

Abstract Submitted  
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**Charge Transport and Dynamics of Ionic Liquids: Evaluating the Impact of Mesoscale Organization**<sup>1</sup> TYLER COSBY, ZACHARIAH VICARS, JOSHUA SANGORO, Univ of Tennessee, Knoxville — Charge transport and dynamics in a homologous series of imidazolium-based ionic liquids are investigated by broadband dielectric spectroscopy to elucidate the impact of alkyl chain length and hydrophobic aggregation on their physicochemical properties. It is observed that systematic ordering of ionic liquids into complex polar and nonpolar domains results in the emergence of a slow dielectric relaxation as well as a decrease in the ionic conductivity. The results are discussed within the framework of current understanding of charge transport and dynamics in ionic liquids.

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