FORGING THE FUTURE

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October 2015

In This Issue

News

See how we were featured in the news and read our press releases.

Staff Accomplishments

7 Staff at PNNL
Received Superior Paper awards for work presented at the 2015 Waste Management

Electricity Infrastructure

Systems Engineering Building Advances Grid and Controls Research
Officials joined regional business leaders and PNNL staff on August 19 to dedicate a $9 million facility that will enable breakthroughs in... read more.

Grid Gets Boost with PNNL Investment
PNNL wrapped its successful five-year Future Power Grid Initiative on September 30th. The initiative developed a suite of tools, including four open-source technologies, designed to... read more.

Energy Efficiency and Renewable Energy

Turn Baby, Turn: Small Wind Exports
The 2014 Distributed Wind Market Report found that nearly 74,000 distributed wind turbines are now in operation

Conference.

Jeff Dagle
Invited to chair Advisory Board for DOE grid project.

Daniel Deng
Recognized with PNNL's Exceptional Engineering Achievement Award.

Greg Lumetta
Honored with Glenn T. Seaborg Actinide Separations Award.

Suveen Mathaudhu
Elected to the rank of Fellow of ASM International.

Graham Parker
Awarded as Fellow by the Association of Energy Engineers.

Yong Wang
Elected to join Washington State Academy of Sciences.

within the U.S., totaling 906 megawatts of power - enough electricity to... read more.

Turning the Lights Back on in Detroit
Motor City, America gets back on its feet with help from PNNL during the street light infrastructure restoration. Less than 50 percent of Detroit's 88,000 street lights were operating due to staff shortages and... read more.

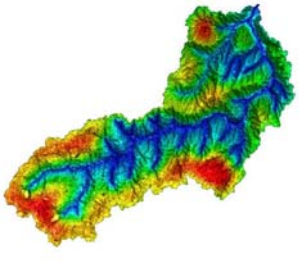
Special Issue Explores Lithium Sulfur Battery Tech
Several PNNL research articles were published in a special issue of *Advanced Energy Materials,* which explores the different facets of Li-S battery technology and points out the main concerns... read more.

PNNL Tests Fish Immobilization Gloves
Handling slippery fish for research can be a difficult job. New technology tested by PNNL could eliminate traditional sedation practices. Fish Handling Gloves use small electric currents to temporarily... read more.

Low-E Storm Windows: For Reduced Energy Costs
New data from PNNL's Lab Home testing has found a sure fire way homeowners can save energy costs: by applying a low-emissivity (low-e) coating to existing storm windows. Projected savings are... read more.

Cooling Off the Energy Impact of Rooftop Units
Packaged air conditioners and heat pumps frequently operate well below peak efficiencies. But new technology called the Smart Monitoring and Diagnostic System reduces operating costs by... read more.

Environmental Health and Remediation

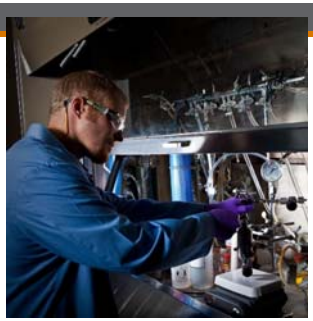


Model Supports Groundwater Risk Calculations
As nuclear power grows in Argentina, PNNL researchers are using software called the Advanced Simulation Capability for Environmental Management to develop a groundwater model of an Argentine basin. The model will be used as a management tool for identifying potential risks posed by... read more.

What Lies Beneath: Hanford Cleanup Milestone
Researchers at PNNL recently helped DOE meet an important cleanup milestone at Hanford by submitting the technology evaluation plan for a key contaminant of concern. Efforts to remediate soil and groundwater contamination from... read more.

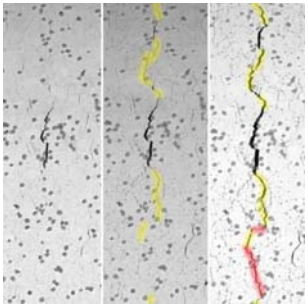
Clean Fossil Energy

Catch-and-Consume: Recycling Carbon Emissions



Over the past decade, governments and utilities have been looking at how carbon capture technologies can reduce greenhouse gases. With a DOE Early Career Research Program award, researcher Dave Heldebrant is building off of earlier research progress to not only improve the efficiency of carbon dioxide capture, but also... read more.

Nuclear



Corrosion Cracking: When Does it Really Start?

Pressurized water nuclear reactors are made up of nickel-base alloy components, such as nozzles and welds, that can crack under stress. Research at PNNL uses PNNL-designed and built equipment to study the microstructural evolution leading up to stress corrosion crack initiation. The results will play a role in regulatory decisions related to inspections and may also influence material, starting condition, and assembly techniques for... read more.

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