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New formulas for the tortuosity factor of electrochemically conducting channels

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Abstract

Porous composite mediums consisting of multiple interpenetrating percolating phases are widely used in electrochemical cells and batteries. The electrochemical species, for example electrons, ions, and gaseous molecules, are confined to transport within the specific conducting phase networks. Our ability to understand physical and chemical processes within these tortuous networks is often limited by the lack of suitable mathematical representation of their tortuosity factor. Thus, the quantitative formulation of tortuosity factor is urgently needed in this regard. From purely Download English Version:

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