

The fabrication process of lithium-ion battery electrodes plays a prominent role in the resulting mesostructure and corresponding cell performance. Here we focus on the simulation of cathode electrode, using a Coarse-Grained Molecular Dynamics approach. The effect of changes of electrode formulation is explored for different ratios between active material and carbon?binder domains. The resulting electrode mesostructures obtained after mixing and drying are characterized in terms of porosity and active material surface coverage by the carbon?binder domains. These structures are subsequently implemented into a 3D continuum model which displays distinct discharge behaviors for the different cases.