

**Electronic Supplementary Information (ESI) for Biomaterials Science.**

**Effect of the Stability of the Poly( $\gamma$ -Glutamic Acid)-ACP  
Dispersion System on Biomimetic Mineralization of Type I Collagen.**

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#These authors contributed equally to this study and share first authorship

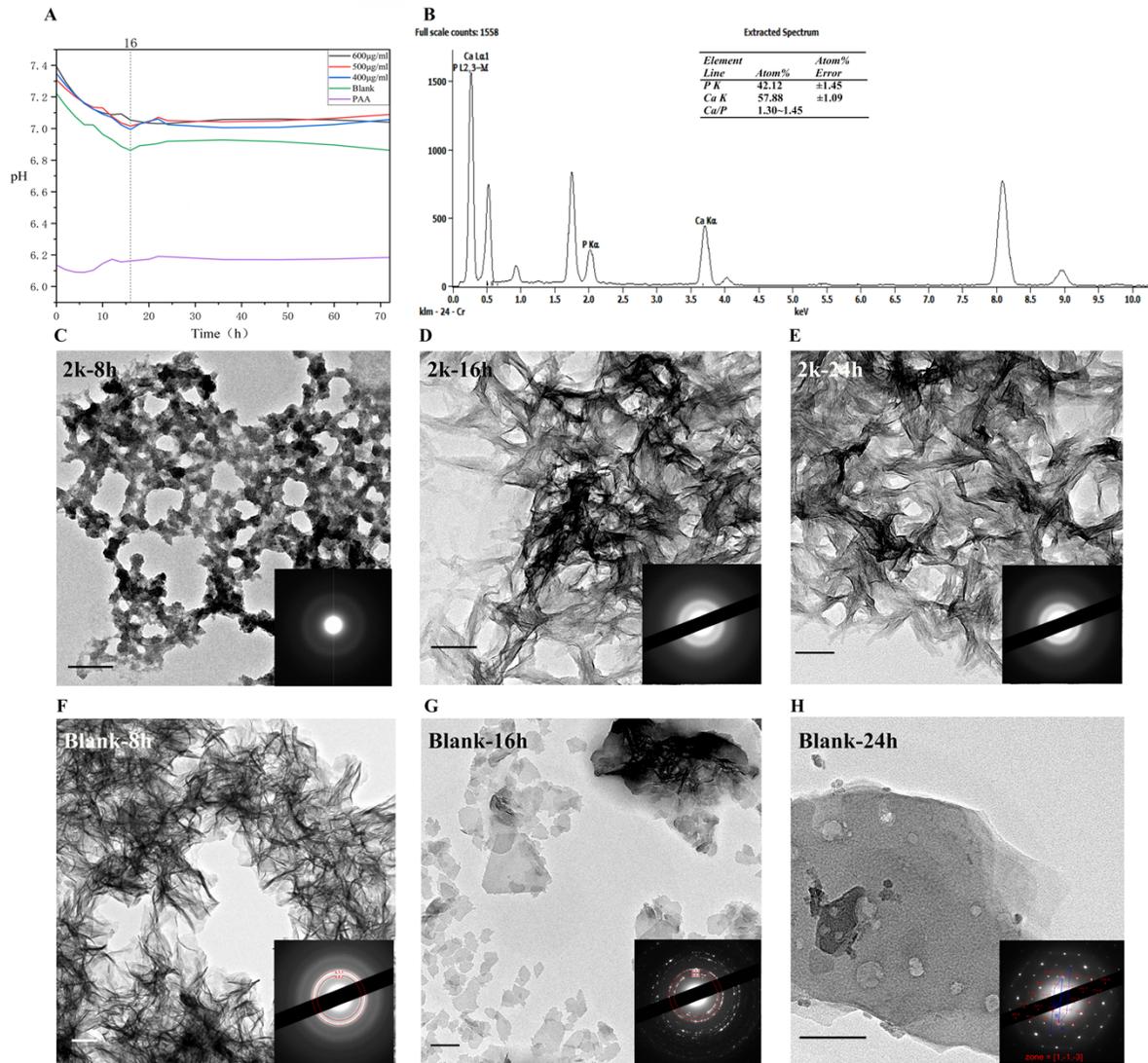
\*These authors contributed equally to this study and share corresponding authorship

