

Happy Thursday! It's time to get *Plugged In!*...

BIG NEWS FOR CELLULOSIC BIOFUELS: America's first commercial cellulosic biofuel plant recently began operations in Columbus, Mississippi. As KiOR scales up its production over the next three years, the fuel – which is derived from plant mass not suitable for food – is expected to become cost-competitive with traditional fuels, and investors are taking note. The U.S. Air Force is an early adopter of KiOR's biofuel. <http://goo.gl/jecVw>

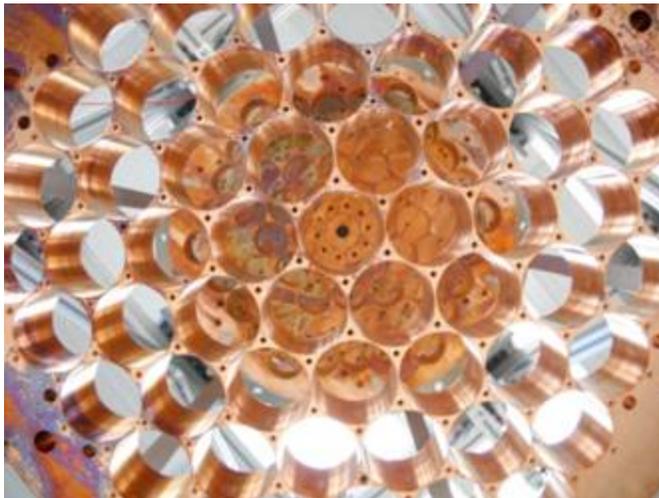


SWINGING FOR THE FENCES: Yesterday Secretary Chu announced \$130 million in funding for 66 new projects that could fundamentally transform the ways we generate, store, and use energy. Read more about ARPA-E's latest awardees, which include companies developing innovative technologies to lower the costs of things like high-performance magnets, transmission lines, and gasoline. <http://go.usa.gov/gb7B>

VIRUS MAPPING: A team at Argonne is using the lab's Advanced Photon Source to map the cold-causing human adenovirus. If you're currently suffering from the seasonal sniffles, don't hold your breath waiting for a scientific solution to come your way; the researchers are studying the proteins' self-assembly mechanisms to gain insights on gene delivery for cancer therapy. <http://go.usa.gov/gb3x>



HUNTING FOR NUKES AND DARK MATTER: LLNL scientists are lending their technological savvy to the Large Underground Xenon experiment in South Dakota because it turns out that the same type of detector needed to sniff out mysterious dark matter particles could also be used to keep an eye on what's going on in nuclear facilities around the world. <http://go.usa.gov/gTZG>

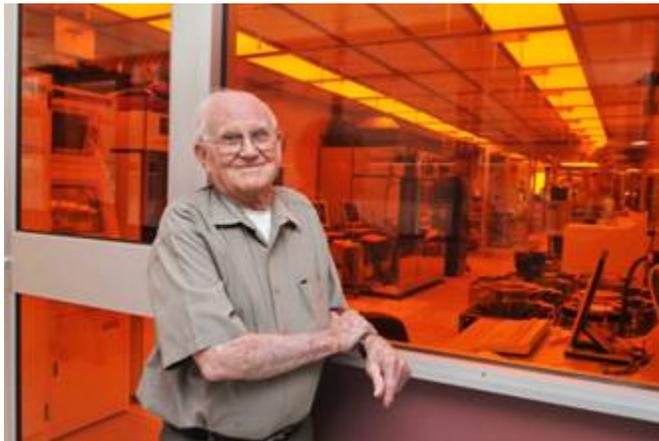


LOOK CLOSELY: Researchers at BNL have successfully used a transmission electron microscope to get an incredibly close look at exactly what goes on inside a lithium-ion battery – the powerhouse for your smart phone and other popular electronics. This new nanoscale look could provide insights into lengthening battery lives and scaling up lithium-ion technology for vehicles or grid storage. <http://go.usa.gov/gTBd>

HOT STUFF: A new enclosure for processing radioactive casks has put ORNL on a path to finishing cleanup work two years ahead of schedule, saving taxpayers nearly \$20 million. Get the details here: <http://goo.gl/TAhYL>



MR. CLEAN'S LEGACY: Retired Sandia physicist Willis Whitfield passed away earlier this month at the age of 92, but his invention of the modern cleanroom revolutionized science, technology, and health. Read more about "Mr. Clean" and his now 50-year old innovation, still in wide use today: <http://go.usa.gov/gTWj>



FUEL EFFICIENCY A WIN-WIN: The new U.S. fuel economy standards will save Americans money at the pump and drive innovation in the U.S. auto industry. Consumers will save an estimated \$8,200 in fuel costs over the lives of their vehicles and the standards are projected to create 148,000 new jobs by 2025. <http://go.usa.gov/g2UY>

A MILESTONE FOR CARBON CAPTURE: Earlier this month, a DOE carbon capture, utilization, and storage test project in Decatur, Illinois, completed a full year of successful injection and storage of supercritical carbon dioxide in a saline reservoir. This amounts to 317,000 metric tons of CO₂ that otherwise would have ended up in the atmosphere. The project is helping to demonstrate the viability of this technology as part of a portfolio of options to reduce carbon emissions. <http://go.usa.gov/g25w>



HARNESSING BODY ENERGY: Scientists are studying ways to use energy from human processes like heart beat, blood flow, and movement to power medical devices like pacemakers and hearing aids. The *Wall Street Journal* recently ran a piece explaining some of the successes and some of the challenges. <http://goo.gl/Y7LoY>

DOGS TEACHING CHEMISTRY!: No further explanation required. Thanks to Gabriel Soll in the General Counsel's office for directing this one to our attention... <http://goo.gl/W0UTb>

KEEP THEM COMING: Got a story idea for *Plugged In!*? Birthstones or milestones? Shoot an email to PublicAffairs@hq.doe.gov.

G-TOWN HAS GONE SOLAR: On November 16, DOE Director of Management Ingrid Kolb cut the ribbon on a new 370 kilowatt photovoltaic solar array on the Germantown Campus. The array, which includes ground-mounted solar panels and a solar panel covered car port with an electric vehicle charging station, will generate around 450,000 kilowatt hours of clean, renewable electricity each year. It will reduce annual green house gas emissions by approximately 350 metric tons and offset 4% of the campus's electricity requirements.



...AND FINALLY: <http://goo.gl/8iNbK>

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