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Molecular Dynamics of Colloidal binary mixtures in an electric field MANUEL VALERA, ATHULA HERAT, ETHAN CORLE, Slippery Rock University — We have studied a system of colloidal binary mixtures in an external electric field. The simulations were performed in the string fluid regime, low packing fraction, and high density regime under the influence of a strong electric field. In the dilute regime we studied the system structure for different concentrations and size ratios. For the high density regime we studied a 50:50 concentration with a size ratio of 1.2/1.0. We show the pair correlation function and diffusion coefficient. A partial phase diagram for the 50:50 concentration and 1.2/1.0 size ratio is also presented.

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