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Authors: Jéssica A. Marins, Bluma G. Soares

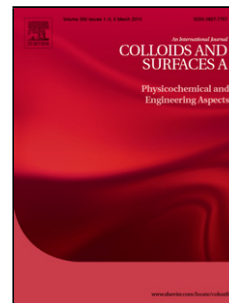
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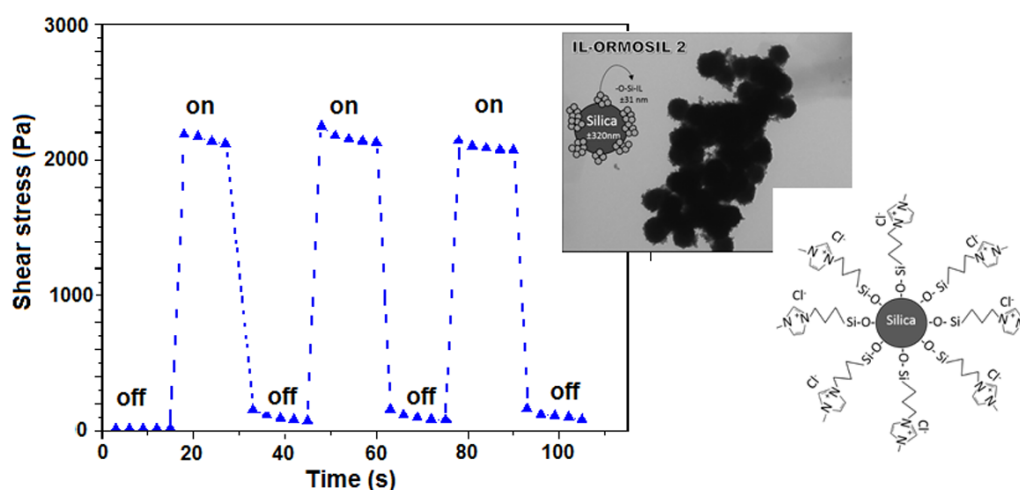
# Ionic liquid-Based Organically Modified Silica for the Development of new Electrorheological Fluids

Jéssica A. Marins<sup>1-2\*</sup> and Bluma G. Soares<sup>2</sup>

<sup>1</sup>Université Côte d'Azur, UMR 7010 Institute of Physics of Nice, Parc Valrose 06100 Nice, France

<sup>2</sup>Universidade Federal do Rio de Janeiro, Departamento de Engenharia Metalúrgica e de Materiais, Centro de Tecnologia, Bl. F, 21941-972, Rio de Janeiro, RJ, Brazil;

Graphical abstract



## Abstract

This work describes the preparation of novel electrorheological (ER) fluids consisted of organically modified silica particles with imidazolium-based ionic liquid (IL-ORMOSIL) suspended in a silicone oil. The IL-ORMOSIL was prepared by hydrolysis/co-condensation of tetraethoxy silane (TEOS) in the presence of different concentration of 1-(3-trimethoxysilylpropyl)-3-methylimidazolium chloride (IL-TMOS), using the one-pot sol-gel process. IL-ORMOSIL particles with controlled morphology were obtained, as indicated by transmission electronic microscopy (TEM).

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