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A Versatile Strategy for the Fabrication of Poly(ethyl methacrylate) Composites

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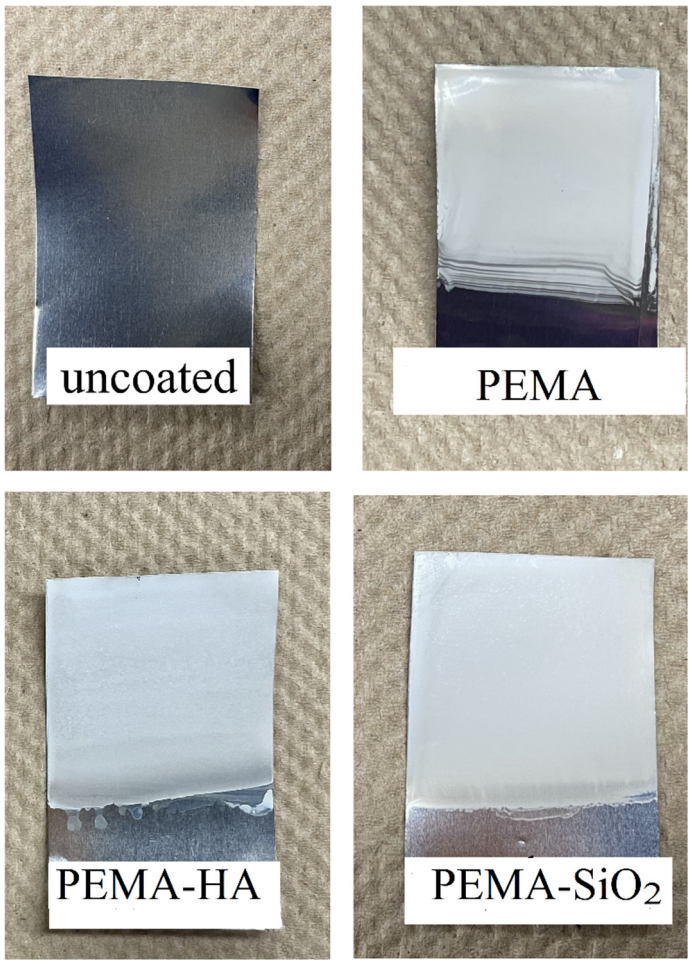

Figure S1. Photographs of uncoated stainless steel and coated with PEMA, PEMA-hydroxyapatite (HA) and PEMA-SiO_2 films. Films were deposited from pure 10 g L^{-1} PEMA solutions without additives and with 10 g L^{-1} HA or 10 g L^{-1} PEMA.

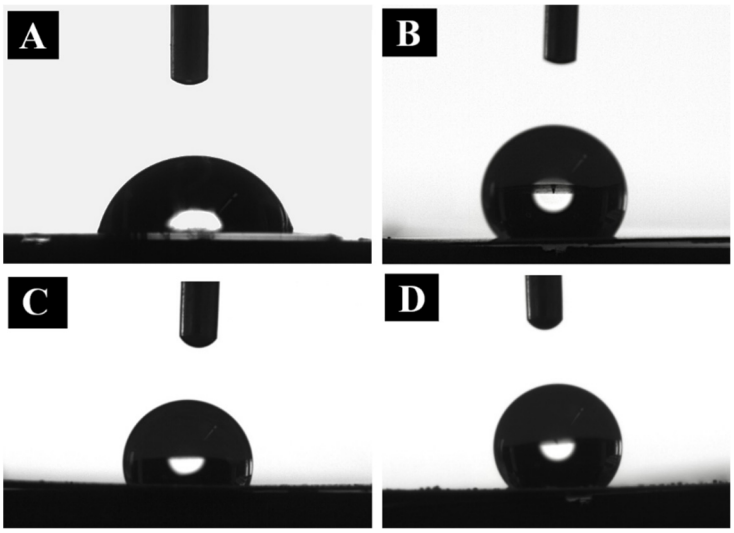

Figure S2. Water droplet contact angle measurements for (A) uncoated stainless steel, and (B-D) containing as-deposited films, prepared from (B) 10 gL^{-1} PEMA solution, (C) 10 gL^{-1} PEMA solution, containing and 10 gL^{-1} HA, and (D) 10 gL^{-1} PEMA solution, containing 10 gL^{-1} SiO_2 .

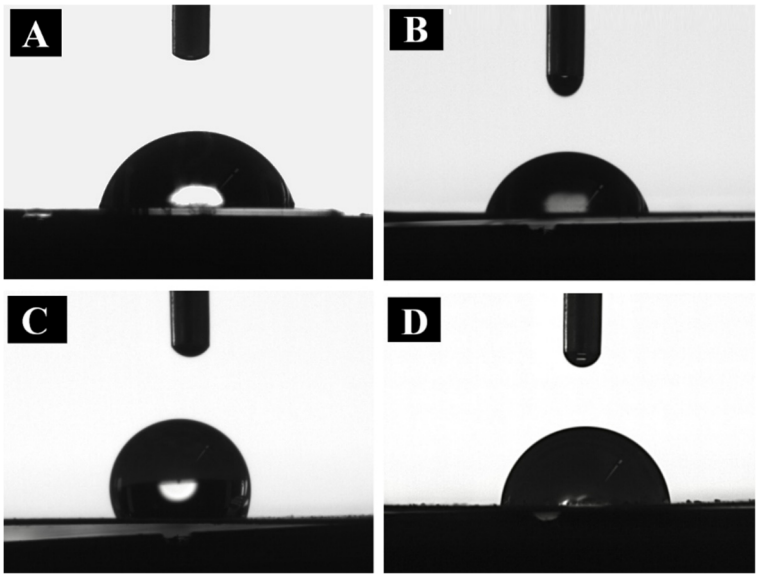

Figure S3: Water droplet contact angle measurements for (A) uncoated stainless steel, and (B-D) containing annealed films, prepared from (B) 10 gL^{-1} PEMA solution, (C) 10 gL^{-1} PEMA solution, containing and 10 gL^{-1} HA, and (D) 10 gL^{-1} PEMA solution, containing 10 gL^{-1} SiO_2.

Table S1. Water droplet contact angle (deg.) data (average for 3 measurements).

Uncoated stainless steel	Coated stainless steel					
	As-deposited films			Annealed films		
	PEMA	PEMA-HA	PEMA-SiO_2	PEMA	PEMA-HA	PEMA-SiO_2
75.59	126.85	119.38	129.09	75.85	117.22	86.45

Water contact angle measurements were performed using the sessile drop method[1] with an OCA 35 device, combined with SCA 20 angle measurement software (Charlotte, North Carolina, 5 USA). The left and right angle of each droplet was measured immediately upon contact with the coating surface, and data was collected from three different locations to determine the average water contact angle.

1. Clifford, A.; D'Elia, A.; Deering, J.; Lee, B. E. J.; Grandfield, K.; Zhitomirsky, I. Electrochemical Fabrication and Characterization of Pectin Hydrogel Composite Materials for Bone Tissue Repair. *ACS Applied Polymer Materials* **2020,** 2, 3390-3396.