Seminar

EPSRC-JSPS Core-to-Core Project (INPOMs)
and
NANOXCAT French-Japan International Associate Laboratory

Catalysts and Materials Design using High-Throughput Technologies

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日時：2023年7月3日（月）　10:45～12:00

場所：工学部A4棟1階　大会議室（A4-122）

講演概要：自動制御のロボットを使って固体触媒を開発する技術について講演いただきます。

The development of new materials, and among them of new catalysts, is key for the world economy as they are used in many crucial domains such as Environment, Food, Health, Energy, etc., which are at the most inner core of the current societal demands.

On the one hand, innovation in the catalysis/materials sector is based on forefront fundamental research to develop new concepts and, on the other hand, on an experimental phase devoted to the synthesis, characterization of catalysts/materials and on the measurement of their performances or properties.

The experimental part of the development of a new material/catalyst is time- and money-consuming, as traditional "trial and error" methods are still needed. *A priori* theoretical prediction of optimal materials/catalysts composition, structure, and conditions of preparation for getting the desired properties has not yet been made fully possible. Therefore, there is a strong need for rapid preparation, characterization, and screening of the properties of materials/catalysts. This is the main objective of high-throughput technologies (HTT) which consist in automatizing, robotizing, and parallelizing the classical techniques used in the R&D laboratories.

This talk will describe and discuss the HTT which have been set-up, tested and/or sometimes developed the last years under the supervision of Prof. Sébastien Paul on the REALCAT platform (www.realcat.fr) located at UCCS/Centrale Lille in France.

研究拠点形成事業
Core-to-Core Program

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