

講演会のお知らせ

講師：Vincent Maisonneuve 教授 (メーヌ大学 フランス・ルマン)

日時：2017年9月25日(月) 17時30分から18時30分頃まで

場所：学習院大学理学部会議室 (南7号館4階)

地図：<http://www-cc.gakushuin.ac.jp/~19990787/group/image/map2010.jpg>

" Nano- and micro-structured inorganic and hybrid fluorides for applications in energy domain "

Professor Vincent Maisonneuve

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(IMMM - UMR CNRS 6283)

UFR Sciences et Techniques – Université du Maine, Le Mans, France

Maisonneuve 教授は9月27日から金沢で開催される 10th Japanese-French Seminar on Fluorine での講演のため来日予定で、この度、学習院大学で講演して下さることになりました。皆様、奮ってご参加ください。

(講演のアブストラクトは次ページにあります。)

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Nano- and micro-structured inorganic and hybrid fluorides for applications in energy domain

Vincent Maisonneuve

At the beginning, our research was mainly devoted to the synthesis of fluoride salts (carbonates, borates, silicates). Then, the activity of the group of crystallized fluorides has gradually shifted towards the development of new fluoride hybrids fifteen years ago. The principal objective is to obtain three-dimensional open framework materials in the perspective of applications in the field of energy (gas storage, cathode materials, ...). Depending on the nature of the interactions between the inorganic and organic sub-networks, two types of hybrid fluorides are observed: class I with weak interactions (hydrogen bonds), class II with strong interactions (ionocovalent bonds). In the latter case, members are frequently called coordination polymers or MOF (Metal Organic Framework). All these fluorides are synthesized in hydro(solvo)thermal conditions, assisted eventually by microwave heating, from mixtures with one or two transition metal cations, an amine, HF and a solvent. According to the precursors, the exploration of numerous systems led to a wide variety of hybrid fluorometallates with different dimensionalities belonging to the two hybrid classes. Despite this structure richness of the new hybrid fluorides obtained, we have not given up the preparation of inorganic fluorides. We have mainly oriented their elaboration towards a nano-structuration in order to exacerbate the properties. This presentation will try with the help of several examples to present the recent, current and future researches of our team.