Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B

Biodegradable polymer-lipid monolayers as templates for calcium phosphate mineralization

Supporting Information

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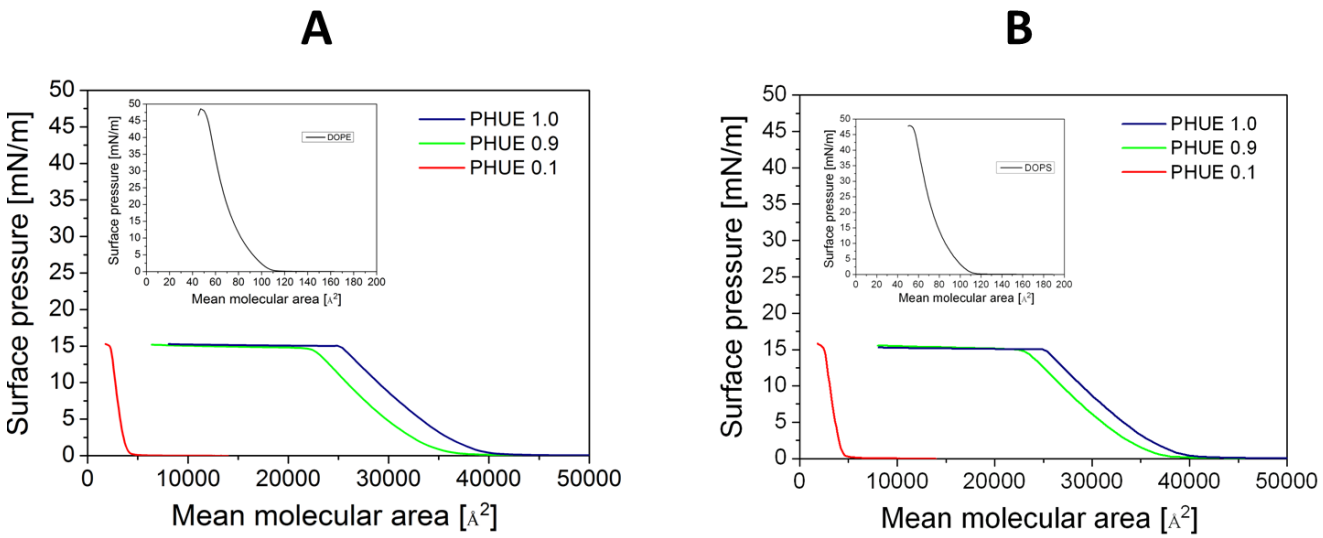

Fig. S1 π-A isotherms from PHUE-DOPE (A) and PHUE-DOPS (B) mixed films

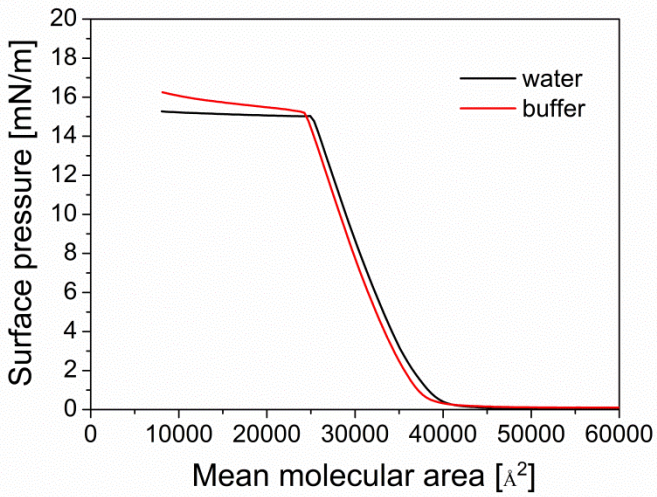

Fig. S2 π-A isotherms from PHUE on water and buffer (HEPES with Ca^{2+}, 2 mM, pH≈7.5)

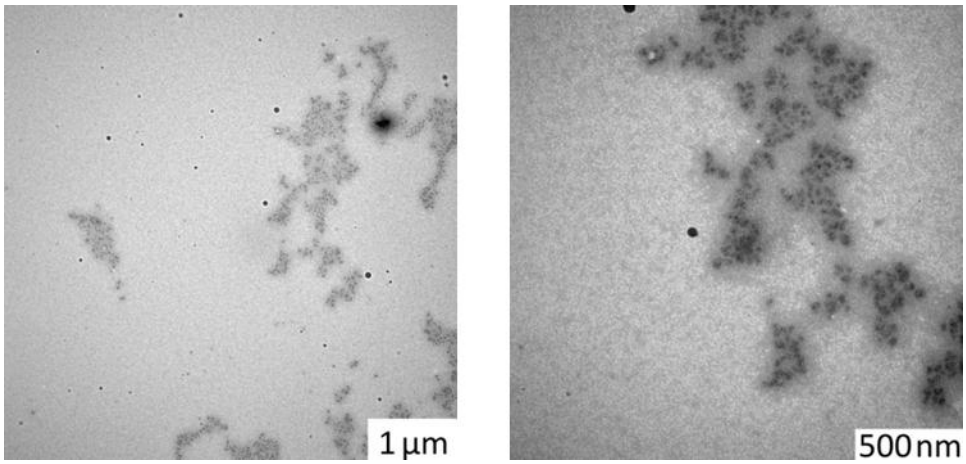

Fig. S3 TEM images of calcium phosphate grown without a PHUE film

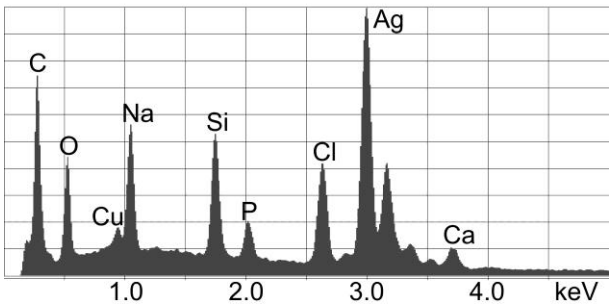

Fig. S4 EDX spectrum of crystals grown in standard conditions (2 mM, 1 h) beneath PHUE-DOPE (0.9 : 0.1) films

