



## *Preparation and Characterization of Shape Controlled mesoporous nanoparticles and their Application in Electrocatalytic Processes*

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The work concerns the synthesis of mesoporous nanomaterials free from platinum which have interesting (electro)catalytic properties. We are looking for an excellent and motivated PhD student for a ten-months duration stay as doctoral trainee in the SAMCat group of IC2MP at the Université de Poitiers, where he will prepare various electrode materials containing a few noble metals, as suggested by the European Union recommendation. The preliminary electrochemical characterizations performed on these materials reveal that they are very active both for organic oxidation and the oxygen reduction reaction. Their physicochemical characterizations have to be achieved to determine their correlation "electrochemical efficiency/crystallographic structure". We would like to provide to this PhD trainee the facilities of our laboratory for an excellent characterization of the prepared materials which are a great interest in energy conversion and storage.