

Olivia S. Ryder, Ph.D.

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EDUCATION

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| Ph.D. Chemistry University of California, San Diego San Diego, CA | 2009 - 2015 |
| Micro-MBA Certificate Program Rady School of Business, University of California, San Diego | 2015 |
| M.S. Chemistry University of California, San Diego | 2009 - 2011 |
| B.S. Chemistry (Honors), Magna Cum Laude University of California, Irvine | 2004 - 2008 |

PROFESSIONAL EXPERIENCE

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| Principal Scientist Atmospheric Interdisciplinary Research Institute | 2026 - present |
| <ul style="list-style-type: none">• Develop community-focused air quality initiatives with partner community groups.• Program development and project management.• Lead author technical reports and manuscripts. | |
| Project Scientist University of California, Riverside – CE-CERT | 2026 - present |
| <ul style="list-style-type: none">• Perform research and detailed technical analysis to support multi-faceted community-focused air toxics monitoring projects.• Develop educational material for the Air Quality and Climate Training (ACT) program.• Research project program management. | |
| Senior Atmospheric Data Scientist & Project Manager Sonoma Technology, Inc | 2019 - 2026 |
| <ul style="list-style-type: none">▪ Coordinate multi-tiered community monitoring campaigns involving FEM monitors, air sensors, filter collection, and canister collection components.▪ Oversee data processing, management, and analysis efforts for monitoring campaigns in disproportionately impacted communities.▪ Coordinate and manage measurement and analysis teams for each project.▪ Develop strong client relationships and perform client communication.▪ Lead author technical reports, manuscripts, and quality assurance documents.▪ Conduct detailed analysis of air quality data and exposure including source apportionment (e.g. Positive Matrix Factorization) and health risk assessment.▪ Create Quality Assurance Project Plans (QAPPs) for communities and State agencies nationwide for FEM instrument and air sensor deployment.▪ Develop comprehensive best practices guides for air pollution mitigation with U.S. EPA.▪ Skills: Client relationship management, Time management, Budget management, Technical analysis, Coordination of project deliverables, Health risk assessment, Positive matrix factorization, Science communication. | |
| Kids Making Sense Program Manager Sonoma Technology, Inc | 2022 - 2026 |
| <ul style="list-style-type: none">▪ Responsible for all aspects of the program from kit development, to marketing, inventory management, technical support, business development, customer acquisition, and management of the Kids Making Sense team▪ Develop training material and perform train-the-trainer style instruction on various aspects of air quality (e.g. air sensor usage, air sensor siting, data interpretation). | |

- Partner with community groups, teachers, and educators globally to deliver air quality education to students and community members through the Kids Making Sense program.
- **Skills:** Product development, Marketing, Customer support, Invoice preparation, Website content management, Inventory management, Curriculum development, Teacher training, Program business planning.

Global Air Quality Fellow | U.S. Department of State

2020 - 2025

- Technical analysis and advisory support to U.S. Embassy (Bosnia and Herzegovina) including air quality data analysis, measurement campaigns, and education/outreach support on air quality issues.

Education, Outreach & Diversity Coordinator | Center for Aerosol Impacts on Chem. of the Environment

2017 - 2019

- Responsible for Planning, coordinating, management, and evaluation all Center activities pertaining to formal and informal education, public relations, diversity initiatives, and the summer research program across 4 university sites nationwide
- **Skills:** Project planning & management, Program evaluation, Science communication, Team leadership, Technical workshop planning, Integration of laboratory technology and experiments into outreach demos

EXAMPLE TECHNICAL PROJECTS

Air Toxics Monitoring in the Del Amo Community Industrial Corridor

2024 – 2026

- **Client: Del Amo Action Committee (DAAC)**
- Manage a team to conduct an air toxics monitoring study in the Del Amo community near Los Angeles, CA. Our team is assisting the community in developing a PM_{2.5} sensor network and trained local staff on how to conduct metals and Volatile Organic Compounds (VOC) measurement at a central site. Data will be used to perform source apportionment analysis to establish a baseline of source contributions and compare the air toxics levels against known health benchmarks.
- Efforts include assisting study design and grant writing, managing field sampling and data analyst teams, analyzing and interpreting data, presenting updates to diverse stakeholders and decision makers, including community members, elected officials, and government agency representatives.

