

## EMSL PROPOSAL PLANNING

User Support Office, (509) 371-6003, [emsl@pnl.gov](mailto:emsl@pnl.gov)

Published February 2012

An EMSL user proposal requires a lot of detailed information for a thorough peer and management review. To aid in this process, we suggest you use this document to help you track the proposal steps and collect the necessary information before you begin filling out the web-based proposal form on EMSL's User Portal. **Proposals submitted without the required information will not be considered.** Please contact the User Support Office if you have any questions throughout this process.

### PROPOSAL CHECKLIST

- Discuss your planned research with the appropriate EMSL staff (recommended).
- Identify which type of proposal you are submitting (<http://www.emsl.pnl.gov/access/calls/index.jsp#types>).  
*Note: All proposals are considered Non-Proprietary, where the results and information are intended to be fully disclosed and disseminated, unless you identify your proposal as Proprietary.*
- Collect information needed (e.g., contact information, team information, capability identification)
- Write an abstract, which can be posted on the EMSL website if the proposal is accepted (*does not apply to Proprietary proposals*)
- Write your Project Description, adhering to the instructions on EMSL's website. Proposals not consistent with these instructions will not be considered ([http://www.emsl.pnl.gov/access/proposal\\_guidance.jsp](http://www.emsl.pnl.gov/access/proposal_guidance.jsp)).
- Create a user account on EMSL's User Portal (<https://eus.emsl.pnl.gov/Portal/>), unless you are a returning user.
- Complete the 3-part, web-based proposal form: 1. Participants, 2. Details, 3. Logistics.
- Save** (for further editing later) or **Submit Proposal** when completed. Once submitted, you will receive an email from the User Support Office ([^PNNL EMSL User Support](#)) confirming receipt of your proposal. *Note: You will not be able to make further edits to your proposal after it has been submitted.*

### ONLINE PROPOSAL FORM

#### PART 1. PARTICIPANTS

Information on file for the person completing the online form will be auto-populated. For each participant, the following information is required. **Note:** While anyone can write and submit the proposal on behalf of the research team, postdocs and students **may not serve as the principle investigator or co-investigator.** A lead professor or advisor must be included on the participant list and marked as principle investigator.

Is this participant the principle investigator of this proposal?  Yes  No

Is this participant the co-investigator of this proposal?  Yes  No

Will this participant be visiting EMSL?  Yes  No

Prefix:  Dr.  Mr.  Mrs.  Ms.

\_\_\_\_\_  
First Name

\_\_\_\_\_  
Middle Name  
(No initials; if no middle name, use "NMN")

\_\_\_\_\_  
Last Name

\_\_\_\_\_  
Suffix

\_\_\_\_\_  
Primary Citizenship

\_\_\_\_\_  
Secondary Citizenship

Profession:

- High School Student
- Undergraduate Student
- Graduate Student
- Postdoc
- Faculty/Staff
- Research Scientist/Engineer
- Professional
- Self-Employed
- Retired
- Other (please specify): \_\_\_\_\_

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Phone Number (with area code)

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Fax Number (with area code)

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E-mail Address

**Institution Information**

**Type of Institution:**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Academia                    | <input type="checkbox"/> Battelle Columbus       | <input type="checkbox"/> DOE Lab (other than PNNL) |
| <input type="checkbox"/> Foreign National Laboratory | <input type="checkbox"/> Other Government Agency | <input type="checkbox"/> PNNL                      |
| <input type="checkbox"/> EMSL (if line staff)        | <input type="checkbox"/> Private Industry        | <input type="checkbox"/> Other (please specify):   |
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Institution Name

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Department

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**Business Address**

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City

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State/Province  
(if U.S. or Canada)