**Correspondence:**

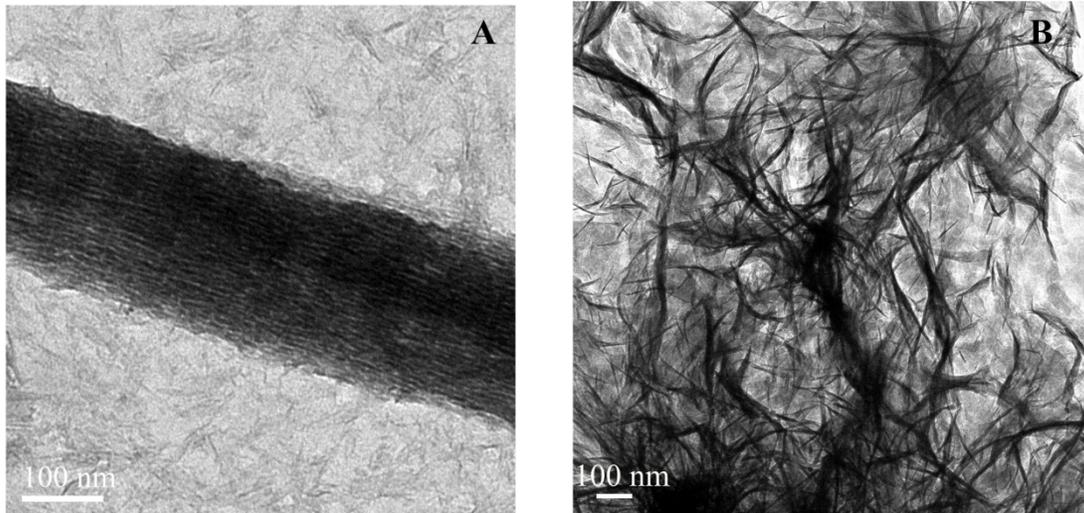
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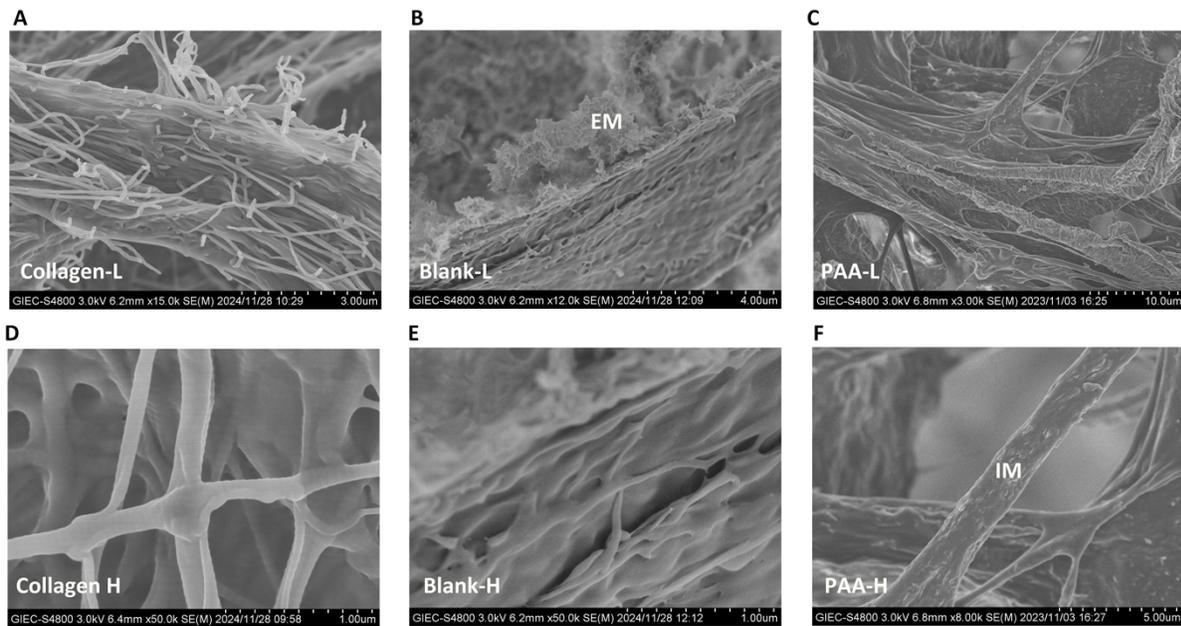
**Supplementary Material**



