

Phase plates expand the capabilities of cryo-EM

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Recently, we developed the Volta phase plate (VPP) for transmission electron microscopy. It greatly improves image contrast and holds promise for further performance gains in cryo-electron microscopy (cryo-EM). Currently, we are exploring the usability of the VPP for cryo-electron tomography and cryo-EM single particle analysis. The initial results are very encouraging. We expect that the VPP will enable visualization of fine cellular structures, in situ, and cryo-EM studies of "difficult" macromolecular complexes in terms of small size, heterogeneity and flexibility.