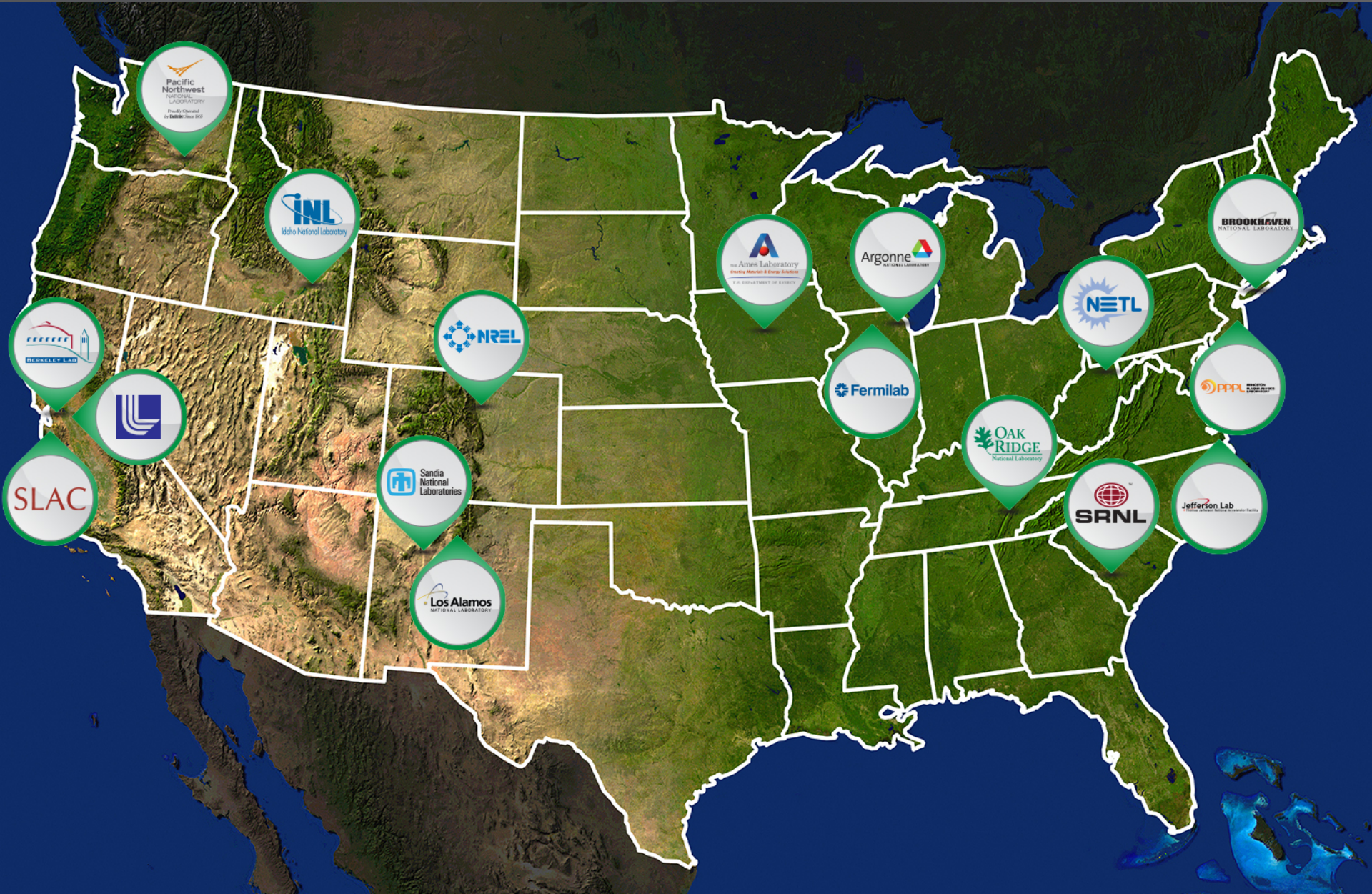


PNNL Overview

March 14, 2013

The National Laboratory system



PNNL is mission-driven