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Postal Code

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Country

**PART 2, DETAILS**

**Primary Research Area:**

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Materials Science (incl. condensed matter phys. & material chem.) | <input type="checkbox"/> Polymers   | <input type="checkbox"/> Environmental Sciences  |
| <input type="checkbox"/> Physics (excludes condensed matter physics)                       | <input type="checkbox"/> Medical Applications   | <input type="checkbox"/> Optics                  |
| <input type="checkbox"/> Chemistry (excludes materials chemistry)                          | <input type="checkbox"/> Biological and Life Sciences (excludes medical applications) | <input type="checkbox"/> Engineering             |
|  | <input type="checkbox"/> Earth Sciences   | <input type="checkbox"/> Other (please specify): |
- 

**Proposal Title** (must be typed or pasted into text box using **plain text only**):

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**Abstract:** (must be typed or pasted into text box using **plain text only, 500 word limit**. Abstracts for approved general use proposals and proposals in response to periodic calls **will be posted on the EMSL website as received**.)

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**Project Description:** (.pdf or .doc(x) file, 4-page limit, including charts, graphs, maps, photographs, and other pictorial presentations). Do not repeat the abstract. Project Description should include:

- **Title** – Must be brief, scientifically or technically valid, intelligible to a scientifically or technically literate reader, and suitable for use in the public press.

- **Specific Aims** (generally 250 words or less) – State the specific objectives of the research proposed (e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology), providing concise and unambiguous details.
- **Background/Introduction** (approximately 400 words or less) – State the scientific question(s) being addressed and the anticipated importance or significance of results to be obtained, especially as related to EMSL’s mission.
- **Approach** (approximately 1200 - 1500 words) – Describe the work to be conducted at EMSL in the first year of the project, along with any preliminary, background measurements, or tests completed that validate the approach (include references where relevant and attach the full citations as an addendum).
- **Computational Approach (required if compute cycles requested, additional 1 page maximum)** – Does not count against the 4-page limit. Specify method or approach, software to be used (include scaling examples if not NWChem), and a strong justification for hours requested (number, size, duration of calculations based on Chinook or other parallel computer). There is no upper limit, but the time requested must be justified. Allocations are awarded in units of node-hours wall-clock time, and each node contains 8 processor-cores (ex: 150,000 node-hours are actually 1,200,000 processor-core hours).

**CVs and Additional Files:** In addition to your Project Description, please submit the following files *in the order listed below*.

- **Addendum 1: References (optional)** – Should be submitted as an additional file (not embedded in the text). Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address or DOI should be included. Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal. While there is no established page limitation for the references, this section must include bibliographic citations only and *must not be used to provide parenthetical information outside of the 4-page Project Description*.
- **Addendum 2: CVs (required)** – Must attach abbreviated curriculum vitae (**2-page maximum each**) for the PI and each of the key investigators that would support the review of the team’s qualifications for the research proposed (Criterion 2).
- **Addendum 3: EMSL Resources (recommended)** – If not already included in your project description, please include a table of resources requested for the first year of your project (instruments **and** staff support), including the units requested if known (see note below), the period of use, the expertise provided by team members on each resource (including duration of EMSL stay), and requested EMSL staff support. “Units Requested” can be instrument hours, node-hours for the supercomputer, or gigabytes for data archive storage. A template is provided below; an example is provided on EMSL’s website.

**NOTE:** *If you’re uncertain about information related to samples, units requested, or specific instruments, please contact the custodian or Capability Lead listed on the website to discuss the needs for your research aims. If you’re unable to speak to a staff member before the proposal deadline, insert a “?” in the table for # of samples, and EMSL management will adjust your request based on your Project Description. If uncertain about the units requested, insert a “1” in both the table and the Details section of the electronic proposal form. This will not affect your resource score.*

Resource	# of Samples	Units Requested (specify unit)	Period of Use	Project Team Expertise per Resource	EMSL Support Requested

- **Addendum 4: Suggested Reviewers or Reviewers Not to Include (optional)** – You may include a list of suggested reviewers who you feel are especially well-qualified to review the proposal or persons you would prefer not to review the proposal (indicating why) may be included. These suggestions are optional. The Capability Lead handling the proposal will consider the suggestions and may contact you for further information. The decision whether or not to use the suggestions remains with the Capability Lead.