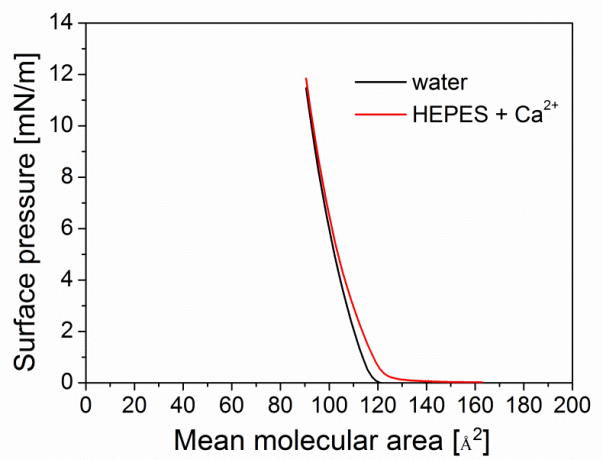

Fig. S5 π-A isotherms from DOPS mixed films recorded on water and HEPES with Ca^{2+} ions

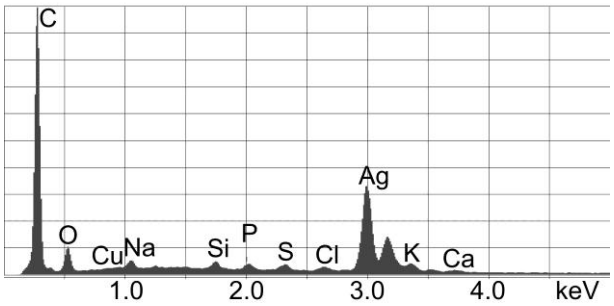

Fig. S6 EDX spectrum of crystals grown in standard conditions (2 mM, 1 h) beneath PHUE-DOPS (0.1 : 0.9) films

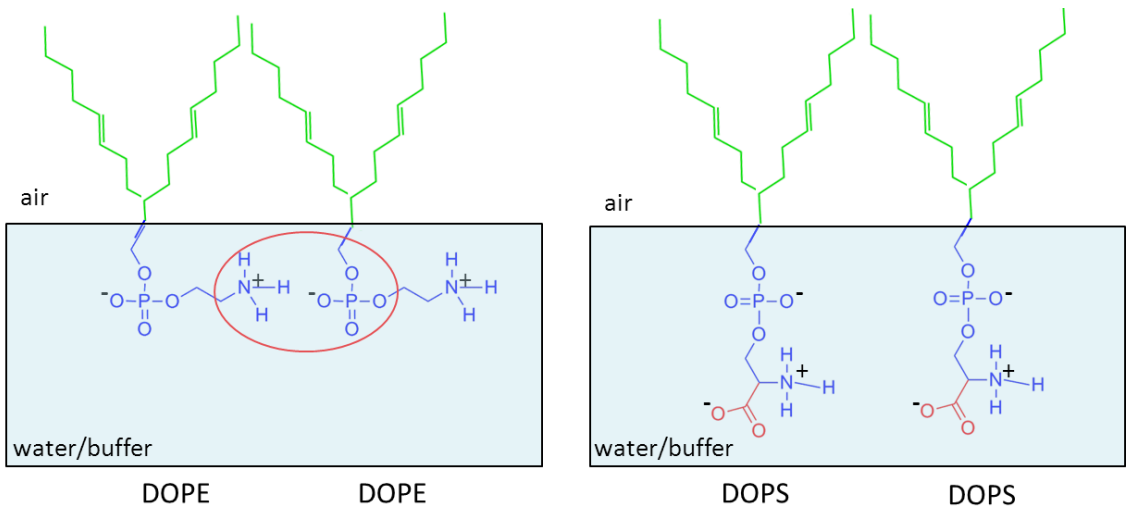

Fig. S7 Schematic representation of DOPE and DOPS organization at the air-water interface. Red contour indicates groups involved in charge neutralization between DOPE molecules

Table 1 The ΔG^{exc}, interaction parameter (α) and interaction energy (*Δh*) for PHUE-lipid mixed films

X_{PHUE}	ΔG^{exc} [kJ/mol]	α	*Δh* [kJ/mol]
PHUE : DOPE			
0.9	-32.10	-146.50	-59.45
0.1	-21.39	-97.62	-39.61
PHUE : DOPS			
0.9	43.18	197.04	79.96
0.1	3.59	16.39	6.65

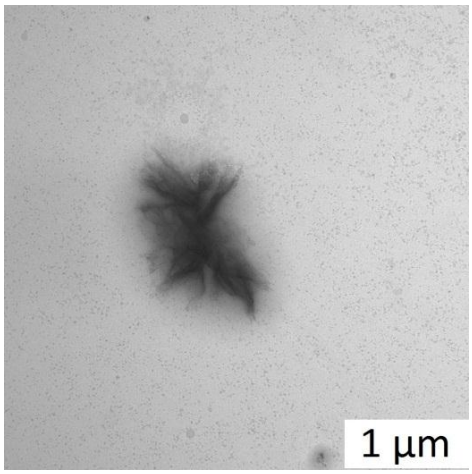

Fig. S8 TEM image of calcium phosphate grown beneath PHUE-DOPS (0.9 : 0.1) films