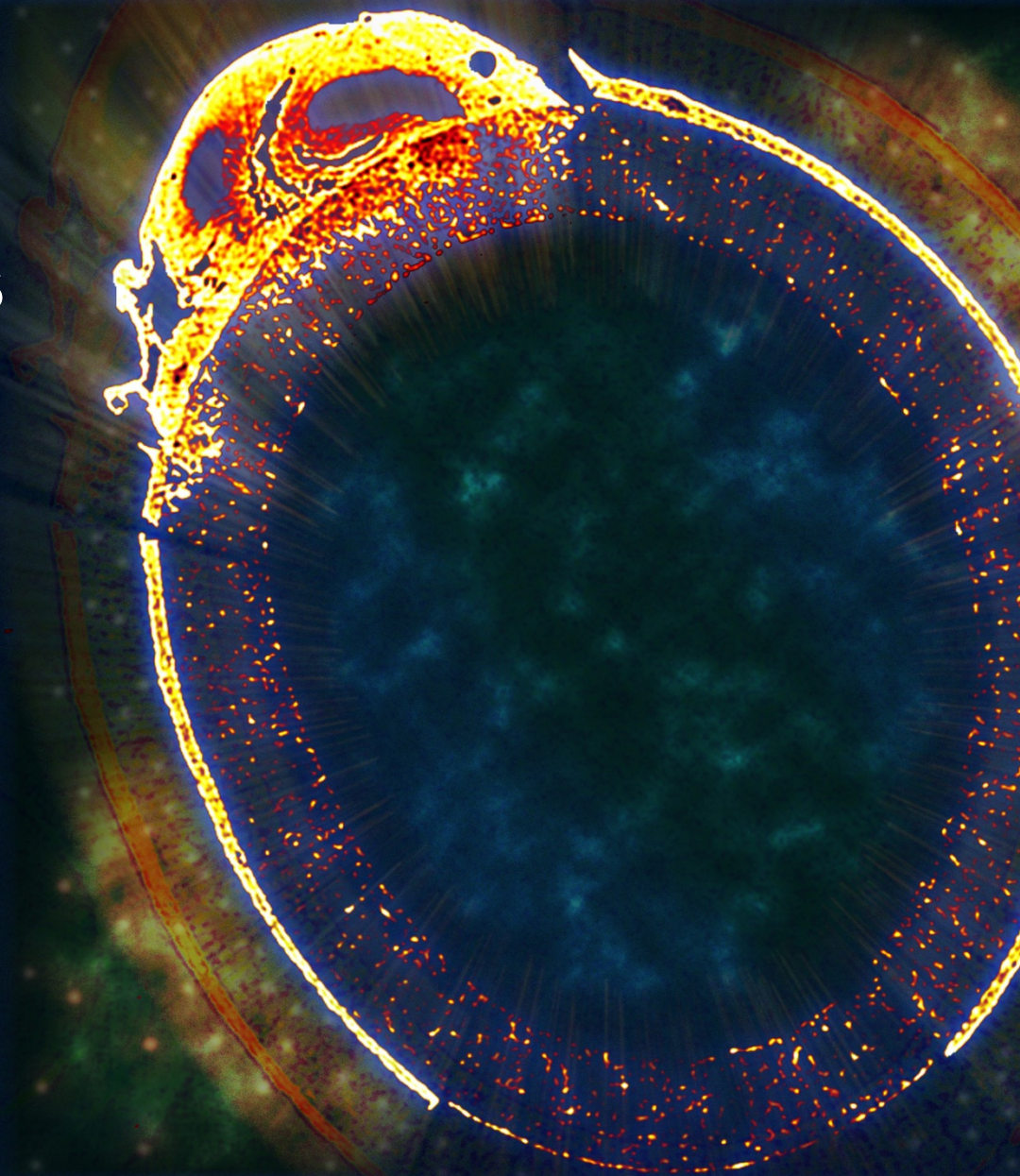
We
TRANSFORM
THE WORLD
through
courageous
DISCOVERY
and
INNOVATION.