Blue Lake Enhanced Air Quality Monitoring

2024 – 2026

- **Client: Blue Lake Rancheria Tribe**
- Collaborated with Blue Lake Rancheria to establish a PM_{2.5} federal equivalency method (FEM) monitor, air filter sampling campaign for toxic metals, and a black carbon monitoring system.
- Technical project management included assisting study design, grant writing assistance, developing a comprehensive project Quality Assurance Project Plan (QAPP), managing field sampling and data analyst teams, interpreting data, updating presentations to client, and creating draft and final reports.

Public Health and Wildfire Smoke Impacts

2022-2025

- **Client: U.S. EPA**
- Developed the Best Practices Guide For Improving Indoor Air Quality In Commercial/Public Buildings During Wildland Fire Smoke Events In collaboration with U.S. EPA Office of Research & Development
- Report focuses on strategic actions for managers of public, commercial, and multi-unit residential buildings with and without air conditioning systems to reduce indoor exposure to particulate matter and gaseous pollutants.
- Efforts included comprehensive research, client management, graphic design, and extensive technical writing.

SYNERGISTIC ACTIVITIES

- Worked with U.S. EPA to develop a library sensor loan program for Los Angeles public libraries, and for EPA Region 5 and 10. Produced curriculum and training materials covering a range of air quality

topics including atmospheric chemistry, and using and understanding data collected from air quality sensors.

- Partnered with The Spokane Regional Clean Air Agency to implement the Kids Making Sense program at eight pilot schools in Spokane County, providing kits, teacher training, and support. Also developed an air sensor loan program, operated through a Spokane-area library, that provides community members access to air quality sensors to investigate their air quality.
- Performed technical data analysis on the Environmental Justice Community Assessment of Particulate Toxic Metals project for the Delaware Department of Natural Resources and Environmental Control. This effort monitored the concentrations and sources of toxic metal and particulate matter concentrations in the community of Eden Park, DE, which is ranked highly on the EPA's Environmental Justice Screen.
- Performed technical data analysis on the Maywood Community Air Quality Monitoring project in partnership with the Coalition for Clean Air, Comite Pro Uno, and the California Air Resources Board (CARB). This work involved analysis to determine sources and concentrations of metals, hexavalent chromium, and diesel particulate matter, and estimate community health risks.

AWARDS AND SERVICE ROLES

- Spheros Environmental E2PIC Guardian Award: Empowerment Inspiration Instigator - peer nominated 2025
- Technical Planning Committee for Air Sensors International Conference (ASIC) 2024, 2026
- Sonoma Technology 'You Make a Difference Award' - peer nominated and selected 2019

SELECT PUBLICATIONS AND PRESENTATIONS

Ryder O. et al. (2026) Air Toxics Monitoring in the Del Amo Community Industrial Corridor – an AB-617 Environmental Justice Community. Report prepared for Del Amo Action Committee by Sonoma Technology, Petaluma, CA.

Ryder O. et al. (2026) Air Toxics Monitoring in Madison Park and Surrounding Neighborhoods in the City of Santa Ana. Report prepared for GREEN-MPNA, Santa Ana, CA, by Sonoma Technology, Petaluma, CA.

Holder, A., B. Hassett-Sipple, S. Coefield, O. Ryder, and H. Hafner (2025) BEST PRACTICES GUIDE FOR IMPROVING INDOOR AIR QUALITY IN COMMERCIAL/PUBLIC BUILDINGS DURING WILDLAND FIRE SMOKE EVENTS. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-25/115.

Ryder O. (2025) Quality assurance project plan for comprehensive air pollution monitoring of industrial sources in disproportionately impacted communities in Metro East, Illinois. Prepared for U.S. EPA Region 5, Air and Radiation Division by Sonoma Technology, Petaluma, CA.

Ryder O.S. (2024) Review of commercially available wearable, portable, and vehicle-mounted PM2.5 sensors. Report prepared for the Electric Power Research Institute, Palo Alto, CA, by Sonoma Technology, Petaluma, CA.

Ryder O.S., DeWinter J.L., Brown S.G., Hoffman K., Frey B., and Mirzakhali A. (2020) Assessment of particulate toxic metals at an Environmental Justice community. Atmospheric Environment: X, 6, 100070, April. Available at <https://doi.org/10.1016/j.aeaoa.2020.100070>.