第 5 回　加工・材料工学セミナー

日時: 9/16 (火), 2025　16:00～17:00
場所: 公立小松大学　粟津キャンパス　３F 会議室

プログラム

Advancements in Nanomaterial Synthesis for Photocatalytic and Electrochemical Applications via Laser Ablation and Hydrothermal Methods

Dr. Vinayak Shinde
（公立小松大学　生産システム科学科　博士研究員）

講演概要

This research explores the synthesis of advanced nanomaterials with unique structural formations, leveraging laser ablation and hydrothermal methods to enhance photocatalytic and electrochemical performance for environmental and energy applications. The study focuses on a diverse array of materials, including tungsten suboxide (WO3-x) petal-like nanosheets, WO3-x/SnO2 composites, WS2/GO/Au ternary composites, MoS2-GO nanosheets, and SnO2 nanostructures. These materials exhibit distinctive morphologies, improved charge separation, and promising activity for pollutant degradation, energy storage, fuel cell technologies, and field electron emission applications. The findings provide insight into how hybrid synthesis methods influence structural and performance outcomes, and open new directions for scalable, multifunctional nanomaterials.

連絡先：生産システム科学科　粕谷　素洋
Tel: 0761-48-3131
Email: motohiro.kasuya@komatsu-u.ac.jp