

TRANSACTION

Newsletter of the Science and Engineering Alliance, Inc. (SEA)

Renowned Soil Chemist and Colleagues at Alabama A&M University Develop New Theory on Inner-Channel Charged Ions Adsorption Mechanism in Soils



Dr. Robert W. Taylor, Ph.D., Dean, School of Agricultural and Environmental Sciences at Alabama A&M University (AAMU), was leading a team of AAMU researchers in studies to unravel some mysteries in the field of soil chemistry. This groundbreaking research, known as *"THE NANOPORE INNER-SPHERE ENHANCEMENT (NISE) THEORY,"* was recently published in the Soil Science Society of America Journal (SSSAJ). The bench work was done by Dr. Cristian Schulthess, Associate Professor of Environmental Soil Chemistry at the University of Connecticut, who was on a sabbatical in Dr. Taylor's Laboratory.

SSSAJ, one of the premier soil science journals in the world, has chosen to feature Drs. Taylor's and Schulthess' work as the cover-page graphic image for the March-April 2011 edition.

SEA congratulates Dr. Taylor and his research team for this extraordinary achievement. This important research will be reported on in greater detail in the next issue of Transaction.

The Nanopore research at AAMU placed on front cover by the editors of SSSAJ



Upcoming Events Involving SEA



April 15-16, 2011
Student Natural Resources Conference - U.S. Fish and Wildlife Service National Conservation Training Center



April 19-22, 2011
The National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, NOBCChE, 38th Annual Technology Conference in Houston, TX



July 18-29, 2011
Facilitating Participation of Middle School Science and Math DC Teachers in the National Institute of Standards and Technology (NIST) Teacher Enhancement Pilot Program



August 17-18, 2011
Conducting "Mechanics of Developing Competitive Research Grant Proposal Workshop" for Tribal Colleges in MT, ND and SD

TBD

21st Annual SEA Student Technical Conference and Recognition Program

TBD

National Ecological Observatory Network (NEON) College Speaking Tour (CST)

It is important that we conserve our valuable resources by reusing and recycling them whenever possible. Please use email.

St. Peter's Middle School and Woodrow Wilson High School of Washington, DC Wins the 2011 DOE Regional Science Bowl

By Tanisha Eaton and Maheteme Gebremedhin, SEA, Inc.



Students from St. Peter's Middle School and students from Woodrow Wilson High School, both in the District of Columbia (DC), triumphed in a battle of scientific and mathematical wits on Saturday, February 26, 2011 and March 19, 2011 respectively, capturing their respective U.S. Department of Energy (DOE) Regional Science Bowl championships.

The Science Bowls are a key part of the DOE's efforts to encourage middle school and high school students to excel in math and science and to pursue careers in these fields. This year was the first year for the middle school competition that brought together a total of 30 students representing six (6) DC Middle Schools competing for the top spot. Now in its 7th year, the high school competition involved some 50 students representing 10 DC High Schools. The competition clearly showcases the very best and brightest of our future scientists and engineers.



First-place winners of the DC Regional competitions will face other regional competition student team winners from across the country at the DOE's 21st Annual National Science Bowl (NSB) competition April 28 - May 2, 2011 at the National 4-H Center in Chevy Chase, MD. The final face off is expected to be a fierce competition among some of the nation's outstanding students from high schools and middle schools representing each state.

The Department of Energy created the NSB in 1991. By recognizing and rewarding successful math and science students, the NSB helps generate enthusiasm for science and engineering. The Department of Energy supports math and science education to help provide a technically trained and diverse workforce for the agency and the Nation. More than 15,000 high school and middle school students are participating in the Science Bowl competition nationwide this year.

For the DC Regional qualifying rounds held at Friendship Public Charter School (FPCS), student-teams faced rounds of increasingly difficult grade-appropriate questions in biology, chemistry, physics, astronomy, earth science and mathematics. Each team has five students and a teacher who serves as an advisor and coach. The competitions consisted of round robins followed by double-elimination finals.

The Science and Engineering Alliance, Inc. (SEA) manages the DC Regional Science Bowl for the DOE under Cooperative Agreement #: *DE-FC01-09ED000008*.





U.S. DEPARTMENT OF ENERGY

Participating High Schools (March 19, 2011)

The winning teams were:

- First Place: Woodrow Wilson High School
- Second Place: National Cathedral High School
- Third Place: Benjamin Banneker Academic High School

Other High Schools

- Ballou Senior High School
- Cardozo Senior High School
- Cesar Chavez Public Charter High School – Capitol Hill
- Friendship Collegiate Academy Public Charter High School
- McKinley Technical High School
- Washington Latin Public Charter High School
- Washington Math, Science and Technology Public Charter School



Participating Middle Schools (February 26, 2011)

The winning teams were:

- First Place: St. Peter's Middle School
- Second Place: Washington Latin Public Charter Middle School
- Third Place: Friendship Public Charter Middle School - Chamberlain Campus

Other Middle Schools

- Emery Education Campus
- Friendship Public Charter Middle School - Blow Pierce Campus
- Ideal Academy Public Charter Middle School



Who We Are and What We Do

The Science and Engineering Alliance, Inc. (SEA) was founded in 1990 as a nonprofit, 501(c) (3) tax-exempt consortium, to serve four state-supported Historically Black Colleges and Universities (HBCUs) and a national laboratory. The purpose of SEA is to help ensure an adequate supply of globally competitive American scientists and engineers, while meeting the research and development needs of the public and private sectors. SEA services include: technical marketing and community relations, development of training and experiential programs for faculty and students, creation of partnership opportunities with public and private sectors, enhancing research opportunities and advancing national goals.

The SEA HBCU founding members are: Alabama A&M University (Huntsville, AL), Jackson State University (Jackson, MS), Prairie View A&M University (Prairie View, TX) and Southern University and A&M College (Baton Rouge, LA). The national laboratory founding associate member is Lawrence Livermore National Laboratory (Livermore, CA). In 2002, the National Institute of Standards and Technology (Gaithersburg, MD) became the second national laboratory associate member of SEA.



Robert L. Shepard, Ph.D.
Founding Executive Director, SEA



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