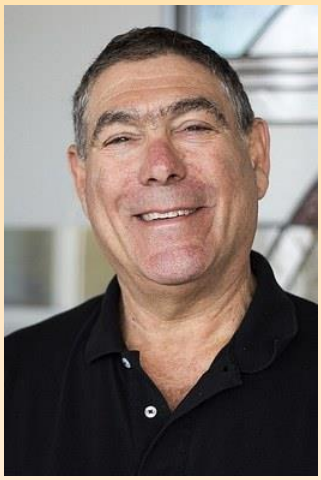
The 29th JUACEP Seminar

第 29 回 名古屋大学日米協働教育プログラムセミナー

“Escaping the Tyranny of Carbothermal Reduction. Conversion of Biowaste Silica to Alkoxysilanes without using Silicon”



Lecturer: **Professor Richard M. Laine**

Department of Materials Science and Engineering, University of Michigan

ABSTRACT:
Agricultural byproducts used as alternate energy sources generate considerable waste. Harvested rice is milled producing rice hulls that are often burned to generate electricity also producing rice hull ash (RHA). In the U.S. some 100k tons of RHA are produced annually. RHA consists of 70-90 wt % low impurity, high surface area (20-80 m2/g) amorphous, porous silica mixed with low impurity, amorphous carbon.
The rice plant does not extract heavy metals from the ground and as such the resulting RHA is relatively pure. Furthermore, it is very easily purified using simple acid extraction to remove small amounts of phosphates and other minor minerals. In this presentation we describe methods of directly depolymerizing RHA SiO2 to transform it into distillable alkoxysilanes.

略歴:
1969年カリフォルニア州立大学化学部卒。1973年南カリフォルニア大学博士号（化学）取得。デラウェア大、UCサンタバーバラ、スタンフォード国際研究所研究員を経て1987年ワシントンテクノロジーセンター研究教授、1990年からミシガン大学物質科学工学部教官。1999年同大教授。Mayaterials 創設者兼CEO、高分子科学工学センター統括者、EXIMOハードコーティング社共同創設者。

Date: **May 19 (Tue), 2015 10:30～12:00**
Venue: **Lecture Rm. 132 (Engg. Bldg. Ⅰ)**

＊事前参加申込み不要

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