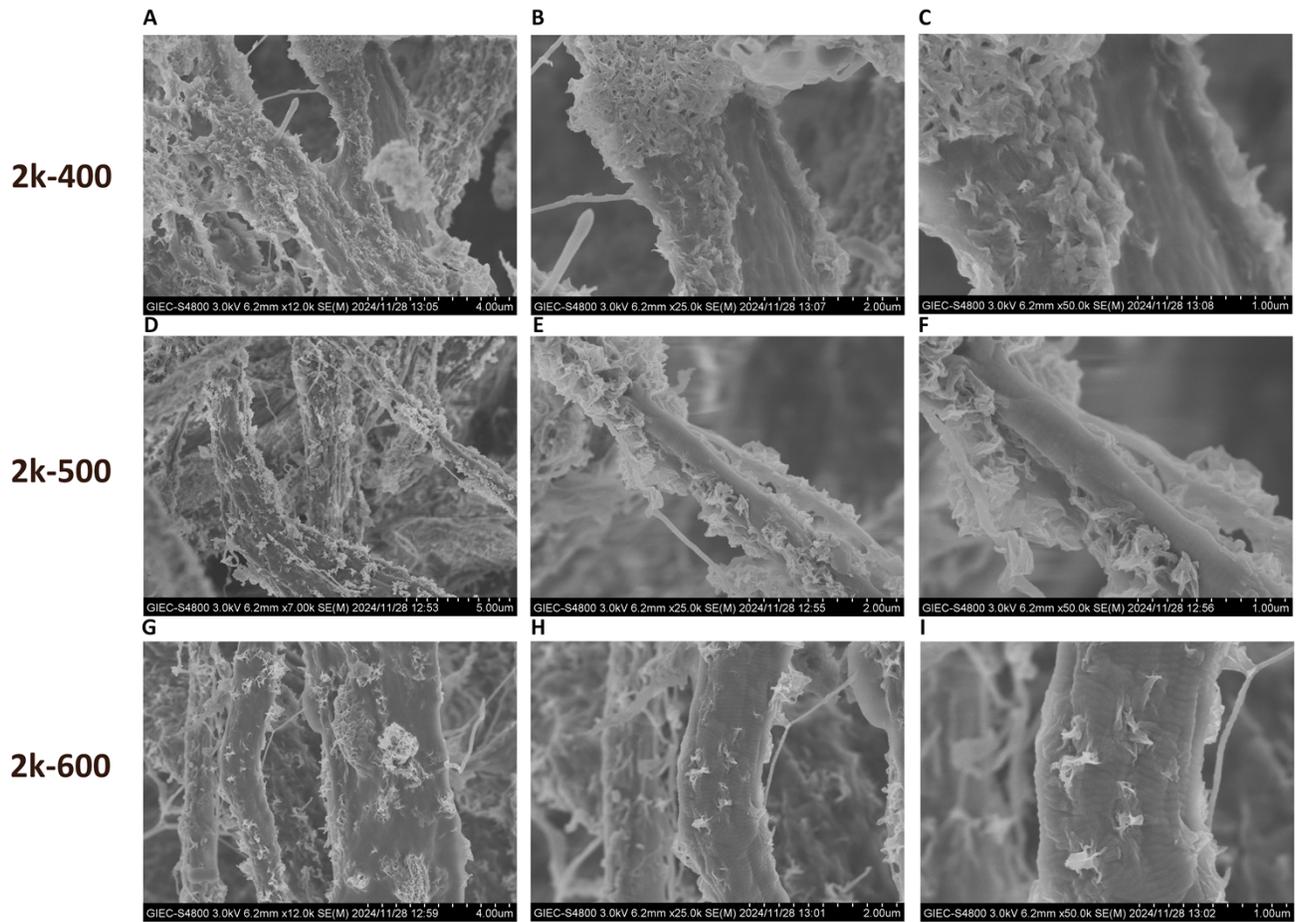
**Supplementary Figure 1.** pH curves of 2 kDa group (A) and Blank group (A) with one turning point. TEM images and SAED images of CaP solutions in 2k-600 group (C-E) and Blank group (F-H), whose time points of observation depends on the turning points of pH curve. B: The EDS graph of graph C. Bar of C-H: 100nm



