



SCDT – FlexE Centre Webinar Series

The webinars aim to bring together researchers in Flexible Electronics and allied areas from across India (and other countries) on a single platform to promote professional interaction.

Webinar by



Dr. Arthur D Hendsbee

Business Development Manager, Brilliant Matters Inc., Quebec Canada

on

“Brilliant Matters: Materials for Organic Photovoltaics at Large Scale”

Date: 15th August, 2023

Time: 7:30 PM to 8:30 PM

Visit www.iitk.ac.in/scdt/webinars.html to access the zoom link to join the webinar.

The event will be chaired by

Dr. Sai Santosh Kumar Raavi

Indian Institute of Technology Hyderabad

Abstract of the Webinar

Printed electronics represent a paradigm shift in the way we manufacture electronics, offering possibilities for more sustainable large-scale manufacturing, in addition to new functionalities. Organic Photovoltaic (OPV) technology for instance, is a 3rd generation photovoltaic technology that offers a low cost and high-speed manufacturing pathway for photovoltaics via roll-to-roll printing. To date, lab efficiencies for OPV on small-scale devices have exceeded 19 % power conversion efficiency. These incredible results are a fantastic demonstration of the potential of this technology to reach parity against silicon PV. However, such results are often obtained using materials or methods that are nearly impossible to scale on an economic perspective. For large volume production runs of printed organic electronics technologies, it is expected that organic semiconductors will be manufactured on the kilogram to ton scale. Thus, it is important that the large-scale synthesis of these materials is not only repeatable but also done in an environmentally responsible manner. This presentation will outline how Brilliant Matters Organic Electronics is contributing to the growing field of printed electronics by offering a scaleup platform for organic semiconductor materials for the printed electronics industry.

Information about the speaker

Dr. Arthur D Hendsbee is an organic materials scientist who graduated from the University of Calgary with a PhD in Chemistry in 2017, obtained under the supervision of Dr. Greg Welch. During his time at the University of Calgary, he developed a new class of non-fullerene acceptors with utility in optoelectronic devices and was awarded a United States Patent (9865819) for this work. Following his PhD, in 2019 Arthur completed an NSERC funded postdoctoral fellowship with Dr. Yuning Li at the University of Waterloo where he studied organic optoelectronic device fabrication techniques. In September of 2019, Arthur was impressed by the vision of Brilliant Matters to provide industry with a reliable and scalable source of organic optoelectronic materials and joined as a Senior Scientist. Near the end of the 2020 year, he transitioned to his current role as Business Development Manager at Brilliant Matters.