

Abstract Submitted
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Porous electrode swelling: effects of inhomogeneity and geometry XUEWEI ZHANG, Texas A&M University-Kingsville — The performance and reliability of electrochemical devices can be significantly influenced by the changes in volume and porosity of the electrodes. Mathematical models have been developed over the last decade to describe and predict the dynamics of porous electrode expansion coupled with porosity change. Based on previous works, here we examine the effects of spatial inhomogeneity of electrode material on the model simulation results. Further, we extend our investigation from planar to cylindrical geometry and compare the electrode behavior in these two settings.

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