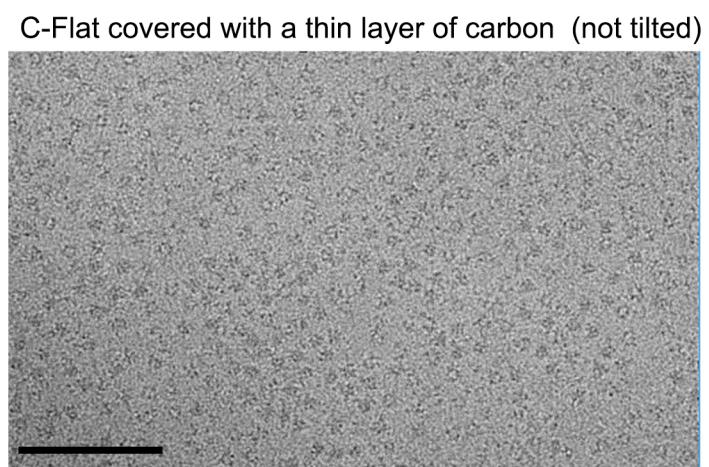
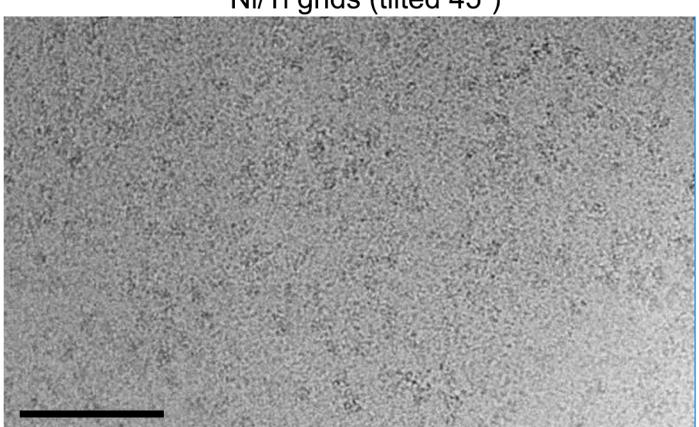
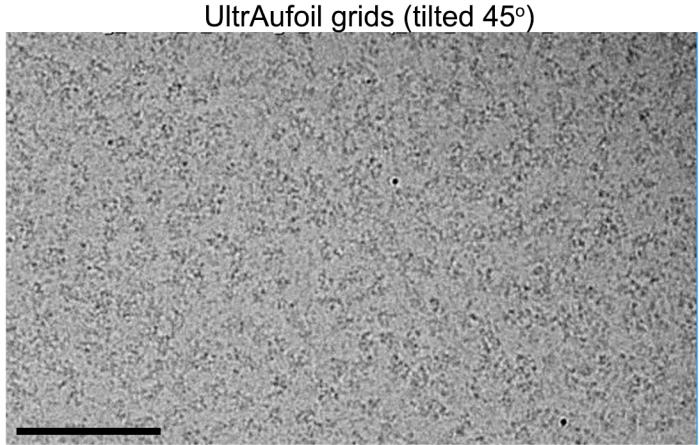
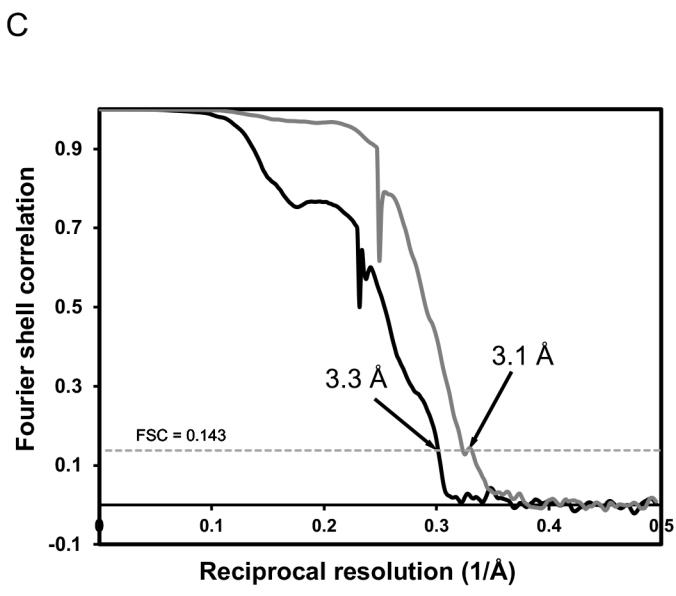
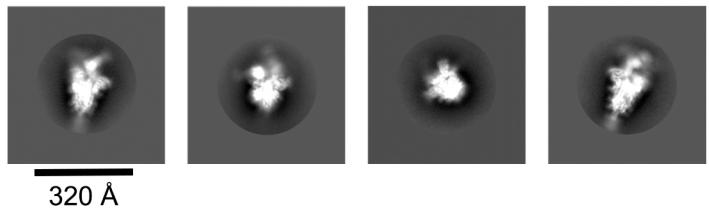


