

Controlled wettability, same chemistry: Biological activity of plasma-polymerized coatings

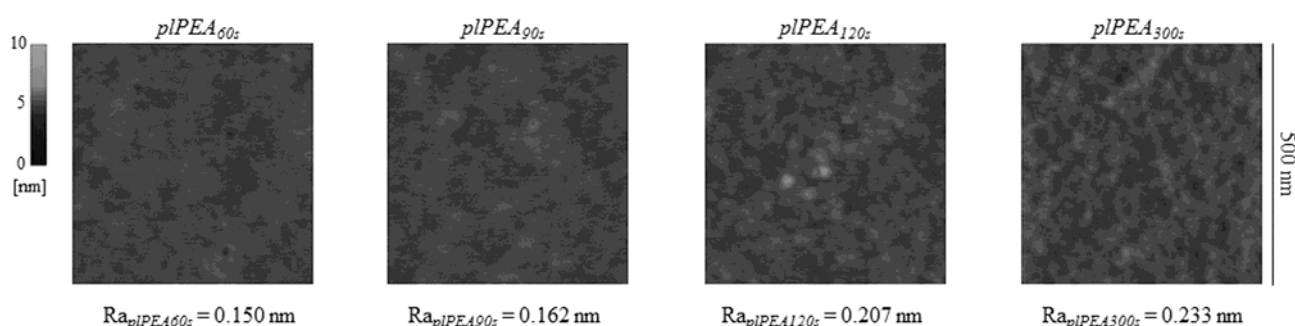
Marco Cantini,^{*a,b} Patricia Rico,^{a,c} David Moratal^a and Manuel Salmerón-Sánchez^{*a,c}

^a Center for Biomaterials and Tissue Engineering, Universidad Politécnica de Valencia, Valencia 46022, Spain. E-mail: marco.l.cantini@mail.polimi.it; masalsan@fis.upv.es

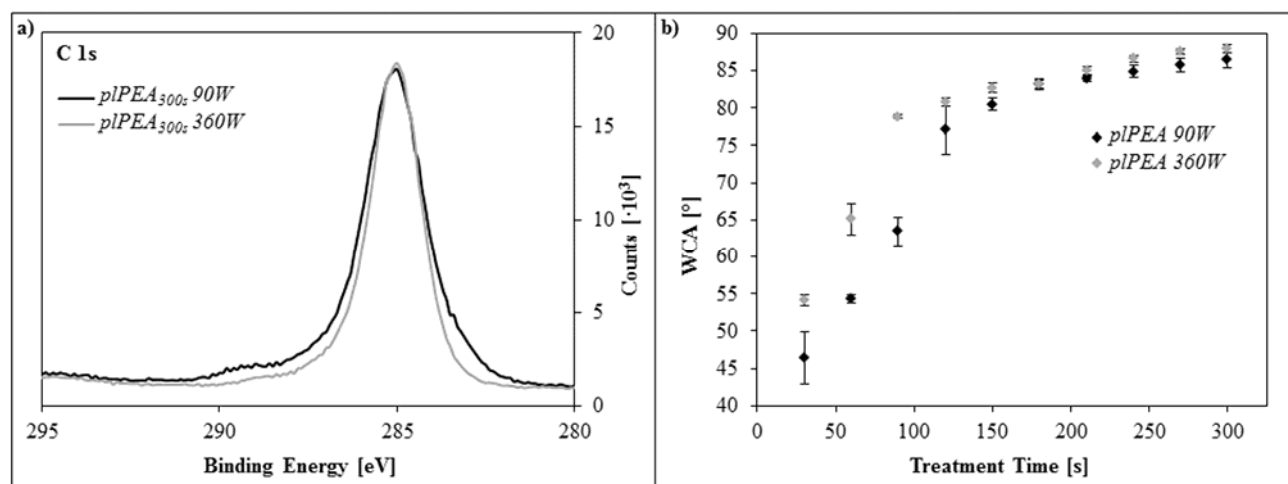
^b Institute for Bioengineering of Catalonia, Barcelona 08028, Spain

^c CIBER de Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN), Valencia46022, Spain