- ▶ Operated by Battelle since 1965
- ▶ Unique S&T capabilities
- ▶ Mission-driven collaborations with government, industry and academia



What PNNL does and why it does it

PNNL science and
technology inspires
and enables the
world to live
PROSPEROUSLY,
SAFELY, and
SECURELY



Delivering simultaneous excellence



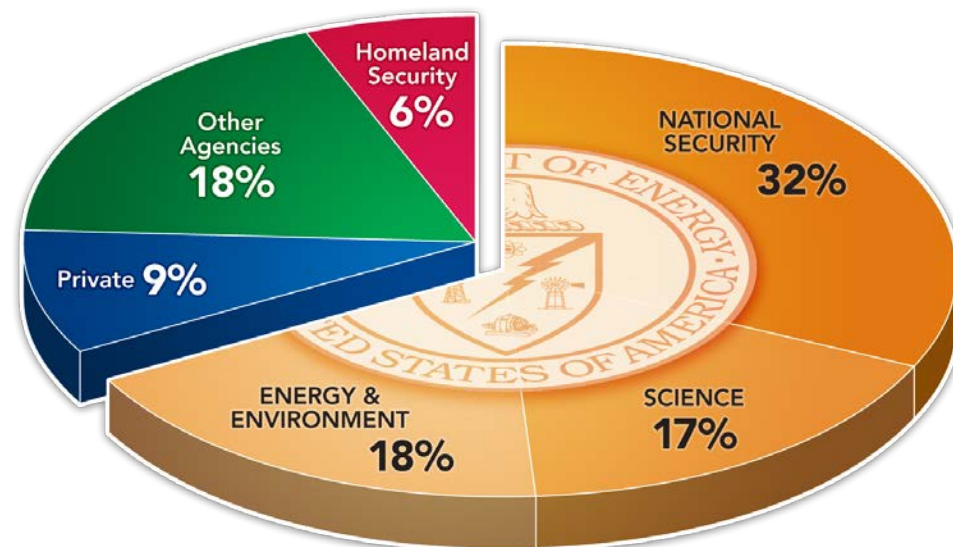
Excellence in Science & Technology



- ▶ 56 AAAS Fellows
- ▶ 2,153 U.S. & foreign patents since 1965
- ▶ Attracting top scientific talent
- ▶ Award winning work
- ▶ Top 1% in publications and citations
 - Biology and Biochemistry
 - Chemistry
 - Clinical Medicine
 - Engineering
 - Environment and Ecology
 - Geosciences
 - Materials Science
 - Microbiology
 - Molecular Biology & Genetics
 - Physics

FY2012 Snapshot

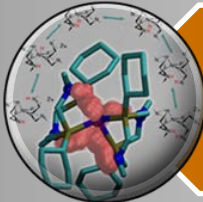
- ▶ \$1.0B operating budget
- ▶ About 4,500 scientists, engineers and non-technical staff
- ▶ 1,041 peer-reviewed papers
- ▶ 44 U.S. and foreign patents
- ▶ 3 R&D 100 and FLC Awards



