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Xavier University of Louisiana Partners with Argonne National Laboratory (U.S. Department of Energy) Towards Advancing Energy Storage and a Cleaner Future

New Orleans – Xavier University of Louisiana, with its long history of supporting environmental and social justice initiatives to create impactful change, has announced that it is one of fifteen partners in collaboration with The Energy Storage Research Alliance (ESRA). ESRA is a United States Department of Energy (DOE) energy innovation hub, uniting nearly 50 world-class researchers and leading experts from three national laboratories and 12 universities to expedite technology commercialization for cutting-edge energy storage solutions. Each institution brings unique perspectives that will accelerate ESRA's ability to impact the global energy storage landscape. As a Historically Black College and University (HBCU), Xavier will add a breadth of knowledge that expands ESRA's materials design and analysis capabilities.

Dr. Lamartine Meda, Bellsouth endowed professor of chemistry and material science and Xavier's Director of the Materials and Interfaces Center for High Energy Storage and Sensing (MICHESS) program, will serve as Xavier's principal investigator for the ESRA collaboration.

"At Xavier, we'll work on understanding interfacial reactions in solid-state cells which is crucial for improving the performance of solid-state batteries," said **Dr. Meda**. "We have developed a solid-state electrolyte and will take advantage of this electrolyte to understand how different materials interact at their boundaries, which is a key factor in optimizing ion conductivity and overall cell performance. Our primary focus is understanding interfacial reactions using a variety of techniques."

ESRA, leveraging decades of national investment in science, seeks to enable transformative discoveries in materials chemistry, gain a fundamental understanding of electrochemical phenomena at the atomic scale, lay the scientific foundations for breakthroughs in energy storage technologies, and train the next-generation battery workforce to ensure U.S. scientific and economic leadership. Over the next five years, DOE's Office of Basic Energy Sciences will fund ESRA up to \$62.5 million with Argonne National Laboratory as the lead organization.

The achievement of ESRA's goals will lead to high-energy batteries that never catch fire, offer days of long-duration storage, have multiple decades of life, and be made from inexpensive, abundant materials. ESRA will also place a central focus on training a diverse, next-generation battery workforce for future manufacturing needs through innovative training programs with industry, academia, and government.

"Cultivating a diverse workforce dedicated to safeguarding America's energy resilience is key to ESRA's mission," said **Wei Wang, ESRA deputy director for crosscuts and director of the Energy Storage Materials Initiative at Pacific Northwest National Laboratory**. "Through our strategic equity and inclusion initiatives, we plan to create a robust training ground for energy storage science from the undergraduate to postdoctoral levels."



From left to right: Kaia Y. Brathwaite ('28), Dr. Lamartine Meda, and Nila A. Beamon ('27) in the lab.

Each participating institution brings unique materials synthesis and characterization capabilities that will accelerate ESRA's ability to impact the global energy storage landscape. As an HBCU that has spent nearly 100 years dedicated to serving those who have historically been underserved, Xavier is uniquely poised to elevate the training of the new generation of scientists who seek cleaner, safer energy.

"This partnership means a lot for Xavier as our students will have opportunities to perform research at our partner institutions in energy storage and contribute to the goal of net-zero carbon emissions, becoming future leaders of this field," said **Dr. Meda**.

In constant pursuit of diversity, Xavier recognizes sustainability and resource efficiency's environmental and economic benefits. Established university initiatives, such as Xavier's Sustainability Office (XULA Green), reflect the university's vision for environmental advocacy and stewardship. The Xavier and ESRA partnership supports the university's mission of contributing to a just and humane society through advancing efforts to build a more sustainable and equitable world and a clean, secure future for all.



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About Xavier University of Louisiana

On the cusp of celebrating its first 100 years of service, Xavier University of Louisiana remains America's only historically Black and Catholic University and is ranked among the top HBCUs (historically Black colleges and universities) in the nation. Recognized as a national leader in STEM and health sciences, Xavier has historically produced more African American students who graduate from medical schools each year than any other university in the United States. Additionally, Xavier's College of Pharmacy is among the country's top producers of African American pharmacists.

Established almost a century ago in 1925 by Saint Katharine Drexel and the Sisters of the Blessed Sacrament as a place for African Americans and Native Americans to receive a quality education, Xavier has since expanded its programs in nearly every industry, including the arts, sciences, business, education, pharmacy, and political science. More recent additions in STEM-based master's programs and undergraduate options in robotics, bioinformatics, engineering, data science, neuroscience, and genetics, have provided Xavier students (3,181 students) an unbeatable experience of traditional classroom study, hands-on research, service-learning opportunities, and life experiences. Xavier students collaborate with world-renowned faculty and experts in their fields to produce award-winning research and notable work. The winning Xavier formula provides students with a well-balanced curriculum and an environment that nurtures their intellect and feeds their souls, developing all who choose to learn at the institution into the next generation of leaders and agents of positive change. Blessed with a mission to promote a more just and humane society, Xavier is leading the way to a brighter future for all. For more information about Xavier University of Louisiana, visit www.XULA.edu or contact the Marketing and Communications Department at (504) 520-5214 or XULANews@XULA.edu.