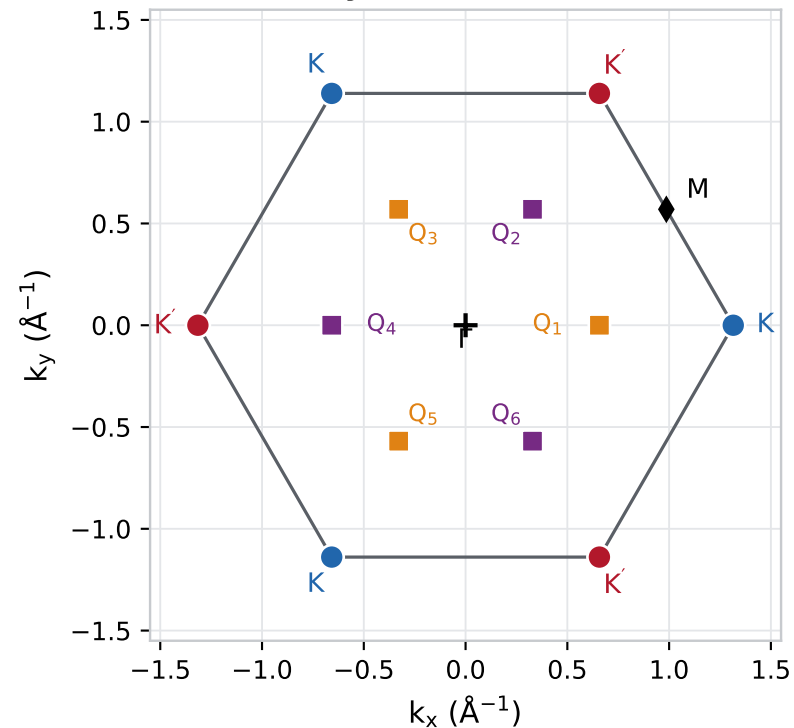
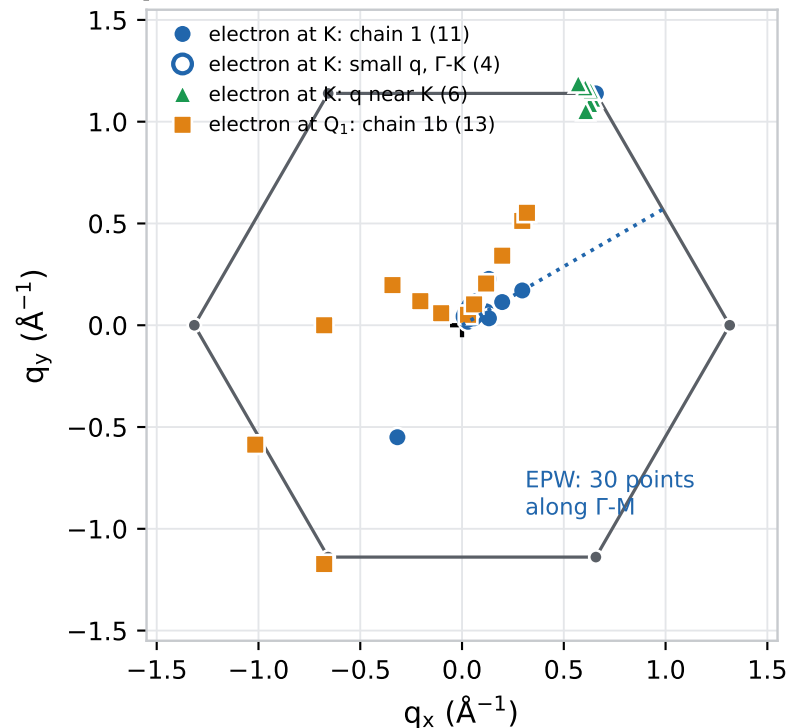


(a) valleys and electron states**(b) phonon wavevectors of the direct chain****(c) phonon dispersion (DFPT, interpolated)**