Lab-Level Objectives distinguish PNNL



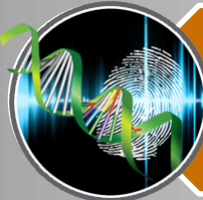
Chemical Imaging of Dynamic Systems



Chemical Conversions for Sustainable Energy



Efficient and Secure Power Grid

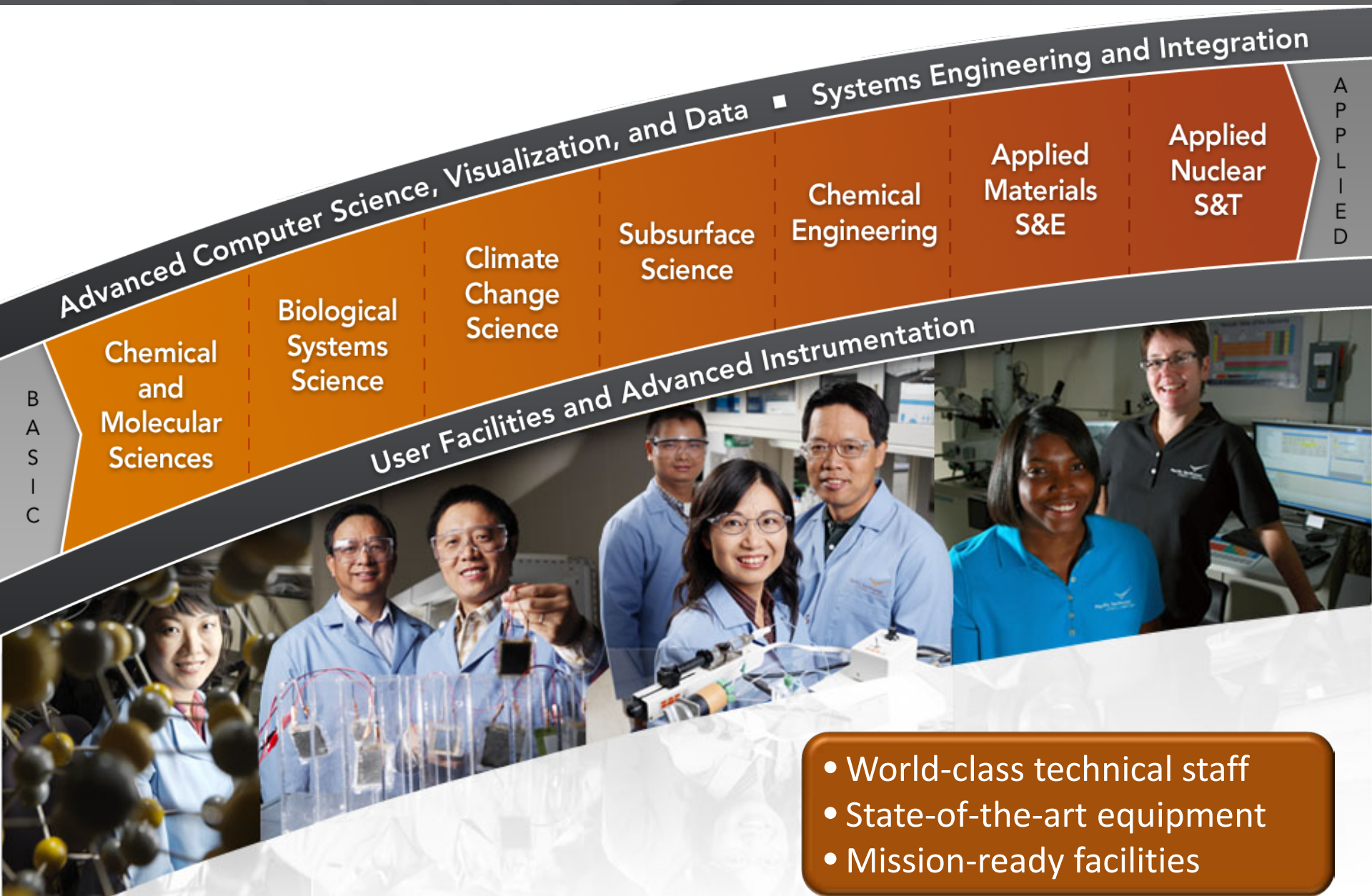


Disruption of Illicit Nuclear Trafficking



Enhance Staff Productivity and the Research Experience

Powerful combination of core capabilities

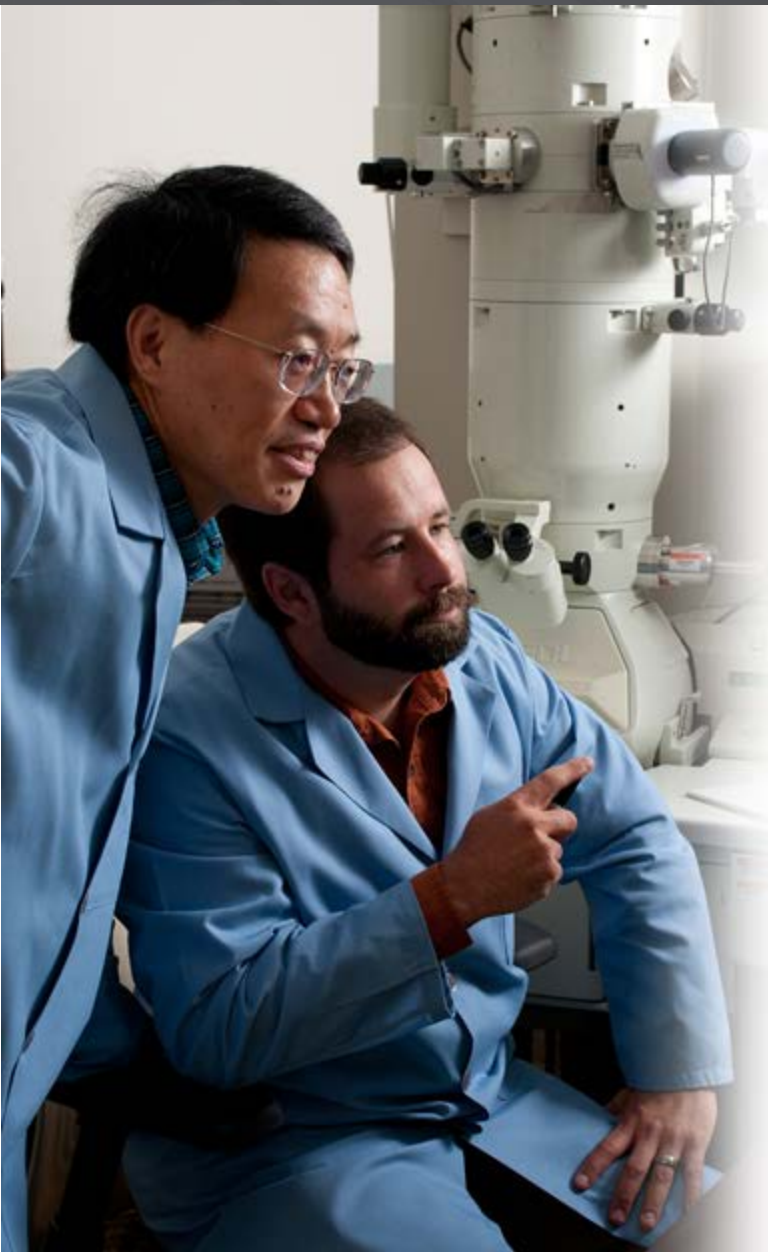


- World-class technical staff
- State-of-the-art equipment
- Mission-ready facilities

Expanding campus, growing capabilities



EMSL, the Environmental Molecular Sciences Laboratory



- ▶ National scientific user facility
- ▶ Sponsored by DOE Office of Biological and Environmental Research
- ▶ World-class research; integrated experimental & computational resources
- ▶ Key capabilities:
 - Supercomputer
 - Mass spectrometry
 - NMR spectrometry
 - Surface science tools

