**A compact machine for the creation of the ultracold lithium and cesium atoms**

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The ultracold atom system is an important platform in quantum simulation because of the excellent tunability and the simple interaction between ultracold atoms. In my group at NTHU, we are working on the implementation of the quantum simulator using both heavy and light elements; more specifically, using lithium (Li) and cesium (Cs) atoms. We plan to exploit the large mass disparity between the two species to simulate quantum impurity models. As the first step towards this goal, we have constructed a compact experimental apparatus to create ultracold lithium and cesium atoms. I will report the performance of the apparatus and give some details regarding the mix of the two species.