SRINIDHI LOKESH

Colorado State University
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CURRICULUM VITAE
AUGUST, 2023

RESEARCH INTERESTS

Fe-NOM interaction, Mass spectrometric analysis of environmental samples, Redox reactivity of biochar, Contaminant release from structural fires

EDUCATION

Ph.D. in Environmental Engineering **2019–2023**
University of Nevada, Reno (UNR)

MS in Environmental Engineering **2016–2018**
New York University (NYU)

Bachelor of Technology in Mining Engineering **2011–2015**
National Institute of Technology Karnataka (NITK)

ACADEMIC APPOINTMENTS

Postdoctoral Scholar **2023–Present**
Department of Plant and Crop Sciences, Colorado State University (CSU)

PUBLICATIONS

1. **Lokesh S**, Yang Y. 2023. Critical Role of Semiquinones in the Reductive Dehalogenation. *Environmental Science & Technology*.
2. **Lokesh S,** Arunthavabalan S, Hajj EY, Hitti E, Yang Yu. 2023. Investigation of 6PPD-quinone in rubberized asphalt concrete mixtures. *ACS Environmental Au.*
3. **Lokesh S**, Timilsina A, Shahriar A, Numan T, Yang Y. 2023. Quantification of quinones in environmental media by chemical tagging with cysteine-containing peptides coupled to size exclusionary seperation. *Analytical Chemistry.*
4. Dorner S, **Lokesh S**, Yang Y, Behrens S. 2022. Biochar-mediated abiotic and biotic degradation of halogenated organic contaminants-A review. *Science of The Total Environment.* 852, Article 158381.
5. **Lokesh S**, Juhee K, Zhou YW, Wu DP, Pan B, Wang XL, Behrens S, Huang CH, Yang Y. 2020. Anaerobic dehalogenation by reduced aqueous biochars. *Environmental Science & Technology*. 54, 15142-15150.

CONFERENCE TALKS

1. Shahriar A, **Lokesh S**, Timilsina A, Numan T, Nyarko L, Dewey C, Boiteau R, Yang Y. Identification of lignin-derived organic iron (Fe) ligands by Fe isotopologue analysis

coupled with metabolomics**.** August 2023, 266th ACS National Meeting, San Francisco, CA.

2. Timilsina A, **Lokesh S**, Shahriar A, Numan T, Yang Y. Tagging Quinones with cysteine and cysteine-contained peptides for their identification and quantification in complex environmental media (biochar). August 2023, 266th ACS National Meeting, San Francisco, CA.
3. Yang Yu**, Lokesh S,** Arunthavabalan S, Hajj EY, Hitti E. Fate of 6PPD-quinone at asphalt concrete-water interface. August 2023, 266th ACS National Meeting, San Francisco, CA.
4. Yang Y, **Lokesh S**, Shahriar A, Numan T. Coupling thermodynamics and kinetics for the redox and complexation reactions between iron and quinone/phenol. August 2023, 266th ACS National Meeting, San Francisco, CA.
5. **Lokesh S**, Yang Y. Recyclability and reactivity of aqueous biochar in the dehalogenation of triclosan. March 2022, 263rd ACS National Meeting, San Diego, CA.
6. Hajj E, Yang Y, **Lokesh S**, Arunthavabalan S. 2022. Fate of 6PPD-quinone at asphalt-water interface. CalRecycle 2022 California Tire Conference.
7. Hajj E, Yang Y, **Lokesh S**, Arunthavabalan S. 2022. Fate of 6PPD-quinone at asphalt-water interface. 2022 CalCIMA Education Conference
8. Numan T, **Lokesh S**, Yang Y. 2022. Engineering application of biochars. 2022 IAC Pacific Region Summit. Intertribal Agriculture Council. Virtual.
9. Yang Y, **Lokesh S**, Shahriar A, Numan T. 2022. Coupling thermodynamics and kinetics for the redox and complexation reactions between iron and quinone/phenol. American Chemical Society Annual Meeting. San Diego, USA.
10. **Lokesh S**, Juhee K, Zhou YW, Wu DP, Pan B, Wang XL, Behrens S, Huang CH, Yang Y. Anaerobic dehalogenation by reduced aqueous biochar. April 2019, 261st ACS National Meeting.
11. **Lokesh S,** Ranganna G, Lokesh KV. Studies on Causes and Effects of Landslides and Flash Floods and their Preventive Measures. May 2013, Minamata International Symposium on Environment and Energy Technology (MISSION 2013), Kumamoto, Japan.

POSTER PRESENTATION

1. Radakovich A, **Lokesh S**, Timilsina A, Yang Y. Environmental orthogonal reactions for dissolving and tagging pyrogenic carbon. August 2023, 266th ACS National Meeting, San Francisco, CA
2. **Lokesh S,** Arunthavabalan S, Hajj EY, Hitti E, Yang Yu. April 2022. Fate of 6PPD-quinone at rubberized asphalt concrete-water interface. CEE research symposium, University of Nevada, Reno, NV.
3. **Lokesh S**, Yang Y. 2022. Critical Role of Semiquinones in the Reductive Dehalogenation. April 2022, CEE research symposium, University of Nevada, Reno, NV.
4. Timilsina A, **Lokesh S**, Shahriar A, Yang Y. April 2022. Development of tagging method for identifying quinone in aqueous pyrogenic carbon media. CEE research symposium, University of Nevada, Reno, NV.

