## Figure S1





**Figure S1**: Dark field TEM images show that for PILP samples, the mineral deposits were coincident with the collagen fibrils, whereas irregular shaped spherulites decorating the collagen fibrils could be seen in mSBF samples. Further energy dispersive spectroscopy (EDS) confirmed that the deposits in/ around collagen fibrils in TEM images consisted of Ca, O and P.

## Figure S2



**Figure S2:** Biomimetic mineralization of GFFP in PILP solution when polyaspartic acid was was replaced by DDR2-Fc. No evidence of intra-fibrillar mineralization was noted.