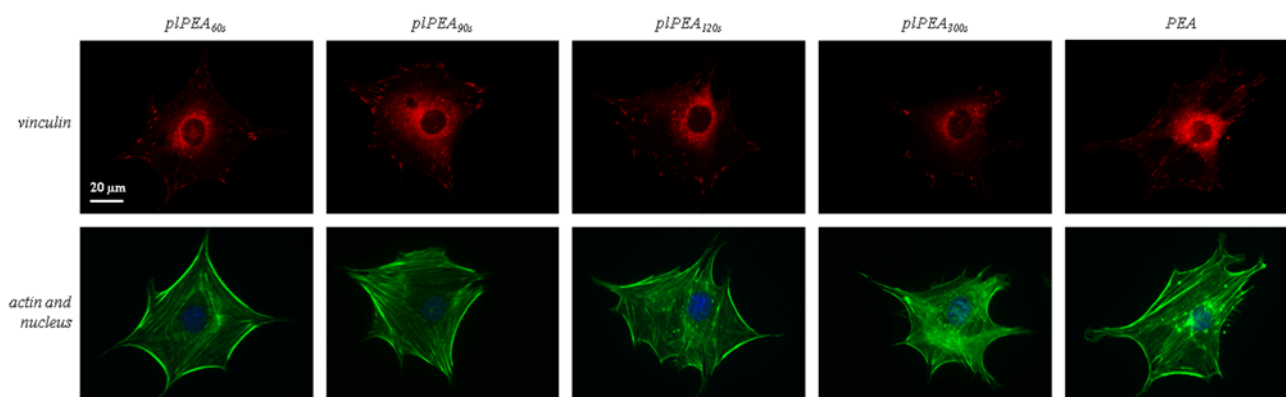
ELECTRONIC SUPPLEMENTARY INFORMATION



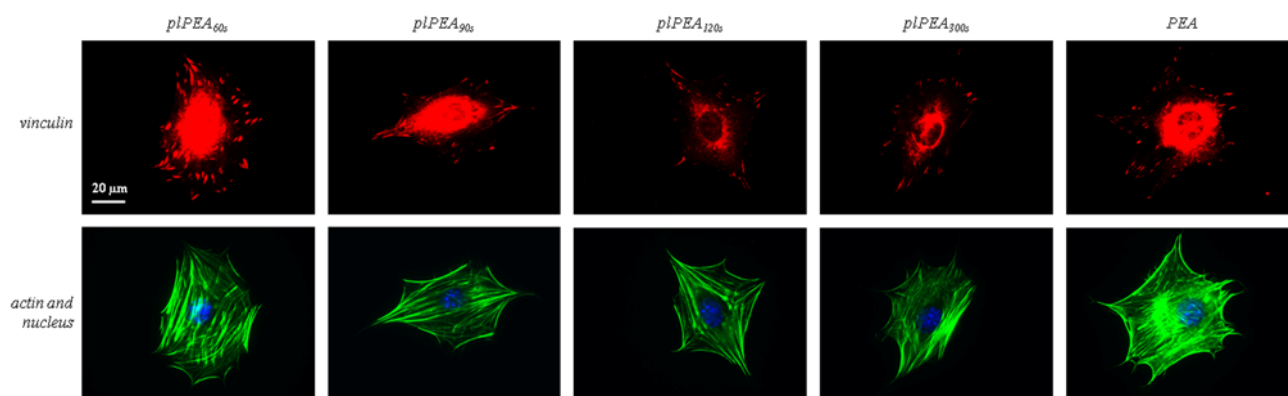
Supplementary Figure 1. Surface of the plasma-polymerized coatings as observed via the AFM height signal, with indication of mean roughness (Ra), proving their smoothness and uniformity independently of the duration of the plasma discharge.



Supplementary Figure 2. a) XPS spectrum in the C 1s region of plasma-polymerized PEA with different power (90 and 360 W) for a treatment time of 300s. b) Water Contact Angle (WCA) measurements after treatment with plasma of ethyl acrylate (EA) at increasing times with two different powers (90 and 360 W).



Supplementary Figure 3. Focal adhesion protein vinculin (first row), actin cytoskeleton and nuclei (second row) of MC3T3-E1 osteoblast-like cells after 2h of culture on plasma-polymerized PEA (treatment times of 60 s, 90 s, 120 s, and 300 s) and on spin-coated PEA, after fibronectin adsorption from a $20\mu\text{g mL}^{-1}$ solution in DPBS for 1h.



Supplementary Figure 4. Focal adhesion protein vinculin (first row), actin cytoskeleton and nuclei (second row) of MC3T3-E1 osteoblast-like cells after 2h of culture on plasma-polymerized PEA (treatment times of 60 s, 90 s, 120 s, and 300 s) and on spin-coated PEA, with a surface density of fibronectin $\sim 100\text{ ng cm}^{-2}$.