Funded Research Projects

Proposed Format:

Project Title: Surface Characterization of Task-Specific Ionic Using Sum Frequency Generation (SFG) Spectroscopy

Project Proponent: Imee S. MARTINEZ

Designation of Proponent: Associate Professor 1

Department and College Proponent: Institute of Chemistry, College of Science

Project Abstract: The need to address pressing changes, and critical levels of air pollutants explain the need to develop robust carbon-capture and gas emission sweetening systems for flue-gas stacks. The goal of this particular project is to characterize the surfaces of novel task-specific ionic liquids, which are ideal for carbon-capture applications such as ([MOBMIM] [TFA] and [CNBMIM] [TFA]). Sum Frequency Generation (SFG) will be used to characterize the gas-liquid interfaces of these ionic liquids. SFG is a surface-specific non-linear optical vibrational technique, which can be used to look at predominant molecular species on the surface. However, this particular technique is not yet available in the Philippines, so one of the main goals of this proposal is to be able to set-up an SFG system in the Institute of Chemistry, UP Diliman.

Funding Support in Philippine Pesos: 300,000.00

Duration and Status: 12 months

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