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Cluster radioactivity of super-heavy nuclei.

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An exotic type of decay - cluster emission - was observed in actinides region in 1980's [1, 2, 3]. In this process a light nucleus, but heavier then alpha particle is emitted, while the heavy mass residue is close to doubly magic lead in all observed cases. Microscopic description of this phenomenon treated as a very asymmetric fission has been successfully performed within HFB model with Gogny interactions D1S [4]. The fission valley on the potential energy surface has been found and fission fragments have been identified as cluster radioactivity products. Recently the characteristic very asymmetric fission valleys have been also found in some super-heavy nuclei. It has been shown that cluster radioactivity plays a nonnegligible role in this part of nuclear chart [5].
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