

第 43 回 グリーンマテリアル成形加工研究センターセミナー

- 43th GMAP Seminar -

今回、Purdue University の Cakmak 教授をお迎えし下記のセミナーを開催いたします。
是非ご参加下さい。

○ Lecturer : Prof. Dr. Miko Cakmak

(Materials and Mechanical Engineering Schools, Purdue University, USA)

○ Title : Field Assisted organization and alignment of Nanoparticles in a Nanocolumn forests in thin polymer films for Ultra-Sensitive, Flexible and Transparent Sensors using Novel Roll to Roll manufacturing Line

○ Abstract:

The unprecedented growth rate of “Internet of Things” (IoT) and its potential impacts on wearable and flexible electronics is creating an increasing demand for the development of lightweight, stretchable and transparent sensors in many diverse application areas ranging from personal health monitoring to human inspired electronic skin.

In this work, we introduce a novel method to produce high performance, flexible and transparent piezoelectric pressure sensors where piezoelectric and graphitic nanoparticles are aligned together (in “Z” direction) in a polymer matrix under the external electric field. The developed materials can even sense the pressures as low as touch of a bird feather. Apart from its outstanding sensing properties, this method can also be scaled up with a continuous roll-to-roll (R2R) production line which is also designed and developed by our group.

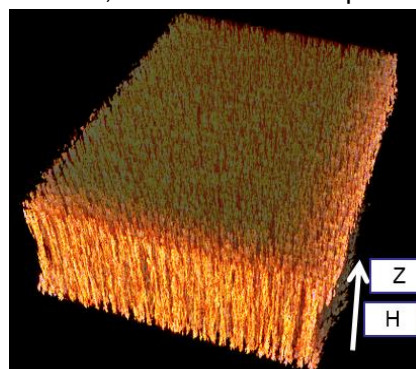


Fig. 1 MicroCT of 100 μm thick film with Z aligned Nickel nanoparticle column forest.

○ Date: 16th November (Fri), 11:00-12:30

○ Place: Seminar Room, GMAP Center 4F 406

主催：山形大学グリーンマテリアル成形加工研究センター

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