

Séminaire SOLEIL

Design of nanostructured catalysts for environmental and energy related applications

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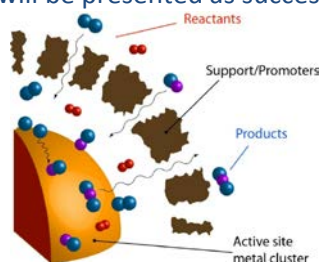
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Invité par Emiliano FONDA

Lundi 18 novembre à 14h00
Grand Amphi SOLEIL

Séminaires

Heterogeneous catalysts are materials widely used in industrial processes as well as in our daily life (i.e. car converters for abatement of exhausted pollutants). In this seminar, I will highlight the recent activity on catalyst design carried out at the Materials Environment and Energy Research Group of the University of Trieste (Italy). Specifically, it will be offered an overview of our strategy to prepare innovative core-shell catalysts for environmental and energy related applications. The strong metal support interaction that results from the adopted catalyst design allowed us to obtain the desired characteristics of any ideal catalysts, such as high thermal stability and excellent catalytic activity. Thermal or photocatalytic H_2 production [1,2], preferential oxidation reaction [3] and catalytic combustion of CH_4 [4] will be presented as successful case history.



References:

- [1]. Montini, T.; Condó, A. M.; Hickey, N.; Lovey, F.; de Rogatis, L.; Fornasiero, P.; Graziani, M., *Appl. Catal. B-Environ.* 2007, 73, 84; Montini, T.; de Rogatis, L.; Gombac, V.; Fornasiero, P.; Graziani, M., *Appl. Catal. B-Environ.* 2007, 71, 125.
- [2]. Gombac, V.; Sordelli, L.; Montini, T.; Delgado, J. J.; Adamski, A.; Adami, G.; Cargnello, M.; Bernal, S.; Fornasiero, P., *J. Phys. Chem. A* 2010, 114, 3916; Montini, T.; Gombac, V.; Sordelli, L.; Delgado, J. J.; Chen, X.; Adami, G.; Fornasiero, P., *ChemCatChem* 2011, 3, 574.
- [3]. Cargnello, M.; Gentilini, C.; Montini, T.; Fonda, E.; Mehraeen, S.; Chi, M.; Herrera-Collado, M.; Browning, N. D.; Polizzi, S.; Pasquato, L.; Fornasiero, P., *Chem. Mater.* 2010, 22, 433.
- [4]. Cargnello, M.; Delgado Jaén, J.J.; Hernández Garrido, J.C.; Bakhmutsky, K.; Montini, T.; Calvino Gámez, J.J.; Gorte, R.J.; Fornasiero, P., *Science* 2012, 337, 713



Ce séminaire sera suivi d'une pause-café



Formalités d'entrée : accès libre dans l'amphi du Pavillon d'Accueil. Si la manifestation a lieu dans le Grand Amphi SOLEIL du Bâtiment Central, merci de vous munir d'une pièce d'identité (à échanger à l'accueil contre un badge d'accès).

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