

Abstract Submitted
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Mobility of Lithium and Hydrogen Ions in Nanotubes in Terms of Fokker-Plank Equation ANDREW KINCHEN, YURIY MALOZOVSKY, Southeastern Louisiana University — We present the theory of mobility of Li and H ions in metallic nanotubes. We derived the mobility of ions in terms of the kinetic Fokker-Plank equation with the consideration of both the motion of an ion in the cylindrical periodic potential of a nanotube and interaction of an ion with lattice vibrations of the tubule. We argue that there is an optimum diameter of the tubule below which the mobility of ions is significantly reduced.

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