EMSL 

Bioproducts, Sciences and Engineering Laboratory



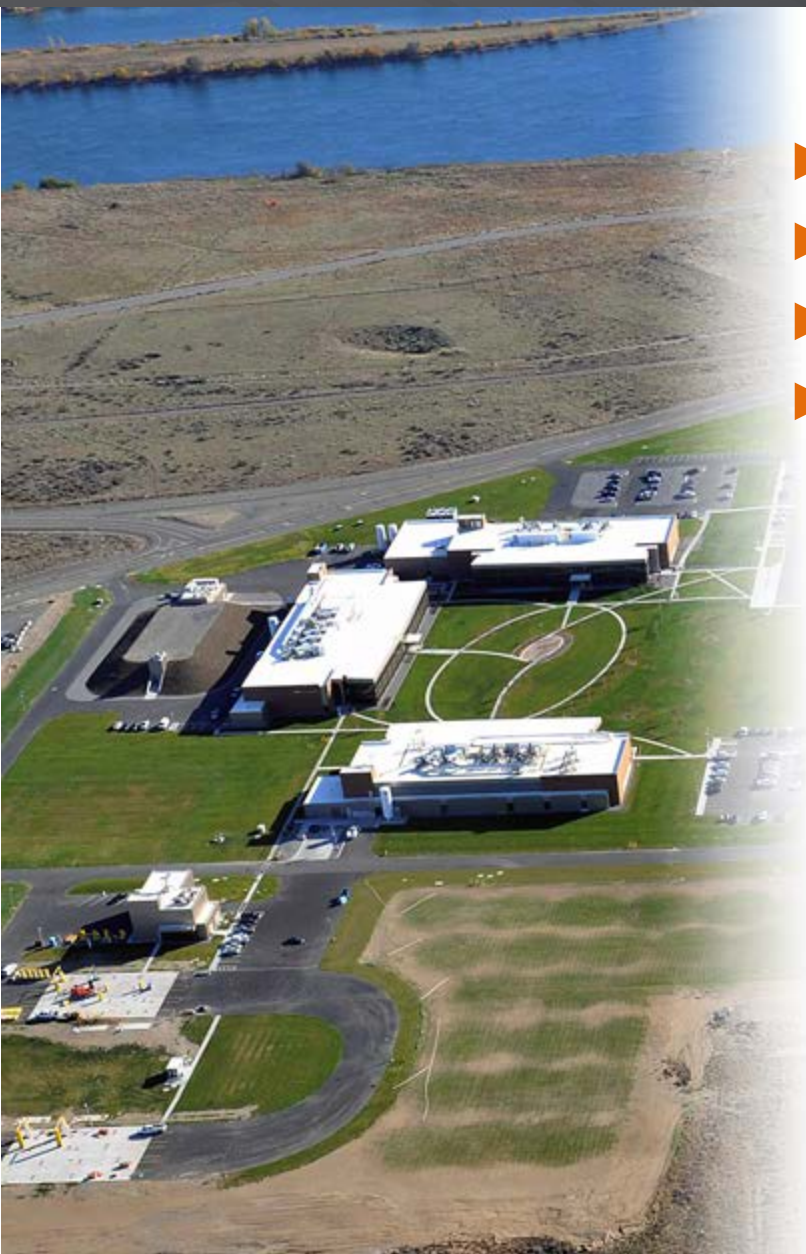
- ▶ Discovery in processes for bio-based product manufacture
 - High-pressure catalytic reactor rooms
 - Development and engineering of fungal fermentations
 - Synthesis and preparation of catalysts and feedstocks
 - Catalysis research laboratory
 - Analytical chemistry

Biological Sciences Facility and Computational Sciences Facility



- ▶ Biological, computational and subsurface science
- ▶ Bio-energy, carbon sequestration and homeland security
- ▶ Biological systems for renewable bioenergy and carbon sequestration
- ▶ National security and threat detection
- ▶ Data-intensive and high-performance computing

Physical Sciences Facility



- ▶ Materials science & technology
- ▶ Ultra-trace and radiation detection
- ▶ Shallow underground laboratory
- ▶ Critical capabilities:
 - Ultratrace detection of radio nuclides
 - Irradiated materials S&T
 - Fundamental and interfacial radiochemistry

Other key facilities



- ▶ Electricity Infrastructure Operations Center
- ▶ Radiochemical Process Laboratory
- ▶ Atmospheric Measurements Laboratory
- ▶ Marine Sciences Laboratory
- ▶ Applied Process Engineering Laboratory
- ▶ Center for Global Security

