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## The CUPID-Mo double-beta decay bolometric experiment and performance

CUPID-Mo is an experiment to search for neutrinoless double beta ( $0\nu 2\beta$ ) decay of  $^{100}\text{Mo}$ , ongoing in the Modane underground laboratory (France) since March 2019. The detector array consists of twenty 0.2-kg  $^{100}\text{Mo}$ -enriched lithium molybdate scintillating bolometers (containing 2.26 kg of  $^{100}\text{Mo}$ ) operated at  $\sim 20$  mK. CUPID-Mo confirms on larger scale a reproducibility of high energy resolution ( $\sim 5$ -6 keV FWHM at 2615 keV) and highly efficient alpha background rejection (well beyond required 99.9%) of lithium molybdate cryogenic detectors. Moreover, a large exposure acquired ( $\sim 2$  kg\*yr) allows to demonstrate the U/Th activity in the crystals on the level of 1 uBq/kg ( $^{226}\text{Ra}$ ) or below ( $^{232}\text{Th}$ ). These results are of a great importance not only for the CUPID-Mo sensitivity to  $^{100}\text{Mo}$   $0\nu 2\beta$  decay, but also for the implementation of a large-scale experiment CUPID, following closely the CUPID-Mo detector configuration.

### Mini-abstract

CUPID-Mo shows high performance and radiopurity of  $^{100}\text{Mo}$ -enriched  $\text{Li}_2\text{MoO}_4$  scintillating bolometers

### Experiment/Collaboration

The CUPID-Mo Collaboration

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