Preferred Start Date: \_\_\_\_\_

Preferred End Date: \_\_\_\_\_

**Proposal Type: Select one.**

- Current Call** – Submitted in response to specific annual calls and available only during the timeframe of the Call. Open for one year, with 1-2 extensions possible, depending on the Call. Proposals should identify the specific focus or the one that most closely matches from the Call’s advertised options. See below for examples.
  - Science Theme:
    - Biological Interactions and Dynamics
    - Geochemistry/Biogeochemistry and Subsurface Science
    - Science of Interfacial Phenomena
  - Capabilities-Based
    - 900 MHz NMR
- General** – May be submitted at any time and are open for up to one year only. Only limited resources are available for these proposals.
- Rapid** – Short-term access for rapid turnaround to meet specific deadline (e.g., response to requested data for finalizing thesis work or paper publication, preliminary data needed for proposal preparation) or proof of principle experiment before developing a full proposal. Open for 30 days only. ***Must clearly justify why rapid access is needed. For rapid turnaround of data, working deadline must be provided; for proof-of-principle requests, sufficient detail of results expected should be given to convince the reviewers that a proof-of-principle is required and that the proposal is not simply a small-scale experiment which would not meet the requirements of a larger proposal.***
- Proprietary** – Research will not be publishable and may require full-cost recovery. Open for up to one year only.
- Partner** – ONLY for users with approved Letter of Intent to co-develop and co-fund a project with EMSL. Open for time determined by EMSL’s Partner Panel.
- Resource Owner** – ONLY for PIs who own or co-own resources with EMSL. Open for one year, with two extensions possible.

Is this proposal associated with a National Science Foundation Supplemental Funding Request?  Yes  No  
<http://www.nsf.gov/pubs/2004/nsf04025/nsf04025.htm>

Will you desire the assistance of EMSL staff in obtaining and interpreting the results?  Yes  No

PNNL Staff Contact: \_\_\_\_\_

## Resources

Select all resources needed and enter an estimate of the time needed **for each during the first year** of the proposal. Resources are listed by capabilities, and operate either 24 hours a day/7 days a week or 10 hours a day/5 days a week. Operating hours by instrument are listed on EMSL's website (<http://www.emsl.pnl.gov/capabilities/instrumentList.jsp>).

### Cell Isolation and Systems Analysis

#### Cell Culture

- Mammalian Cell Culture
- Microbial Bioreactors

#### Cell Isolation and Fractionation

- Flow Cytometer: Influx
- Laser Capture Microdissection

#### Fluorescence Microscopy/Spectroscopy

- Microscope: Confocal, Multi-Photon/FLIM Integrated
- Microscope: Fluorescence, Confocal, Real-Time
- Microscope: Fluorescence, Single Molecule
- Microscope: Fluorescence, Single Molecule/Patch Clamp
- Microscope: Scanning Probe – AFM Compound

- Microscope: Fluorescence, Super Resolution STORM
- Microscope: Fluorescence, Super Resolution Structured Illumination – (avail. Oct. 2012)

#### Secondary CISA Resources

- Electron Microscope: Dual FIB/SEM (FEI Helios)
- Electron Microscope: Transmission, CRYO 2005
- Electron Microscope: Transmission, Liquid Helium, Cryo (JEOL) – (avail. Mar. 2013)
- Microscope: Helium Ion

#### Transcriptomics

- 5500XL SOLiD Sequencers

### Computing

#### Data File Storage

- Computing: Data File Storage (Aurora) (GB)

#### Graphics

- Computing: SGI 16-processor Graphics Server (NWVisus)

#### Small Clusters

- Computing: NW-ICE
- Computing: Spokane cluster

#### Super Computing

- Computing: Chinook (HP 2310-Node Linux Cluster)

### Deposition/Microfabrication

#### Ion/Molecular Beam Spectrometry

- Ion Accelerator, Beam Lines, and End Stations
- Liquid-Beam Source

#### Microfabrication

- Electron Microscope: Dual FIB/SEM (FEI Helios)
- Microfabrication Laboratory (Clean Room)
- Microfabrication: Deep Reactive Ion Etching System
- Microfabrication: Mask Aligner
- Microfabrication: Nanoimprinter