PNNL is committed to its community



- ▶ Region's largest employer
- ▶ \$24 million invested in the community
- ▶ 160,000 hours volunteered by staff over past 10 years
- ▶ Focus: A stronger community

Excellence in community service



- ▶ Advancing STEM education
- ▶ Building understanding of science to broader society
- ▶ A more diversified, innovation- and technology-based economy

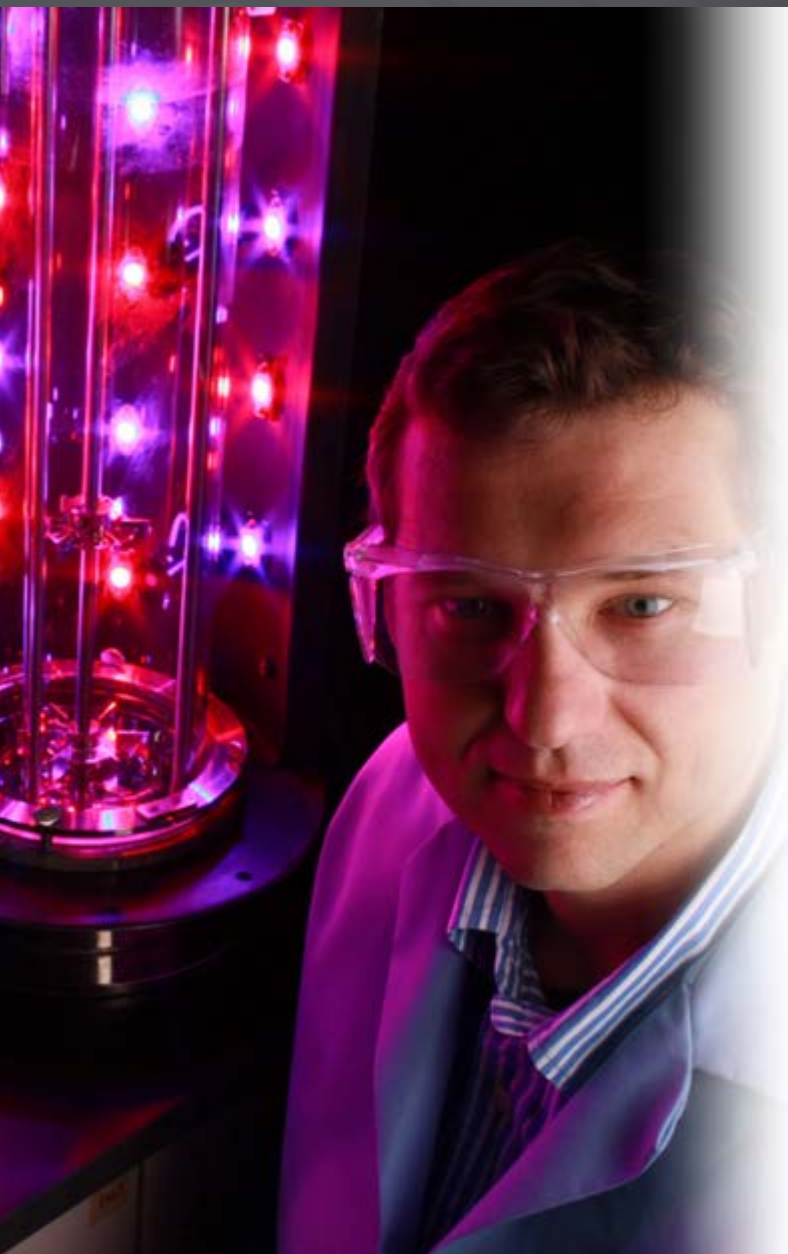
Developing scientific leaders



- ▶ Institutional partnerships
- ▶ Joint appointments
- ▶ Mentor Protégé Program
- ▶ Postdoc and intern programs