A



B



F

Dataset 1    Dataset 2    Dataset 3  
12,234    12,460    5,295 micrographs  
Movie frame alignment  
Estimation of microscope CTF  
Particle picking  
Extraction (4,081,929 particles)

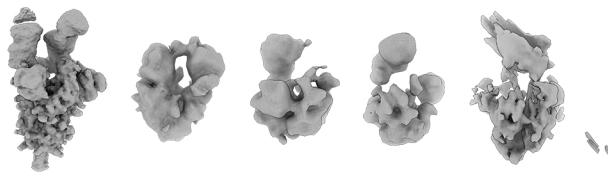
2D classification  
Ab initio 3D reconstruction  
Heterogeneous refinement

Topaz train  
Topaz Extraction  
2D classification  
Heterogeneous refinement

Combine & Remove duplicates  
(cutoff distance 90 Å)

Ab-initio reconstruction  
Heterogeneous refinement

Classes not selected



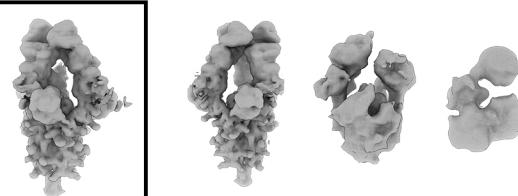
Class selected



NUR with per-particle defocus

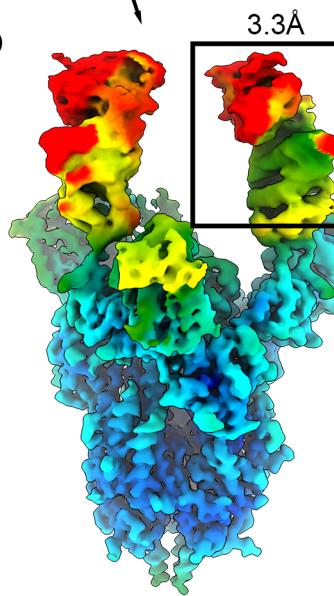
Polishing

Ab-initio reconstruction  
Heterogeneous refinement

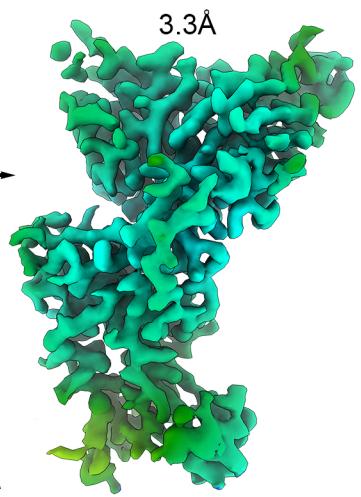


NUR with per-particle defocus  
(314,440 particles)

E



2.5 3 3.5 4 4.5 Å



WARP

CryoSPARC

RELION

CryoSPARC