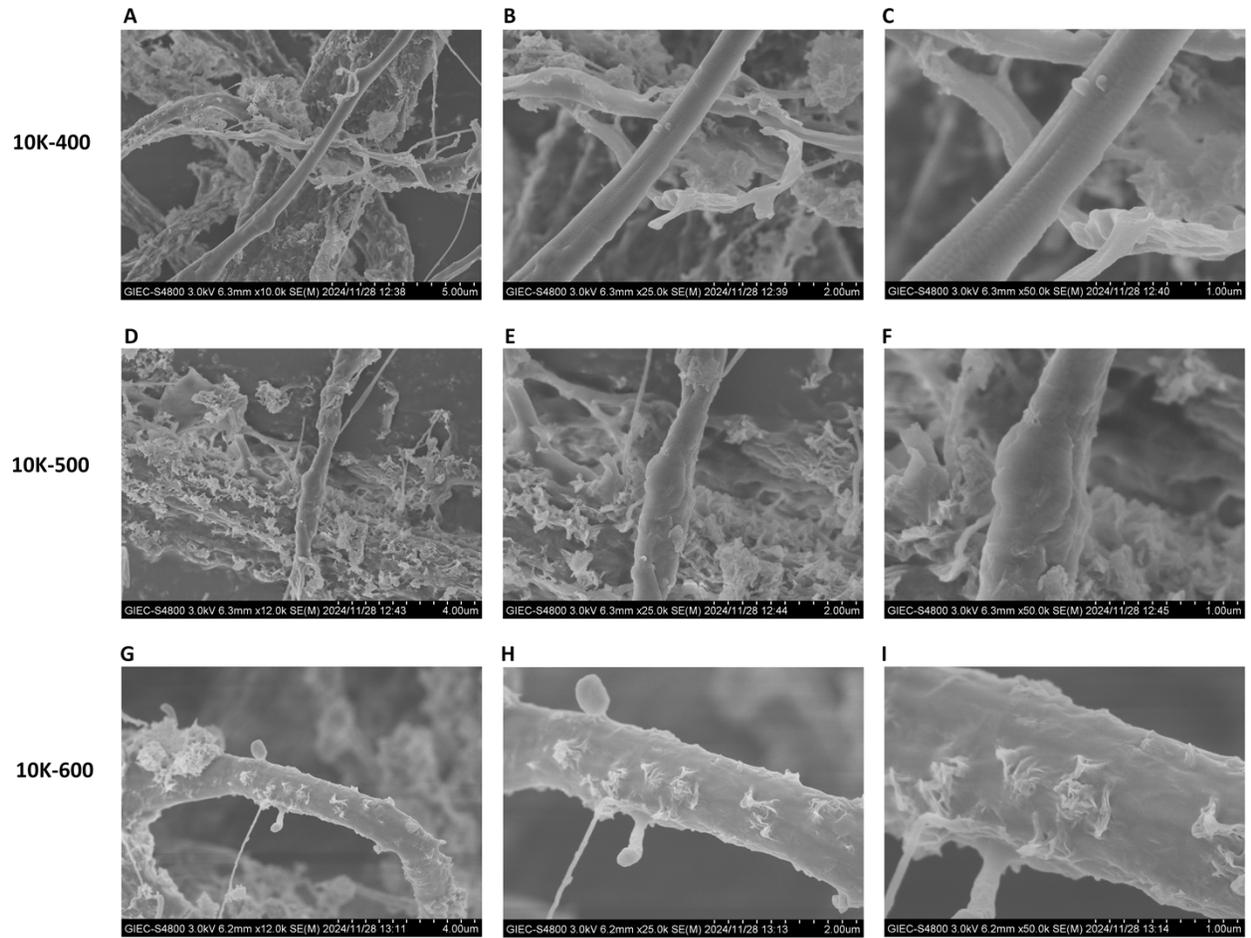
**Supplementary Figure 2.** Microscopy images of the positive control group (A) and the negative control group (B) after mineralization of the two-dimensional collagen model for 3 d



