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Scintillating Li_2MoO_4 Bolometers for neutrinoless double beta decay search

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The next generation experiment CUPID will search for neutrinoless double beta decay using scintillating Li_2MoO_4 bolometers to study the candidate isotope ^{100}Mo . The scintillating properties of these crystals allow for the dual read-out of heat and light signals to suppress the background induced by alpha particles. This feature, together with the high Q-value of ^{100}Mo , will reduce the background level by a factor 100 with respect to CUORE, the predecessor of CUPID. The R&D results presented concern the study of the detector performances in terms of energy resolution, a key element to search for rare decays, and light yield, to understand the particle identification capabilities of the experiment.

Collaboration name

CUPID

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Session Classification: Double Beta decays and Neutrino Masses