#### Thin Film Deposition

- Deposition: Molecular Beam Epitaxy #1
- Deposition: Hybrid Thin Film Deposition System
- Deposition: Pulsed Laser Deposition System
- Mass-Selected Ion Deposition System – Electro Spray Source

## Mass Spectrometry

### Aerosol Particle Characterization

- \_\_\_\_\_ Mass Spectrometer: Aerosol - time-of-flight, high resolution
- \_\_\_\_\_ Mass Spectrometer: Inductively Coupled Plasma (ICP-MS), High Resolution (Element XR)
- \_\_\_\_\_ Mass Spectrometer: Inductively Coupled Plasma (ICP-MS), Multi-Collector (Neptune Plus)
- \_\_\_\_\_ Mass Spectrometer: Inductively Coupled Plasma (ICP-MS), Ultra-High Resolution
- \_\_\_\_\_ Mass Spectrometer: Linear Ion Trap Quadrupole (LTQ) Orbitrap MS - for environmental research
- \_\_\_\_\_ Mass Spectrometer: Proton Transfer Reaction (PTRMS)
- \_\_\_\_\_ Mass Spectrometer: Single Particle (SPLAT II)
- \_\_\_\_\_ Mass-Selected Ion Deposition System – Electro spray Source

### Imaging

- \_\_\_\_\_ Mass Spectrometer: MALDI-TOF

### Ion Surface

- \_\_\_\_\_ Analytical: Inductively Coupled Plasma-Mass Spec (ICP-MS)
- \_\_\_\_\_ Mass Spectrometer: FT-ICR 6 T (Ion Surface Collisions)
- \_\_\_\_\_ Mass Spectrometer: Time of Flight Secondary Ion (ToF SIMS) – 1997
- \_\_\_\_\_ Mass Spectrometer: Time of Flight Secondary Ion (ToF SIMS) – 2007

### Isotopic Elemental Analysis

- \_\_\_\_\_ Mass Spectrometer: Inductively Coupled Plasma (ICP-MS), High Resolution (Element XR)
- \_\_\_\_\_ Mass Spectrometer: Inductively Coupled Plasma (ICP-MS), Multi-Collector (Neptune Plus)
- \_\_\_\_\_ Mass Spectrometer: Inductively Coupled Plasma (ICP-MS), Ultra-High Resolution
- \_\_\_\_\_ Mass Spectrometer: NanoSIMS – (avail. May 2012)

### Metallomics

- \_\_\_\_\_ Mass Spectrometer: Inductively Coupled Plasma (ICP-MS) System, Metallomics

### Proteomics/Biological

- \_\_\_\_\_ Mass Spectrometer: Fourier Transform Ion Cyclotron Resonance
- \_\_\_\_\_ Mass Spectrometer: Ion Mobility Time of Flight
- \_\_\_\_\_ Mass Spectrometer: Linear Ion Trap (LTQ)
- \_\_\_\_\_ Mass Spectrometer: Orbitrap
- \_\_\_\_\_ Mass Spectrometer: MALDI TOF
- \_\_\_\_\_ Mass Spectrometer: LC Triple Quadrupole
- \_\_\_\_\_ Mass Spectrometer: GC Triple Quad
- \_\_\_\_\_ Mass Spectrometer: Chromatograph, Liquid, qTRAP
- \_\_\_\_\_ Mass Spectrometer: Ion Mobility Spectrometry, Time of Flight

## Microscopy

### Aerosol Particle Characterization

- \_\_\_\_\_ Electron Microscope: Dual FIB/SEM, Environmental (FEI Quanta)
- \_\_\_\_\_ Mass Spectrometer: Single Particle (SPLAT II)

