



## Olivia S. Ryder, PhD

*Atmospheric Scientist*

Dr. Ryder, who joined STI in 2019, has over a decade of experience analyzing atmospheric chemistry. Her current duties include analyzing ambient data for toxic metals as part of community air monitoring efforts, conducting source apportionment assessments, and supporting geographic information system (GIS) work. She has a strong interest in communicating environmental information across scientific disciplines and to the public through outreach efforts.

Prior to joining STI, Dr. Ryder was a Staff Researcher at UC San Diego's Center for Aerosol Impacts on Chemistry of the Environment. She designed and performed projects to examine the role of marine enzymes on sea spray aerosol properties using Atomic Force Microscopy and Scanning Transmission X-ray Microscopy. She led a team of graduate students and wrote three successful proposals to secure instrument time at national laboratories around the world.

Dr. Ryder also worked as the Center's Education, Outreach, and Diversity Coordinator. She planned, coordinated, managed, and evaluated activities related to formal and informal education, public relations, and diversity initiatives. She used her skills in science communication and technical workshop planning to integrate laboratory technology and experiments into outreach demonstrations and community engagement efforts. She also planned and ran the Center's summer research program for undergraduates.

Dr. Ryder's graduate work included field and laboratory studies that investigated the impact of particle chemical composition on reactive trace gas uptake to ambient aerosol particles, especially in coastal environments. She used gas and particle phase instrumentation to explore the role aerosol composition plays in impacting daytime air quality and NO<sub>x</sub> and ozone budgets. For her efforts, she was awarded three years of full funding through a National Science Foundation Graduate Research Fellowship.

Dr. Ryder brings her experience of working with a broad range of scientists from diverse disciplines to STI, enabling her to effectively communicate scientific results and solve complex problems by adapting standard techniques and developing new ones. Dr. Ryder is a co-author of 13 peer-reviewed publications and has presented numerous works at scientific conferences, including the American Geophysical Union and American Chemical Society National meetings.

### Education

- PhD, Chemistry, University of California, San Diego
- MS, Chemistry, University of California, San Diego
- BS, Chemistry, University of California, Irvine
- Mini-MBA Certificate Program, Rady School of Business, University of California, San Diego

### Memberships

- American Geophysical Union
- American Chemical Society

For a list of publications, see [sonomatech.com/ResPub/OSRpub.pdf](https://sonomatech.com/ResPub/OSRpub.pdf).