Conn Center for Renewable Energy Research

Thad Druffel[1]

[1]*Conn Center for Renewable Energy Research, University of Louisville*

In collaboration with the state, UofL established the Conn Center for Renewable Energy Research at the J.B. Speed School of Engineering in 2009. The Conn Center provides leadership, research, support and policy development in renewable energy; advances the goal of renewable energy; and promotes technologies, practices, and programs that increase efficiency for energy utilization in homes, businesses and public buildings. To accomplish these objectives, the Conn Center conducts and facilitates R&D on potentially commercializable renewable energy and energy efficiency technologies. he center employs top-notch scientists and engineers as theme leaders for directing these research thrusts and to enable collaborations with faculty researchers and industry partners across the state. The Conn Center has developed unique, state-of the art, translational research facilities in the following areas: scalable manufacturing R&D of advanced nanoscale materials, roll-to-roll manufacturing R&D for solar technologies, and lithium ion battery fabrication. The Center is now developing facilities for solid-state lithium ion battery manufacturing R&D and also hosts a number of pre-pilot scale processing tools for converting various waste and biomass streams to fuels/chemicals. The Center's main objective is to foster development of transformational concepts and accelerate the translation of technology concepts from the lab to pre-commercial scale via large-scale device prototyping. Through innovative R&D at an accelerated pace and development of Kentucky's workforce and renewable resources, the Center's ongoing goal is to seek outcomes that enhance global energy security, maintain US technological leadership, and improve high-tech manufacturing activity in Kentucky.

Thad Druffel, PhD, PE is currently Theme Leader, Solar Manufacturing R&D at the Conn Center for Renewable Energy Research at the University of Louisville. His current research is focused on developing materials and processes for roll-to-roll manufacture of devices for renewable energy. The work involves using near atmospheric processes to consolidate the nanomaterials into functional bulk thin films. His twenty year background in industry includes research, development and engineering topics in several engineering disciplines and he has been involved in projects ranging from solar and water facilities in Africa to corporate research and development of cutting edge technologies. He has PhD in Chemical Engineering, M.Sc. in Mechanical Engineering and is a registered Mechanical Engineer in the Commonwealth of Kentucky. He is active within the entrepreneurial community and continues to be involved in startups. He co-founded Bert Thin Films, LLC along with a former post-doctoral researcher to commercialize a technology that was initially conceived at the Conn Center.