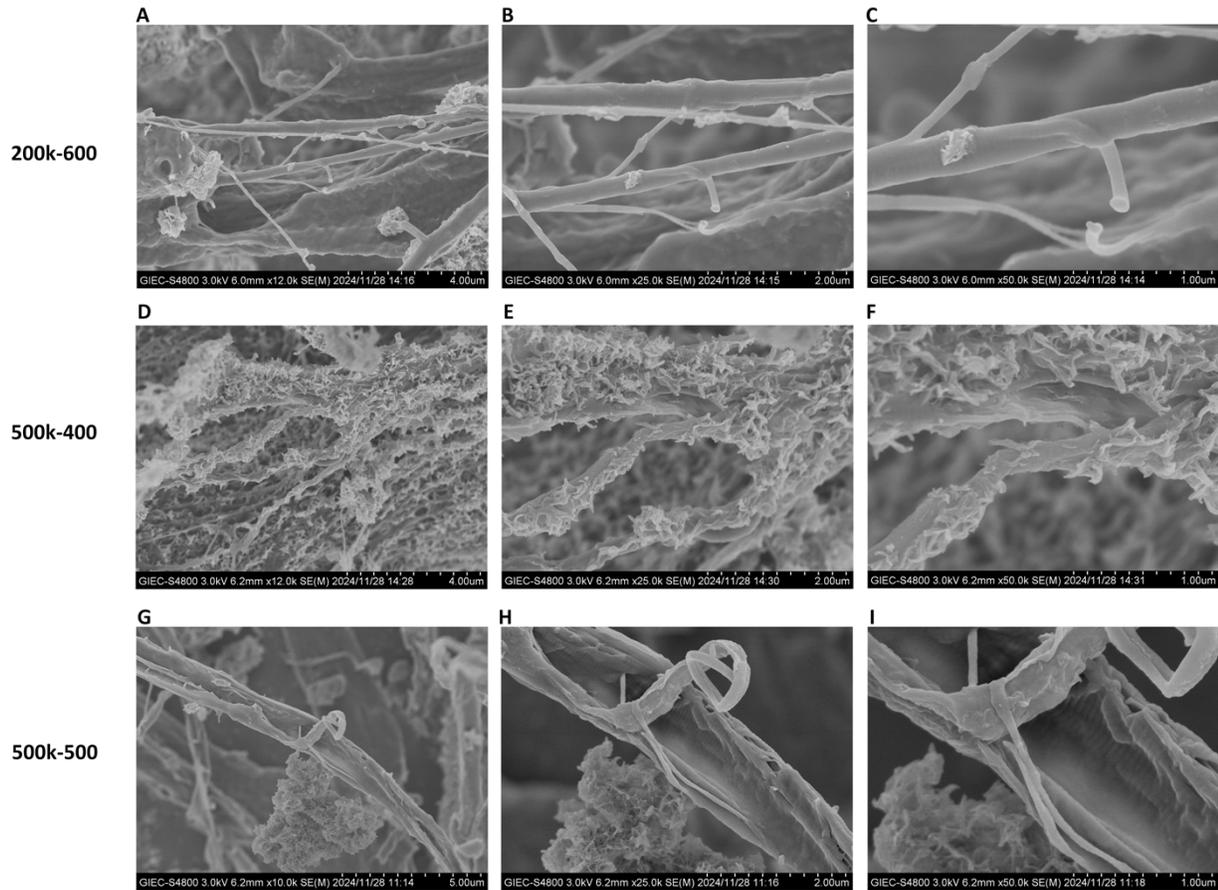
**Supplementary Figure 3.** SEM images of the pure collagen (A, D), positive control group (C, F) and the negative control group (B, E) after mineralization of the three-dimensional collagen scaffold for 7 d. L: lower magnification; H: higher magnification; IM: intrafibrillar mineralization; EM: extrafibrillar mineralization.



