MS25-P106 LATE | EXPLORATION OF BRAGG IN-LINE ELECTRON HOLOGRAPHY AS A POSSIBLE TOOL FOR CRYSTAL STRUCTURE DETERMINATION

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We have been exploring a hybrid crystal imaging scheme in TEM, acquiring deeply defocussed images such that individual Fourier components in the image are spatially separated (which we term “Bragg in-line holography”). Interference between the reference beam and each individual “Bragg beam” results in an internal 2-beam interference pattern in each individual Bragg image. Previously (ECM31) we presented first experimental results on MgO nanocubes, confirming the presence of lattice information in each individual Bragg image. In the meantime, we have performed further simulations, and begun experimental efforts on (cryo-prepared) organic crystals. We include selected examples of recent simulation work below.