

The Postdoctoral Experience at Pacific Northwest National Laboratory

"It is critical that organizations like PNNL support the development of our most promising young scientists. EMSL is an ideal environment to support this by providing postdoctoral opportunities that are collaborative, impactful, and productive. To see the caliber of work being done by these young scientists, as recognized by the M.T. Thomas Award, makes us all proud to be part of such an organization."

Dr. Allison A. Campbell
EMSL Director

"Postdoctoral Associates are among our most important assets at the Laboratory—certainly more important than the impressive instruments they use to probe fundamental scientific questions. They bring new perspectives, know better than we do the important fundamental issues of the day, and challenge our thinking in constructive ways."

Dr. Jean Futrell
Battelle Fellow,
BMI Council Chair

"The postdoctoral associate in the EMSL constitutes the productivity engine of its research enterprise, benefiting the EMSL, PNNL, DOE, and ultimately our society as a whole. The benefits to the postdoctoral associate are equally substantial, and include working with the EMSL's unparalleled research capabilities, a fantastic infrastructure, and support staff. It is magical to observe a gifted associate making the most of an opportunity to conduct research in the EMSL."

Dr. Richard D. Smith
Battelle Fellow, EMSL

www.EMSL.PNL.GOV

The W. R. Wiley Environmental Molecular Sciences Laboratory (EMSL) is a U.S. Department of Energy (DOE) national scientific user facility located at Pacific Northwest National Laboratory (PNNL) in Richland, Washington. EMSL is operated by PNNL for the DOE Office of Biological and Environmental Research.

Purpose

This distinguished award acknowledges outstanding accomplishments by a postdoctorate associate who conducts research in the William R. Wiley Environmental Molecular Sciences Laboratory.

History

The award is named in honor of Dr. M. (Tom) Thomas, who was an integral part of the leadership and progression of the EMSL project team that began in 1987. Serving in a variety of leadership roles, Dr. Thomas retired as the EMSL Operations Manager in 1995.

Nature

The awards consist of a commemorative plaque, a \$1000 cash award, and a reception to honor the recipient. The recipients are requested to deliver a seminar describing their research and the accomplishment leading to the award. A plaque that lists all recipients is displayed in the EMSL.

Eligibility

This award is made to one postdoctoral associate who has significantly utilized the EMSL capabilities and made significant contributions to work in the EMSL on projects relevant to the EMSL mission. Postdoctorate associates from organizations outside the EMSL, who have participated in research on an EMSL project, are also eligible for the award. A past recipient may not be nominated.

Nominations

Nominations are made by the appropriate Technical Group Manager, Technical Group Leader, or advisor with the concurrence of the Division Director.

Program Logistics

Additional information on award logistics can be found on the EMSL website at www.emsl.pnl.gov or contact Nancy Foster-Mills (nancy.foster@pnl.gov).

**Pacific Northwest
National Laboratory**
Operated by Battelle for the
U.S. Department of Energy



William R. Wiley

EMSL

Environmental Molecular Sciences Laboratory

**M.T. Thomas
AWARD**

for

**Outstanding
Postdoctoral
Achievement**

**Pacific Northwest
National Laboratory**
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U.S. Department of Energy

2004 Recipient



Dr. Alexandre Shvartsburg
Postdoctoral Research Associate
Macromolecular Structure & Dynamics

Congratulations to **Dr. Alexandre Shvartsburg**, who has been selected as the 2004 recipient of the M.T. Thomas Award for Outstanding Postdoctoral Achievement. Alex was selected in recognition of his outstanding accomplishments in the development of a fundamental understanding of ion mobility-based methods and instrumentation, particularly FAIMS, which involved comprehensive theoretical modeling and computational simulations. He has successfully applied his insight of ion mobility fundamentals towards the invention and practical implementation of new high-performance analytical technologies and platforms at PNNL.

Dr. Shvartsburg obtained his M.S. in Chemical Physics from the University of Nevada (Reno, NV) in 1995, and his Ph.D. in Chemistry from Northwestern University (Evanston, IL) in 1999. Dr. Shvartsburg has been with the Biological Separations & Mass Spectrometry Group under the leadership of Dr. Richard D. Smith since 2003.

Past Recipients

Eight postdoctoral associates have been awarded this honor since 1996. Recent recipients include:



2003

Dr. Xin Yang for his contributions to the development of electrospray-photoelectron spectroscopy techniques and for leading its use in new research directions, including the investigation of complex anion solvations in the gas phase and the electronic structure of the active site of Fe-S proteins.



2002

Dr. Julia Laskin for her pivotal experimental and theoretical contributions to the essential understanding of collision and surface-induced activation and fragmentation of large molecules and peptides.



2001

Dr. Michael B. Goshe for his landmark discovery known as the phosphoprotein isotope coded affinity tag (PhIAT) methodology, which enables researchers to rapidly isolate and characterize essentially any protein modified with a phosphate group.



2000

Dr. Zdenek Dohnálek for his experimental and theoretical contributions to understanding the crystallization, morphology, and properties of amorphous solid water, and to the molecular-beam synthesis of chemically tailored nanoporous films.



1999

Dr. Xuebin Wang for his phenomenal scientific accomplishments and productivity, and specifically for his major contributions to the design and construction of a new experimental apparatus to investigate multiply charged anions, his outstanding discoveries using this apparatus, and his penetrating insight in interpreting and understanding the experimental results.



1998

Dr. Matthew T. Sieger for his research on electron-stimulated desorption from environmentally important interfaces, and for the theoretical and experimental development of new surface probe techniques based on electron standing waves.



1997

Dr. Lukas Novotny for his contributions to the theoretical understanding of near-field optical microscopy, especially in demonstrating the feasibility of optical trapping and manipulation at a nanometer scale.



1996

Dr. Ramona S. Taylor for her contributions to developing a molecular-level understanding of important heterogeneous atmospheric processes.



For more information about the Postdoctoral Program at PNNL, visit the Science Education Programs website at <http://science-ed.pnl.gov/>