Pickering high internal phase emulsion templated poly(ε-caprolactone) scaffolds functionalized using type 1 collagen for enhanced bioactivity

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Fig. S1: Digital image confirming the formation of uniform solution of HEC in CL at 2 wt% concentration prepared at 120 °C.

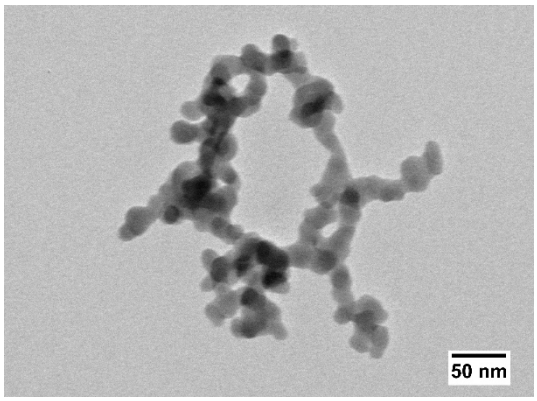

Fig. S2: TEM image of mSiNP demonstrating its fumed 3D network with average size of 16.19 ± 2.18 µm determined using ImageJ.

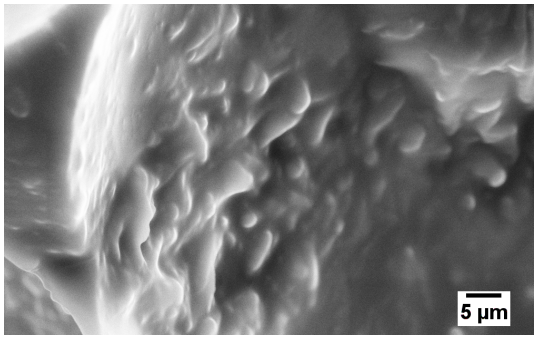

Fig. S3: Higher magnification SEM image illustrating the surface roughness of HEC1.0 scaffold due to the presence of mSiNP at the interface indicating its retention within the scaffold even after rigorous purification process.

Table S4: Density of various non-porous and porous scaffolds fabricated using HEC as a functional macroinitiator.

Sample Id	Density (g/cc)	
	non-porous	porous
HEC0.0	1.29 ± 0.06	0.36 ± 0.08
HEC0.5	1.36 ± 0.04	0.40 ± 0.02
HEC1.0	1.32 ± 0.03	0.42 ± 0.04

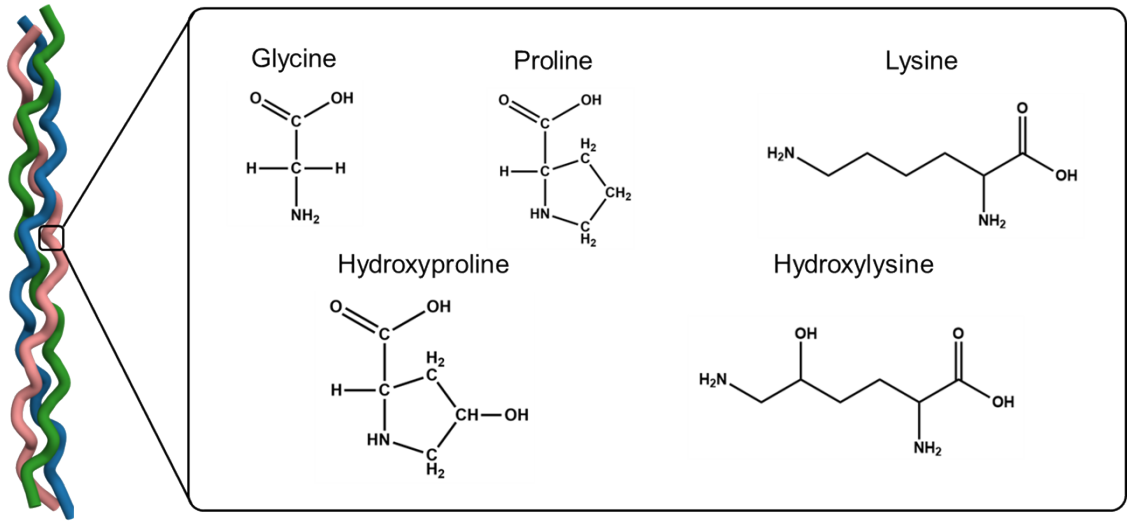

Fig. S4: Schematic representation of triple helical structure of type 1 collagen along with various amino acids that forms its structure leading to the presence of prime amines which can further be utilized for immobilization of collagen over the surface of scaffolds.

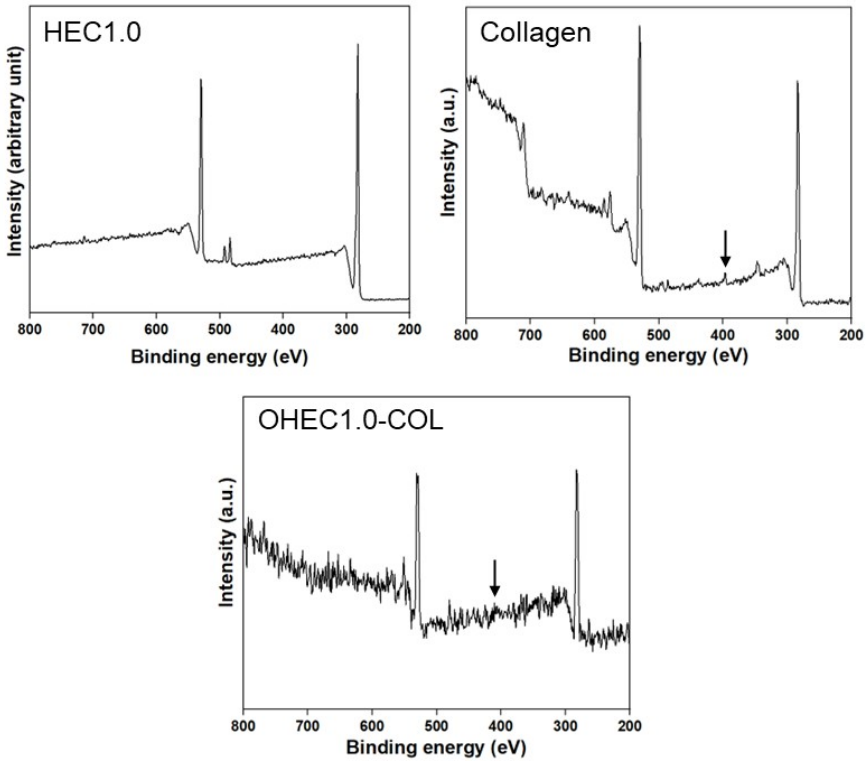

Fig. S5: XPS spectra of HEC1.0 scaffold, collagen powder, and collagen functionalized OHEC1.0-COL scaffold. The arrow indicates the peak at 400 eV corresponding to N 1s.