www.pnnl.gov/about/institutional_partnerships

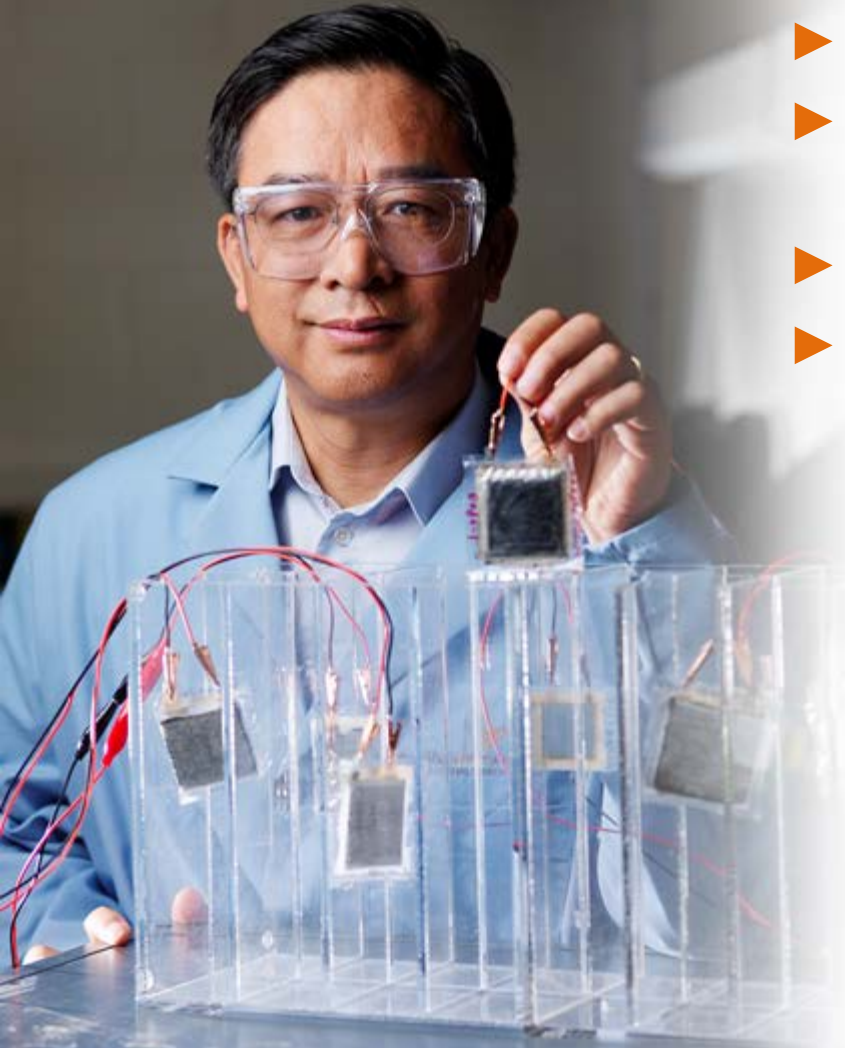
Commercializing science and technology



- ▶ 150+ companies trace origins to PNNL
- ▶ Creating a more diversified, technology-based economy
- ▶ Working with partners through:
 - Collaborative research
 - Technology transfer
 - Programs and resources to assist technology-based businesses

<http://www.pnnl.gov/business/>

Discovery, innovation and impact



- ▶ Solving the nation's critical challenges
- ▶ Delivering transformational science and technology
- ▶ Partnering for global impact
- ▶ Accelerating the rate of innovation

Mission

We transform the world through courageous discovery and innovation.

Vision

PNNL science and technology inspires and enables the world to live prosperously, safely and securely.

DISCOVERY

in action

CREATIVITY
integrity
Values
courage
COLLABORATION
Impact



Pacific Northwest
NATIONAL LABORATORY

Proudly Operated by **Battelle** Since 1965



Pacific Northwest
NATIONAL LABORATORY

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Thank You

Name

Title

Phone

email@pnnl.gov