### Electron

- \_\_\_\_\_ Electron Microprobe
- \_\_\_\_\_ Electron Microscope: Dual FIB/SEM (FEI Helios)
- \_\_\_\_\_ Electron Microscope: Dual FIB/SEM, Environmental (FEI Quanta)
- \_\_\_\_\_ Electron Microscope: Dual FIB/SEM, Environmental for radiological samples (Quanta)
- \_\_\_\_\_ Electron Microscope: Photoemission (PEEM)
- \_\_\_\_\_ Electron Microscope: Transmission, Aberration Corrected
- \_\_\_\_\_ Electron Microscope: Transmission, CRYO 2005
- \_\_\_\_\_ Electron Spectrometer: XPS Imaging
- \_\_\_\_\_ Electron Microscope: Transmission, Radiological (JEOL 2010F)
- \_\_\_\_\_ Electron Microscope: Transmission, Liquid Helium, Cryo (JEOL) – (avail. Mar. 2013)
- \_\_\_\_\_ Electron Microscope: Transmission, Environmental – (avail. Apr. 2012)
- \_\_\_\_\_ Electron Microscope: Transmission, Dynamic – (avail. Dec. 2012)

### Ion

- \_\_\_\_\_ Microscope: Helium Ion
- \_\_\_\_\_ Spectrometer: Atom Probe
- \_\_\_\_\_ Mass Spectrometer: NanoSIMS – (avail. May 2012)

### Optical

- \_\_\_\_\_ Mammalian Cell Culture
- \_\_\_\_\_ Microscope: Fluorescence, Single-Molecule
- \_\_\_\_\_ Microscope: Fluorescence, Single-Molecule / Patch Clamp
- \_\_\_\_\_ NMR Spectrometer: 500 MHz WB Bruker (Imaging)
- \_\_\_\_\_ Spectrometer: Fluorescence, Cryogenic
- \_\_\_\_\_ Spectrometer: FTIR - standard
- \_\_\_\_\_ Spectrometer: FTIR/Raman
- \_\_\_\_\_ Spectrometer: Raman, Confocal
- \_\_\_\_\_ Spectrometer: Raman/Epifluorescence, Inverted Confocal
- \_\_\_\_\_ Spectroscopy: Fluorescence, Time-resolved

### Scanning Probes

- \_\_\_\_\_ Geochemistry AFM
- \_\_\_\_\_ Microscope: Scanning Probe – AFM Compound
- \_\_\_\_\_ Microscope: Scanning Probe – AFM, Bioscope, Radiological
- \_\_\_\_\_ Microscope: Scanning Probe – Dynamic Force
- \_\_\_\_\_ Microscope: Scanning Probe - STM/AFM, PicoSPM
- \_\_\_\_\_ Microscope: Scanning Probe, DI Nanoscope IIIa Multimode
- \_\_\_\_\_ Microscope: Scanning Probe, Scattering IR SNOM
- \_\_\_\_\_ Microscope: Scanning Probe, STM/AFM, Low Temperature, UHV
- \_\_\_\_\_ Microscope: Scanning Probe, Variable Temperature
- \_\_\_\_\_ Microscope: Scanning Probe, Variable Temperature UHV

### Tomography

- \_\_\_\_\_ Electron Microscope: Transmission, Aberration Corrected
- \_\_\_\_\_ Electron Microscope: Transmission, CRYO 2005
- \_\_\_\_\_ X-ray Computed Tomography

## NMR and EPR

### EPR

- \_\_\_\_\_ EPR Spectrometer Pulsed/CW (X-band, 9.5 GHz)
- \_\_\_\_\_ EPR Spectrometer: High Field (W-band, 95 GHz)

### High-Resolution Liquids

- \_\_\_\_\_ NMR Spectrometer: 600 MHz NB Varian Inova (Liquids)
- \_\_\_\_\_ NMR Spectrometer: 600 MHz NB Varian Inova – Cryoprobe (Liquids)
- \_\_\_\_\_ NMR Spectrometer: 600 MHz NB Varian LC-NMR System - metabolomics cryoprobe (Liquids)
- \_\_\_\_\_ NMR Spectrometer: 750 MHz (17.6 Tesla) WB Bruker (Liquids, Solids, Imaging)
- \_\_\_\_\_ NMR Spectrometer: 750 MHz (17.6 Tesla) NB Varian
- \_\_\_\_\_ NMR Spectrometer: 800 MHz (18.8 Tesla) Varian Cryoprobe (liquids)
- \_\_\_\_\_ NMR Spectrometer: 900 MHz (21.1 Tesla) Varian – (subscribed through Sept. 2012)

