

## Sun named associate laboratory director for Energy Science and Technology

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Xin Sun has been selected as the associate laboratory director for ORNL's Energy Science and Technology Directorate.  
Credit: ORNL, U.S. Dept. of Energy

Xin Sun has been selected as the associate laboratory director for the Energy Science and Technology Directorate, or ESTD, at the Department of Energy's Oak Ridge National Laboratory.

Sun will lead initiatives essential to supporting a clean, resilient and secure energy future for the United States, including carbon capture and utilization efforts. She will direct a diverse group of scientists who engage with industry to develop, demonstrate and deploy cutting-edge energy technologies. The research spans the entire energy spectrum from generation and distribution to storage and end use.

"Accelerating clean energy technologies from fundamental science to deployment is critical to providing affordable, reliable and equitable energy solutions for the U.S.," ORNL Director Thomas Zacharia said. "Xin has been integral to our research efforts in developing new materials for vehicles and buildings, devising controls for a secure and resilient power grid, and innovating manufacturing processes. She is well suited to lead our research in these areas."

Since joining ORNL in 2017, Sun has served as interim associate laboratory director for ESTD and division director for Energy and Transportation Science. A scientist at heart, she developed a series of research programs focused on enhanced carbon capture through process intensification using ORNL's signature strengths in advanced manufacturing and combustion research. Sun also initiated the first ORNL direct air capture program leveraging advanced manufacturing and building equipment capabilities.

“ORNL has historically played a pivotal role in delivering breakthrough technologies in energy in support of Department of Energy missions,” Sun said. “I am honored to have the opportunity to lead our talented and distinguished scientists in developing and demonstrating critical clean energy solutions.”

Prior to joining ORNL, Sun was a laboratory fellow and group leader at Pacific Northwest National Laboratory, where she developed capabilities in carbon capture and multiphase reactive flow simulations, integrated computational materials engineering and simulations of joining and manufacturing processes. She also served as a principal research scientist in the Energy and Automotive Division at Battelle Memorial Institute.

A fellow of the American Society of Mechanical Engineers and an author of more than 200 journal publications and 10 books and book chapters, Xin earned a master’s degree and doctorate in naval architecture and marine engineering as well as a master’s degree in mechanical engineering at the University of Michigan. She received her bachelor’s degree in naval architecture and ocean engineering from Shanghai Jiao Tong University in China.