5. Numan T, **Lokesh S**, Shahriar A, Yang Y. April 2022. Pyrogenic carbon produced during wildfire and impact on watershed functions. CEE research symposium, University of Nevada, Reno, NV.
6. Shahriar A, **Lokesh S**, Boiteau R, Yang Y. April 2022. Stability constant of lignin-derived small compounds and structure identification for their complexes with Fe. CEE research symposium, University of Nevada, Reno, NV.
7. **Lokesh S,** Arunthavabalan S, Hajj EY, Hitti E, Yang Yu. Fate of 6PPD-quinone at rubberized asphalt concrete-water interface. April 2022, 17th IWA Leading Edge Conference on Water and Wastewater Technologies, Reno, NV. (**Poster)**
8. **Lokesh S**, Yang Y. 2022. Critical Role of Semiquinones in the Reductive Dehalogenation. April 2022, 17th IWA Leading Edge Conference on Water and Wastewater Technologies, Reno, NV. (**Poster)**
9. **Lokesh S,** Arunthavabalan S, Hajj EY, Hitti E, Yang Yu. Fate of 6PPD-quinone at rubberized asphalt concrete-water interface. January 2022, Reunited in water 2022 NWEA annual conference & exposition, Las Vegas, NV. (**Poster)**
10. **Lokesh S**, Yang Y. 2022. Critical Role of Semiquinones in the Reductive Dehalogenation. January 2022, Reunited in water 2022 NWEA annual conference & exposition, Las Vegas, NV. (**Poster)**
11. Numan T, **Lokesh S**, Shahriar A, Yang Y. Pyrogenic carbon produced during wildfire and impact on watershed functions. January 2022, Reunited in water 2022 NWEA annual conference & exposition, Las Vegas, NV.
12. Shahriar A, **Lokesh S**, Yang Y. Stability constant of lignin-derived small compounds and structure identification for their complexes with Fe. January 2022, Reunited in water 2022 NWEA annual conference & exposition, Las Vegas, NV.

HONORS & AWARDS

ACS ENVR Certificate of Merit **2021**
American Chemical Society

Nevada Watereuse Association Scholarship ($1,000) **2021**
Nevada Watereuse Association

Student Travel Grant ($500) **2022 & 2019**
University of Nevada Reno

New York University Graduate Scholarship ($10,000) **2016**
New York University

Best Young Scholar **2013**
Minamata International Symposium on Environmental and Energy Technology 2013 (MISSION 2013), Kumamoto, Japan

National Talent Search Examination Scholar **2010**
National Council of Educational Research and Training, Government of India.

National Science Olympiad **2009**

Government of India

RESEARCH EXPERIENCE

Postdoctoral Scholar: Advisors**:** Dr. Thomas Borch and Dr. Shantanu Jathar **2023–Present**
Department of Soil and Crop Sciences, CSU

- Evaluate contaminat release from structural fires using target and non-target mass spectrometric analysis.
- Chemical characterization of karrakins.

Graduate Research Assistant: Advisor: Dr. Yu (Frank) Yang **2019–2023**
Department of Civil & Environmental Engineering, UNR

- Redox reactive role of aqueous phase biochar in the dehalogenation process
- Role of semiquinone radicle in the dehalogenation process
- Mobilization and interactions of 6PPD-quinone from rubberized asphalt concrete
- Non-target high-resolution mass spectrometry analysis workflow to identify Fe-lignin degradation complexes
- Development of chemical tagging for quinone analysis using high-resolution mass spectrometry
- Non-Target analysis of the reactive species in biochar for pollutant degradation

Graduate Research Assistant: Advisor: Dr. Andrea Silverman **2016–2018**
Department of Civil & Urban Engineering, New York University

- Inactivation of human viruses, bacteriophages, and bacteria in natural waters and wastewaters through experimental and modeling approaches

Undergraduate Research Assistant: Advisor: Dr. Lakshmikanth **2013–2015**
Karnataka State Remote Sensing Application Centre (KSRSAC)

- Prediction of ground vibrations in geotechnical and mining operations using numerical and machine learning models
- Evaluated safety of ground excavation projects using data and numerical models
- Coupled physics-based and data-driven models to reduce the risk of failure of mining projects

TEACHING EXPERIENCE

Instructor, UNR **Fall 2022**
CEE 417/617—Quantitative water quality analysis

GradFIT Module Developer **2021, 2022**
Co-developed and held a Matlab-based Statistical Analysis workshop for first-generation college students and students from historically underrepresented backgrounds students joining UNR

(National Science Foundation Innovation Graduate Education Project)

Teaching Assistant, UNR **Fall 2019 & 2020**
CEE 417/617—Quantitative water quality analysis
Co-taught the laboratory course and developed a video module series to facilitate the learning process of laboratory experiments during the COVID-19 pandemic

Teaching Assistant, NYU **Spring 2018**
CE-GY8283—Risk Analysis
Held office hours, graded assignments, and managed online Q&A

MENTORING EXPERIENCE

Alyssa Radakovich (Ph.D.)	**2022–2023**
Travis Numan (Ph.D.)	**2020–2023**
Anil Timilsina (Ph.D.)	**2022–2023**
Abrar Shahriar (Ph.D.)	**2021–2023**
Justin Boice (Undergraduate)	**2021**

ACADEMIC SERVICE

Journal Reviewer for Environmental Science & Technology, Earth Science Review, Critical reviews in Environmental Science and Technology, Chemosphere, Journal of Environmental Quality, and Journal of American Water Resources Association

ANALYTICAL INSTRUMENTS & PROGRAMMING LANGUAGE

TOC, IC, UV-vis spectrometer, HPLC, LC-Triple quadrupole MS, LC-TOF-MS, Anaerobic Glove Box, FTIR, Quantachrome Surface Area Analyzer, Lachat, R, Matlab, MZmine, GNPS, and Sirius

ACTIVITIES

General Secretary, Indian Student Organization, UNR **2019–2021**
Student Assistant, Office of Global Services (OGS), NYU