### Imaging

- \_\_\_\_\_ NMR Spectrometer: 2 Tesla Horizontal Bore Bruker (Imaging)
- \_\_\_\_\_ NMR Spectrometer: 500 MHz WB Bruker (Imaging)
- \_\_\_\_\_ NMR Spectrometer: 750 MHz (17.6 Tesla) WB Bruker (Liquids, Solids, Imaging)

### Solid-State

- \_\_\_\_\_ NMR Spectrometer: 300 MHz WB Varian (Solids)
- \_\_\_\_\_ NMR Spectrometer: 500 MHz WB Varian (solids)
- \_\_\_\_\_ NMR Spectrometer: 600 MHz NB Varian NMR system (solids) – (Limited Time Available)
- \_\_\_\_\_ NMR Spectrometer: 750 MHz (17.6 Tesla) WB Bruker (Liquids, Solids, Imaging)
- \_\_\_\_\_ NMR Spectrometer: 750 MHz (17.6 Tesla) NB Varian
- \_\_\_\_\_ NMR Spectrometer: 850 MHz (20 Tesla) WB Varian (Solids) – (subscribed through Sept. 2012)
- \_\_\_\_\_ NMR Spectrometer: 900 MHz (21.1 Tesla) Varian – (subscribed through Sept. 2012)

## Spectroscopy/Diffraction

### Electron

- \_\_\_\_\_ Catalysis: UHV Model Catalysts, High Pressure
- \_\_\_\_\_ Electron and Photon Stimulated Desorption (BES 2)
- \_\_\_\_\_ Electron Spectrometer: HREELS, UHV Surface Chemistry
- \_\_\_\_\_ Electron Spectrometer: Scanning Multiprobe Surface Analysis System - Versaprobe
- \_\_\_\_\_ Electron Spectrometer: XPS High Resolution (Quantera)
- \_\_\_\_\_ Electron Spectrometer: XPS Imaging
- \_\_\_\_\_ Electron Spectrometer: XPS with Laser Interface
- \_\_\_\_\_ Electron Spectrometer: X-Ray, High Sensitivity (for radiological samples)
- \_\_\_\_\_ Photoelectron Spectrometer – Low Temperature

### Fluorescence

- \_\_\_\_\_ Spectrometer: Fluorimeter
- \_\_\_\_\_ Spectrometer: Fluorescence, Cryogenic
- \_\_\_\_\_ Spectrometer: Fluorescence, Picosecond
- \_\_\_\_\_ Spectrometer: Fluorescence, Time-resolved

### Infrared

- \_\_\_\_\_ Atmospheric Pressure Reactor System
- \_\_\_\_\_ Energetic Processes (Surfaces/Solids) Instrumentation w/Lasers
- \_\_\_\_\_ Spectrometer: FTIR – standard
- \_\_\_\_\_ Spectrometer: FTIR/Raman
- \_\_\_\_\_ Spectrometer: FTIR – High Resolution
- \_\_\_\_\_ Transient Kinetic Analysis (TKA)

### Ion/Molecular Beam Spectrometry

- \_\_\_\_\_ Ion Accelerator, Beam Lines, and End Stations
- \_\_\_\_\_ Microscope: Helium Ion
- \_\_\_\_\_ Molecular Beam Kinetics
- \_\_\_\_\_ Spectrometer: Atom Probe

