Tender-energy microspectroscopy at the NSLS-II TES Beamline (8-BM) reveals chemical heterogeneity, particularly of P and S, at the microscale. This study of CM2 Carbonaceous Chondrite meteorite NWA12748, which represents primitive material from a small body, illuminates early Solar System processes. Chemical heterogeneity reflects the initial condensation products of the Solar Nebula, as well as subsequent small-body thermal and aqueous processes. The results form the scientific foundation and establish analysis protocols for characterization of pristine asteroid samples returned by NASA's OSIRIS-REx and Japan's Hayabusa2 missions. It also sets the stage for the new submicron tender-energy probe under construction at TES.