

Exploring fusion hindrance for asymmetric systems at deep sub-barrier energies

The phenomenon of fusion hindrance, observed initially in symmetric systems involving medium-heavy nuclei at deep sub-barrier energies, has inspired current activities related to challenging low cross-section measurements. Theoretical models suggested to explain this behavior have different physical basis. We have investigated the evolution of the fusion hindrance as a function of increasing mass and charge of relatively light projectiles (both weakly bound and stable) on heavy targets. In this talk results from our recent measurements combined with data available in the literature will be presented to understand the origin of this phenomenon.

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