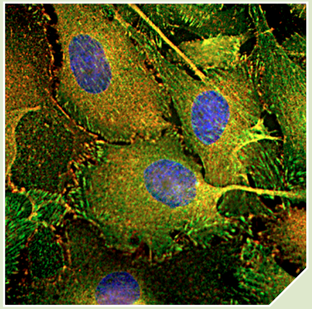
SCIENCE

EMSL's Science Themes help define and direct the development of capabilities and focused collections of user projects that will enhance scientific progress in the areas of environmental molecular science most critical to DOE and the nation. Each Science Theme focuses on drivers important to that field of science, and the themes share significant overlap.

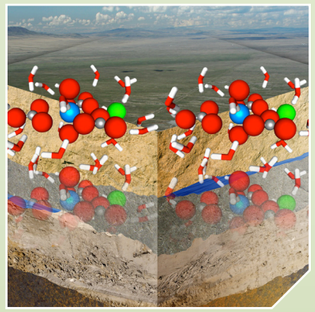


Biological Interactions and Dynamics

Developing a quantitative, systems-level understanding of the dynamic network of proteins and molecules that drive cell responses and how groups of different cells interact to give rise to functional cell communities.

Geochemistry/ Biogeochemistry and Subsurface Science

Studying reaction mechanisms at the mineral-water, microbe-mineral, and fluid-fluid interfaces at the molecular scale and understanding the effect of these mechanisms on the fate and transport of contaminants.



Science of Interfacial Phenomena

Developing an understanding and gaining control of atomic- and molecular-level structure-function relationships at interfaces that enable the optimization of interfacial properties, such as the control of catalytic activity and selectivity.

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- Join our mailing list by sending an email to subscribe-emsl_announcements@lyris.pnl.gov.

For general proposal inquiries,
contact the EMSL User Support Office:

emsl@pnl.gov

509-371-6003

EMSL provides integrated experimental and computational resources for discovery and technological innovation in the environmental molecular sciences to support the needs of DOE and the nation.

PNNL's mission is to deliver leadership and advancements in science, energy, national security, and the environment for the benefit of DOE and the nation.

PNNL-SA-77849

EMSL

EMSL'S USER FACILITY PROGRAM

How to Become a User

DOE LABORATORY, DOE USER FACILITY – EMSL is a *national scientific user facility* located at Pacific Northwest National Laboratory.

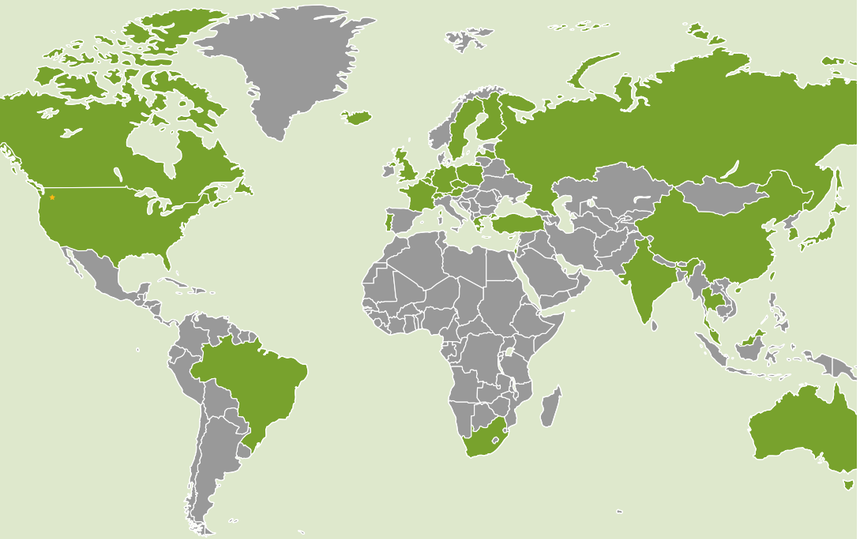
Pacific Northwest NATIONAL LABORATORY

Proudly Operated by Battelle *Since 1965*

U.S. DEPARTMENT OF ENERGY

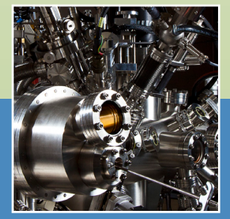
EMSL: INTEGRATION, COLLABORATION

More than 700 researchers from around the world benefit from EMSL's unique, collaborative environment every year. EMSL specializes in solving scientific problems with the holistic perspective afforded by multidisciplinary partnerships and collaborations. Our users hail from all 50 states and more than 35 countries and are affiliated with universities, national laboratories, government agencies, and industry.



EMSL focuses on scientific innovation through integration, combining computational and experimental approaches for discovery. EMSL recently expanded its collection of state-of-the-art instruments, which includes resources for:

- Cell Isolation and Systems Analysis
- Deposition and Microfabrication
- Mass Spectrometry
- Microscopy
- Molecular Science Computing
- NMR and EPR
- Spectroscopy and Diffraction
- Subsurface Flow and Transport.



BECOME AN EMSL USER

Give your research the benefit of the unique and state-of-the-art capabilities and internationally recognized experts at EMSL. Researchers may use EMSL's resources at no cost if results are shared in the open literature.

EMSL offers several avenues for collaboration, including proposal opportunities and fellowships. Learn more below and at:

- www.emsl.pnl.gov/access
- www.emsl.pnl.gov/news/awards

Answer our Call

Science Theme Call for Proposals

- Issued annually in the spring
- Awarded for up to three years
- Calls help define and direct research and capability development at EMSL
- External peer-review process favors research that integrates experiment and theory, crosses multiple science themes, and/or is computationally intensive

Submit a Proposal any Time of Year

General Proposals

- Can be submitted at any time (no call necessary)
- Awarded for up to one year
- Scope can vary from a single experiment to substantial EMSL access
- Awards heavily depend on resource availability

Rapid Access Proposals

- Can be submitted at any time (no call necessary)
- Awarded for no more than one month
- Accommodates users' needs for deadline-driven, rapid turnaround of data

Partner with EMSL

Scientific Partner Proposals

- Accommodate users or groups of users who wish to partner with EMSL staff to enhance an existing capability or develop and build new or unique capabilities that enhance EMSL's user program
- Letters of Intent can be submitted at any time (no call necessary)
- A full proposal is requested pending review and approval of a Letter of Intent
- Awarded for a period of time contingent upon EMSL strategic needs and the availability of EMSL resources

Apply for a Fellowship

Wiley Visiting Scientist Program

- Offers an opportunity for distinguished scientists to provide recommendations on EMSL's path forward as well as actively contribute to EMSL's success
- Travel and per diem funds are available
- Applicants are considered quarterly

Wiley Research Fellow Program

- Formally recognizes researchers who make significant contributions to EMSL outside of their individual research efforts as well as provides those researchers with a venue to provide recommendations on EMSL's path forward and actively contribute to EMSL's success
- All new and existing appointments are considered annually

William Wiley Postdoctoral Fellowship

- Attracts high-performing, newly graduated junior Ph.D. scientists who have the potential to become full-time scientific staff at EMSL
- Award is for one year
- Renewals possible for a total of three years
- Salary, research support, and travel budget provided