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**Structure Property Relationships in Imidazole-based Deep Eutectic Mixtures** LOGAN TERHEGGEN, TYLER COSBY, JOSHUA SANGORO, Univ of Tennessee, Knoxville — Deep eutectic mixtures of levulinic acid with a systematic series of imidazoles are measured by broadband dielectric spectroscopy, differential scanning calorimetry, and Fourier transform infrared spectroscopy to investigate the impact of steric interactions on charge transport and structural dynamics. An enhancement of dc conductivity is found in each of the imidazoles upon the addition of levulinic acid. However, the extent of increase is dependent upon the alkyl substitution on the imidazole ring. These results highlight the importance of molecular structure on hydrogen bonding and charge transport in deep eutectic mixtures.

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