

Dissociation of Homonuclear Relativistic Molecular Ions

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Abstract

We give lower bounds to the 'size' of diatomic homonuclear relativistic molecules which are modeled by the Herbst operator. We also show that – as in the non-relativistic case – the absence of sufficiently many electrons leads to the dissociation of the molecule.¶To obtain these results we found new bounds for the localization error in the semirelativistic approach.