The Image and the Bio

B.S. Mechanical Engineering, Wichita State University, 2014-Present

Research Interests: Improved water condensation using distributed wick structure for efficient water desalination systems

Water Distillation System using Distributed Wick

Wavita Vidanalage Dona Dilanki Terranska

One of the bottlenecks of the thermal-energy-based water desalination is poor condensation rate. To significantly improve the condensation rate, a novel distributed wick structure is employed to improve efficient water removal through the artery wick from the condensation sites for continuous condensation. In this project, the enhanced condensation rate of the distributed wick is tested the water vapor temperature of 60 to 80°C on the cold surface 0°C. This project includes fundamental understandings of the roles of the distributed wick on the enhanced condensation rate. The development of this system provides an insight into the optimal design of the solar-thermal-based water desalination system without an active power consumption.