

山形大学グリーンマテリアル成形加工研究センター
&
YU-COE(S)ソフトマテリアル創製研究拠点

第67回合同セミナーのお知らせ

本講演会は、対面およびビデオ会議ツール「Zoom」を使ったハイブリッド形式で行います

タイトル： FUNDAMENTAL FRACTURE BEHAVIOR OF POLYMERS CONTAINING
DIFFERENT TYPES OF NANOPARTICLES

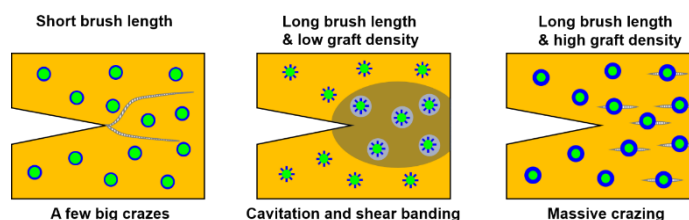
講演者： POLYMER TECHNOLOGY CENTER, TEXAS A&M UNIVERSITY
PROF. HUNG-JUE SUE



要旨：

Polymeric materials have gained significant attentions as an attractive functional and structural material of choice in place of metallic counterparts since early 1980s. However, polymer properties are known to be highly temperature and rate dependent and cannot be casually chosen for engineering applications. Furthermore, most engineering polymers are highly notch-sensitive and can fail in a brittle fashion if not toughened. Upon toughening, however, the polymer may become difficult to process and possess undesirable properties, such as drop in modulus, T_g , and thermal stability. In this presentation, emphasis will be placed on fundamental understanding on fracture behavior of polymers containing various types of nanoparticles, including nano-rubber, 0D metal-organic-framework nanoparticles, 1D carbon nanotubes, 2D nanoplatelets, and polyrotaxane molecules. These nanocomposite materials can possess highly attractive multifunctional properties without significant compromise to other desirable properties. Implication of the above study for preparation of high-tech devices and electric vehicles is discussed.

Fracture behavior of PMMA/ZIF-8 with variations in grafted chain density and length



日時： 2023年5月10日(水) 13時00分～14時30分

場所： GMAP 4-406

参加をご希望の方は、事前にメールでご連絡をお願い致します。

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後日、講演会参加のオンライン配信 Zoom 会議のリンク先 (ミーティング ID、パスコード) をご連絡致します。
講演は対面およびオンライン配信で行います。

世話人： 有機材料システム 伊藤浩志 (内線 3081)