-first authors
- Lau, G. E., Cosmidis, J., Grasby, S. E., **Trivedi, C. B.**, Spear, J. R., & Templeton, A. S. (2017). Low-temperature formation and stabilization of rare allotropes of cyclooctasulfur ( $\beta$ -S<sub>8</sub> and  $\gamma$ -S<sub>8</sub>) in the presence of organic carbon at a sulfur-rich glacial site in the Canadian High Arctic. *Geochimica et Cosmochimica Acta*, 200, 218–231. <https://doi.org/10.1016/j.gca.2016.11.036>
- 2016** Stoll, Z. A., Ma, Z., **Trivedi, C. B.**, Spear, J. R., & Xu, P. (2016). Sacrificing power for more cost-effective treatment: A techno-economic approach for engineering microbial fuel cells. *Chemosphere*, 161, 10–18. <https://doi.org/10.1016/j.chemosphere.2016.06.072>

## GRANTS, FELLOWSHIPS, AND AWARDS

- INTERACT Transnational Access Travel Grant** 2019  
Travel and logistical costs for fieldwork in Greenland. EUR 10,920
- XSEDE HPC Startup Grant** 2018  
Access to high performance computing resources. USD 8,455
- SETI Travel Grant** 2015  
Astrobiology Science Conference, Chicago, IL. USD 500

## CONFERENCE PROCEEDINGS

- 2018 Trivedi, C. B.**, Stamps, B. W., Lau, G. E., Templeton, A. S., Grasby, S. E., Spear, J. R.; *Metabolic investigation of microbial communities found in a sulfur-dominated glacial spring system in the Canadian High Arctic*; 2018 Rocky Mountain Geobiology Symposium – Golden, CO, Poster
- Trivedi, C. B.**, Stamps, B. W., Lau, G. E., Templeton, A. S., Grasby, S. E., Spear, J. R.; *Metabolic investigation of microbial communities found in a sulfur-dominated glacial spring system in the Canadian High Arctic*; 2018 Graduate Research and Discovery Symposium (GRADS), Colorado School of Mines – Golden, CO, Poster
- 2017 Trivedi, C. B.**, Lau, G. E., Templeton, A. S., Grasby, S. E., Daille, L. K., Spear, J. S.; *The Geobiology of a Sulfur-Dominated Glacial Spring System Found in the Canadian High Arctic*; 2017 Astrobiology Science Conference, Poster (#3540)
- Daille, L. K., **Trivedi, C. B.**, Bradley, J. A., Bojanowski, C. L., Stamps, B. W., Nunn, H. S., Johnson, H. A., Stevenson, B. S., Berelson, W. M., Corsetti, F. A., Spear, J. R.; *Carbonate-rich Cones: A potential modern analogue of ancient conical stromatolites*; 2017 Rocky Mountain Geobiology Symposium – Golden, CO
- Trivedi, C. B.**, Lau, G. E., Templeton, A. S., Grasby, S. E., Spear, J. R.; *Microbiological implications of a sulfur-dominated glacial spring system found in the Canadian High Arctic*; 2017 Graduate Research and Discovery Symposium (GRADS), Colorado School of Mines – Golden, CO, Poster
- 2015 Trivedi, C.B.**, Lau, G.E., Templeton, A.S., Grasby, S.E., Spear, J. R.; *Community Characterization of Microbial Populations Found at a Cold Water Sulfidic Spring in the Canadian High Arctic*; 2015 AGU Fall Meeting, Poster (P11C-2105)
- Bojanowski, C. L., **Trivedi, C. B.**, Daille, L. K., Bradley, J. A., Stamps, B. W., Nunn, H. S., Johnson, H. A., Stevenson, B. S., Berelson, W. M., Corsetti, F. A., Spear, J. R.; *Vertical Microbial Community Variability of Carbonate-based Cones may Provide Insight into Formation in the Rock Record*; 2015 AGU Fall Meeting, Poster (B21C-0445)
- Daille, L. K., **Trivedi, C. B.**, Bradley, J. A., Bojanowski, C. L., Johnson, H. A., Stamps, B. W., Stevenson, B. S., Berelson, W. M., Corsetti, F. A., Spear, J. R.; *Carbonate-rich Cones: A New Modern Analogue of Ancient Conical Stromatolite Formation?*; 2015 GSA Annual Meeting, Poster (#109-7)
- Templeton, A. S., Lau, G. E., Cosmidis, J., **Trivedi, C. B.**, Spear, J. S., Grasby, S. E.; *Sulfur Oxidation and Biomineralization Processes in Sulfidic Ice Ecosystems*; Goldschmidt 2015 – Czech Republic
- Trivedi, C. B.**, Lau, G. E., Templeton, A. S., Grasby, S. E., Spear, J. R.; *Community Characterization of Microbial Populations Found in Supraglacial Icings at Borup Fiord Pass*, 2015 Astrobiology Science Conference, Poster (#7633)
- Lau, G. E., **Trivedi, C. B.**, Grasby, S. E., Spear, J. S., Templeton, A. S.; *Characterization of Sulfur-Rich Materials in Supraglacial Icings at Borup Fiord Pass, Canadian High Arctic*, 2015 Astrobiology Science Conference (#7349)
- Lau, G. E., **Trivedi, C. B.**, Spear, J. S., Grasby, S. E., Templeton, A. S.; *Characterization of Sulfur-Rich Materials in Supraglacial Icings at an Arctic Analogue to Europa*; NASA Ames Europa Plume Workshop

## FIELD EXPERIENCE

- Multiple glaciers, Greenland & Iceland** **2019 - present**  
Field sampling for genomic, geochemical, and organic analysis
- Borup Fiord Pass, Nunavut, Canada** **16 June – 5 July, 2014**  
NASA Exobiology field campaign. Field sampling of water, ice, and mineral precipitate samples for genomic and biogeochemical analysis.
- Yellowstone National Park, USA** **2014 - present**  
Multiple field campaigns focusing on sample collection for genomic and geochemical analysis of thermal features.

## ADVANCED TRAINING COURSES

- EU FT-ICR MS Advance User School,** **14 April – 18 April, 2019**  
Faculdade de Ciências da Universidade de Lisboa (FCUL), Campo Grande
- International GeoBiology Course,** **19 June – 21 July, 2015**  
Wrigley Institute for Environmental Studies, University of Southern California

## PROFESSIONAL SERVICE

- US Association for Polar Early Career Scientists,** **Feb 2018 – present**  
Board member and website manager
- NASA Exobiology Grant Panel,** **2014**  
Executive Secretary, Denver, CO

## PROFESSIONAL MEMBERSHIPS

- American Society for Microbiology **October 2012 – present**  
American Geophysical Union **July 2015 – present**  
Sustainable Remediation Forum (SURF) **May 2013 – present**  
Association for Polar Early Career Scientists (APECS) **Jan 2018 - present**  
US Association for Polar Early Career Scientists (APECS)