



**Noppadon Sathitsuksanoh, Ph.D.**

Associate Professor  
Chemical Engineering  
University of Louisville

**From waste to feedstocks for a circular economy:  
what are we missing?**

**ABSTRACT:**

Modern society runs on petroleum, from transportation fuels to chemicals and plastics. However, petroleum is non-renewable. Moreover, processing petroleum into fuels and chemicals contributes to climate change. Here we will show our catalytic strategies to upgrade renewable biomass into biofuels and bioproducts. First, we will demonstrate the design of biomass conversion pathways into bioplastics and liquid organic hydrogen carriers. Then, we will discuss ongoing projects in the lab, including how these developed strategies mitigate plastic pollution, enable energy storage devices, and promote a circular economy.

**BIO:**

Dr. Sathitsuksanoh (Dr. Tik for short) is an Associate Professor of Chemical Engineering at the University of Louisville. His research focuses on bio-inspired systems, where he adapts nature's biomass conversion pathways to add value to biomass. He is the recipient of an NSF CAREER Award. In addition, he serves as an Editorial Board member for Molecular Catalysis and a Membership Chair for the Cellulose Division of the American Chemical Society.