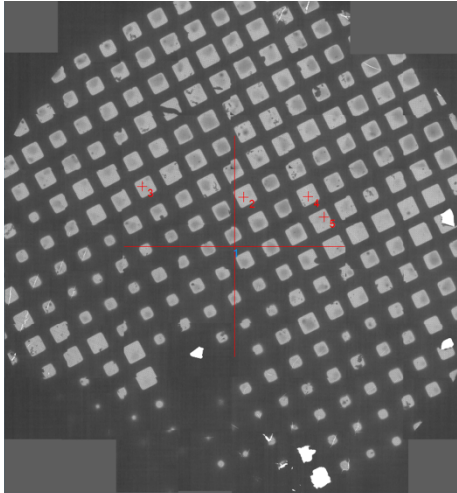


Supplementary Information

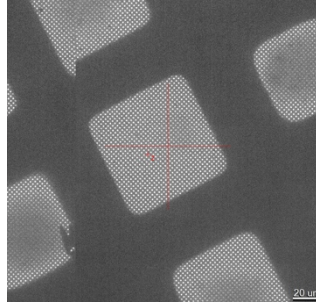
Size of Particles (kDa): 116 kDa (METTL3: 64 kDa; METTL14: 52 kDa)

Symmetry: C1 symmetry

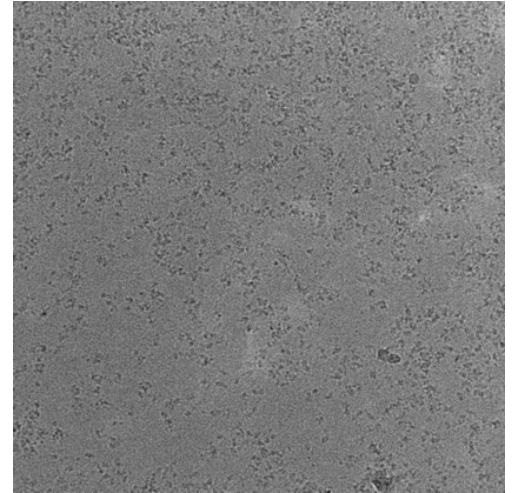
Shape: butterfly shape molecule



Low Mag 280X Atlas

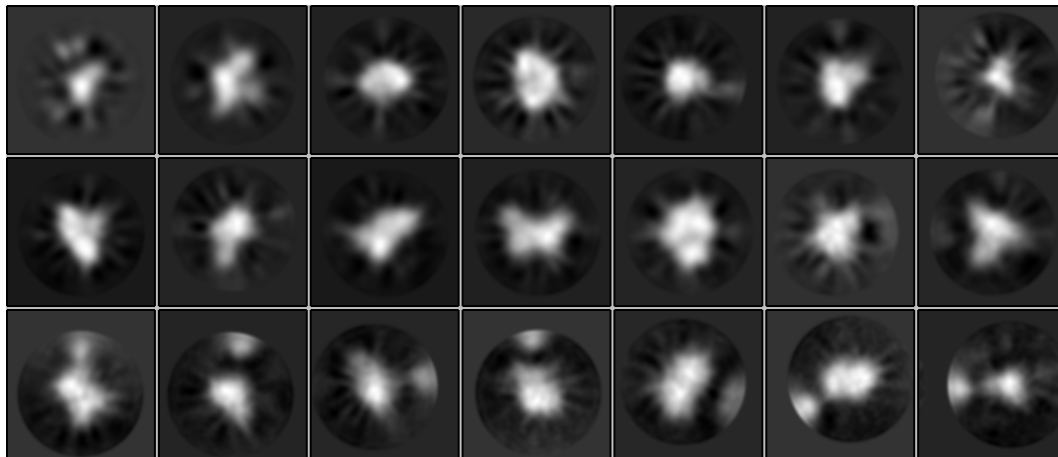


Low Mag 2600x



High Mag 120kx Particles

A dataset above was collected on a FEI Talos F200C microscope with side-entry holder and a Falcon 3 camera in linear mode at 200kV. The collected movies and resulting particles were processed using Relion.



Due to the relative small size of METTL3-METTL14 complex (116 kD) and the linear mode of Falcon 3 camera (it is virtually unrealistic to use counting mode of Falcon 3 on a side-entry Talos microscope), the signal to noise ratio is insufficient for a clean 2D classification without signs of overfitting (in this case, the hairy features extending in the solvent around a particle). However, the 2D classification does reflect the expected shape and size of the complex. We expect to obtain a higher resolution map with K2 camera in super-resolution counting mode. Therefore, the access to NCCAT's EM facilities is essential for the success of this project.