

Corrected Diffusion Coefficients of Lithium in Helium and Helium in Lithium

K. Alioua

Laboratoire de Physique des Rayonnements, Badji Mokhtar University, Annaba, Algeria

M. Bouledroua^{C,S}

*Faculté de Médecine and Laboratoire de Physique des Rayonnements, Badji Mokhtar University, Annaba,
Algeria*

boulmoncef@netscape.net

The diffusion coefficients, D_0 , of ground and excited state lithium atoms diffusing in a helium buffer gas are reviewed with new and reliable potentials. The calculations are performed quantum mechanically at low and moderate temperatures, and the results are compared with published theoretical and experimental data. The diffusion coefficients of ground state Li in He and ground state He in Li are particularly considered by taking into account the first-order correction like: $D = D_0(1\epsilon)$.