

Metastable states of clusters tunneling through repulsive barriers

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The method of solution of quantum tunneling problem of several identical particles with pair oscillator-type interactions through the repulsive barriers is considered. The effect of quantum transparency, manifesting itself in nonmonotonic resonance-type dependence of the transmission coefficient upon the energy of the particles, the number of the particles and their symmetry type were revealed, that is due to the existence of barrier metastable states, embedded in the continuum.