### Mössbauer

- \_\_\_\_\_ Spectrometer: Mössbauer

### Optical

- \_\_\_\_\_ Spectrometer: Circular Dichroism
- \_\_\_\_\_ Spectrometer: Sum Frequency/Second Harmonic Generation, Picosecond, Surface Spectroscopy
- \_\_\_\_\_ Spectrometer: Sum Frequency/Second Harmonic Generation, Femto-Picosecond, High Resolution, Ultrafast Dynamics
- \_\_\_\_\_ Spectrometer: Stopped-Flow, Absorbance, BioLOGIC SFM-400

### Raman

- \_\_\_\_\_ Spectrometer: Raman, Confocal
- \_\_\_\_\_ Spectrometer: Raman/Epifluorescence, Inverted Confocal

### X-ray Diffraction and Tomography

- \_\_\_\_\_ X-ray Diffraction: Four-Circle
- \_\_\_\_\_ X-ray Diffraction: General Purpose
- \_\_\_\_\_ X-ray Diffraction: Microbeam
- \_\_\_\_\_ X-ray Diffraction: Special Applications
- \_\_\_\_\_ X-ray Computed Tomography

## Subsurface Flow and Transport

### Analytical

- \_\_\_\_\_ Analytical: Chromatograph: Ion
- \_\_\_\_\_ Analytical: Chromatograph: Gas/Mass Spec System 2005
- \_\_\_\_\_ Analytical: Chromatograph: Liquid
- \_\_\_\_\_ Analytical: Inductively Coupled Plasma-Mass Spec (ICP-MS)
- \_\_\_\_\_ Analytical: Total Organic Carbon Analyzer (TOC)

### Flow Cells

- \_\_\_\_\_ SFTEL: Flow Cell
- \_\_\_\_\_ SFTEL: Hydraulic Property Apparati
- \_\_\_\_\_ SFTEL: Pore Scale Micromodels

### Tomography

- \_\_\_\_\_ X-ray Computed Tomography

## **PART 3. LOGISTICS**

### **Funding Agencies:**

DOE requires that we report on the subject discipline of all proposals. Select all funding agencies associated with your proposed research.

Department of Defense  
DOE, Office of Advanced Scientific Computing Research  
DOE, Office of Biological & Environmental Research  
DOE, Office of Environmental Management  
DOE, Office of Nonproliferation & National Security  
DOE, Other: \_\_\_\_\_  
Environmental Protection Agency  
Foreign Government Agency  
Industry, Foreign  
LDRD, Other National Lab  
LDRD, PNNL  
National Aeronautics and Space Administration  
National Institutes of Health  
National Science Foundation  
Nuclear Regulatory Commission  
Other U.S. Government Agency: \_\_\_\_\_  
University, Foreign  
University, U.S.  
Other (please specify): \_\_\_\_\_

**Work Package #** (required for PNNL employees only to verify if work is government or private): \_\_\_\_\_

### **Materials & Equipment**

**Will your research involve the use of human blood, tissues, DNA, cells, cell lines, or human biological samples in any form?**  Yes  No

**Does your work involve the use of live animals?**  Yes  No

**Will you be bringing or sending any chemicals to the EMSL facility?**  Yes  No

**Does your experiment on EMSL resources involve samples?**  Yes  No

Do any of your samples contain bound or unbound engineered nanoparticles?  Yes  No

Do any of your samples contain radioactive isotopes?  Yes  No

If bringing/sending samples, what are your plans?  Ship  Hand Carry  Other, Specify \_\_\_\_\_

Will you need to perform sample preparation at EMSL?  Yes  No

At the end of the project, the samples should be Returned to you  Disposed at EMSL  Other, Specify \_\_\_\_\_

**Note: Do not ship any equipment, chemicals or samples to EMSL/PNNL without first coordinating with your host or the User Support Office, (509) 371-6003. Samples will not be accepted without a Sample Submission Form. In addition to EMSL regulations, users are responsible for adhering to all Department of Transportation regulations.**

**User Equipment:** If you intend to bring equipment to EMSL, including computers that will need to connect to the PNNL network, please list them here.

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**Comments:** If you have any additional needs or comments regarding the proposal or the process, please enter them here:

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