

## "Heavy-ion fusion reactions from a view point of open quantum systems"

We discuss the role of internal degrees of freedom in heavy-ion fusion reactions at energies around the barrier. While only a few degrees of freedom are involved before two nuclei touch with each other, a huge number of internal degrees of freedom are activated after the touching, significantly affecting the dynamics of fusion reactions.

This is relevant in fusion at deep subbarrier energies as well as in fusion for superheavy nuclei. We shall discuss how one can model such complex dynamics from a view point of open quantum systems.

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