

Supporting Information

Surface Modification of Smooth Poly(L-lactic acid) Films for Gelatin Immobilization

Hai Li, Yun Xia, Jumiati Wu, Qiyuan He, Xiaozhu Zhou, Gang Lu, Lei Shang, Freddy Boey, Subbu S. Venkatraman, and Hua Zhang*

School of Materials Science and Engineering, Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798, Singapore

*Author to whom correspondence should be addressed. Tel: +65-67905175. Fax: +65-67909081. E-mail: h Zhang@ntu.edu.sg, h Zhang166@yahoo.com; Website: <http://www.ntu.edu.sg/home/h Zhang/>.

The surface composition of PLLA film, APTES-PLLA, GOPS-PLLA, and gelatin-GOPS-PLLA film were analyzed by XPS (Kratos AXIS Ultra) with monochromatic Al K α (1486.71 eV) X-ray radiation (15 kV and 10 mA).

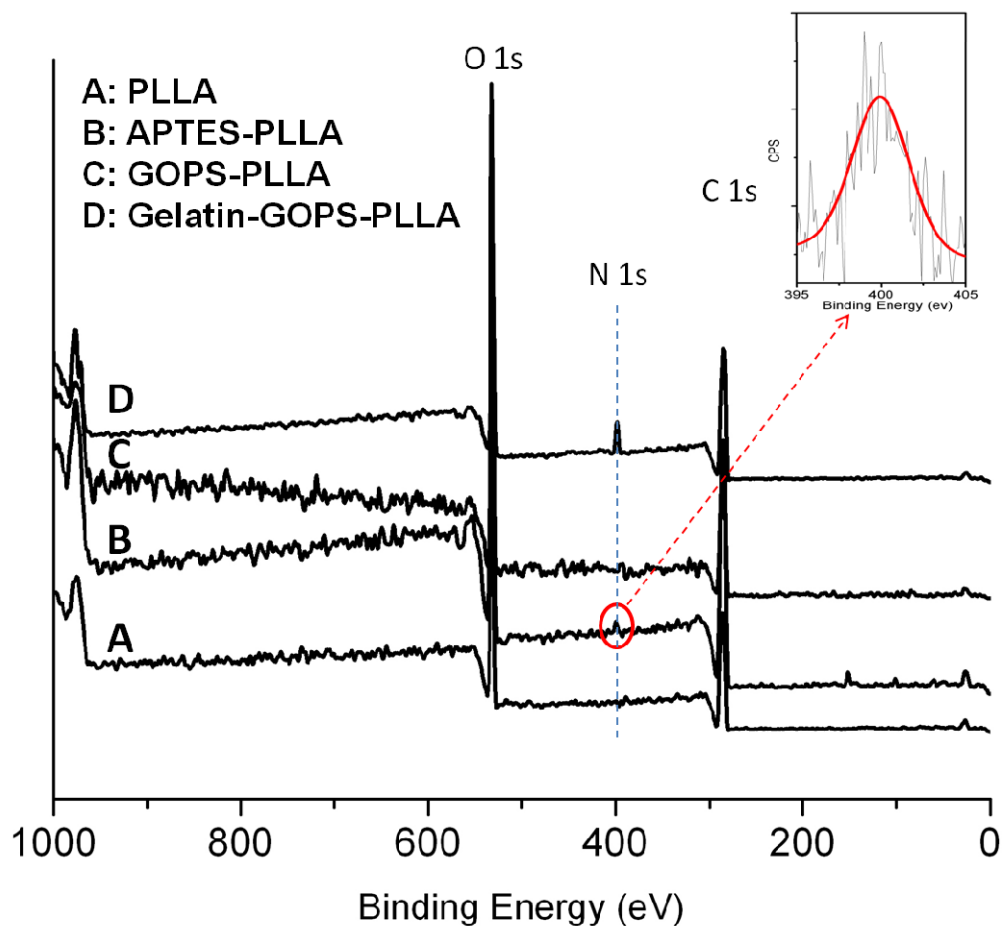


Figure S1. XPS spectra of (A) PLLA, (B) APTES-PLLA, (C) GOPS-PLLA, and (D) gelatin-GOPS-PLLA films. APTES only has one nitrogen atom while gelatin has many nitrogen atoms, thus the N1s peak of APTES-PLLA is much weaker than N1s peak of gelatin-GOPS-PLLA. Inset: Magnified image of N1s peak of APTES-PLLA.

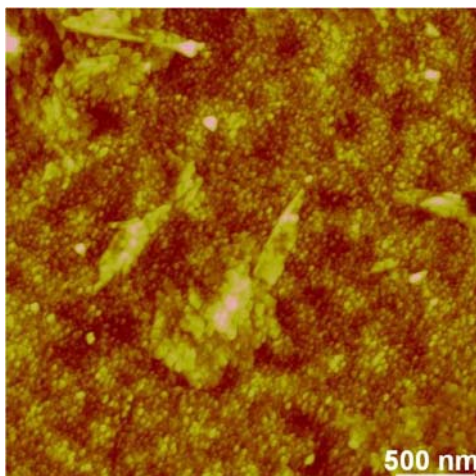


Figure S2. AFM image of oxygen plasma-treated PLLA film after being immersed into ethanol for 15 min. The Z scale is 50 nm. The surface roughness (RMS value) of this film is 4.9 nm in $3 \times 3 \mu\text{m}^2$.