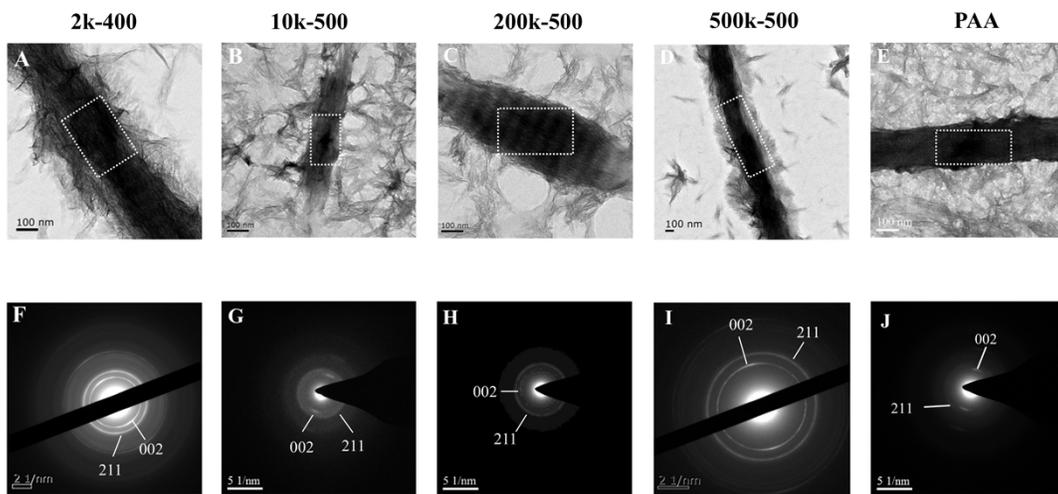
**Supplementary Figure 4.** High power SEM images of the 2k-400 (A-C), 2k-500 (D-F) and 2k-600 (G-I) groups after mineralization of the three-dimensional collagen scaffold for 7 d.



**Supplementary Figure 5.** High power SEM images of the 10k-400 (A-C), 10k-500 (D-F) and 10k-600 (G-I) groups after mineralization of the three-dimensional collagen scaffold for 7 d.



**Supplementary Figure 6.** High power SEM images of the 200k-600 (A-C), 500k-400 (D-F) and 500k-500 (G-I) groups after mineralization of the three-dimensional collagen scaffold for 7 d.



**Supplementary Figure 7.** SAED patterns of the 2k-400 (A, F), 10k-500 (B, G), 200k-500 (C, H), 500k-500 (D, I) and PAA (E, J) groups.