Electronic Supplementary Material (ESI) for Biomaterials Science.

Electronic Supporting information

Self-assembled phosphate-polyamine networks as biocompatible supramolecular platforms to modulate cell adhesion

Nicolás E. Muzzio, Miguel A. Pasquale, Waldemar A. Marmisollé, Catalina von Bilderling, M. Lorena Cortez, Lía I. Pietrasanta, Omar Azzaroni

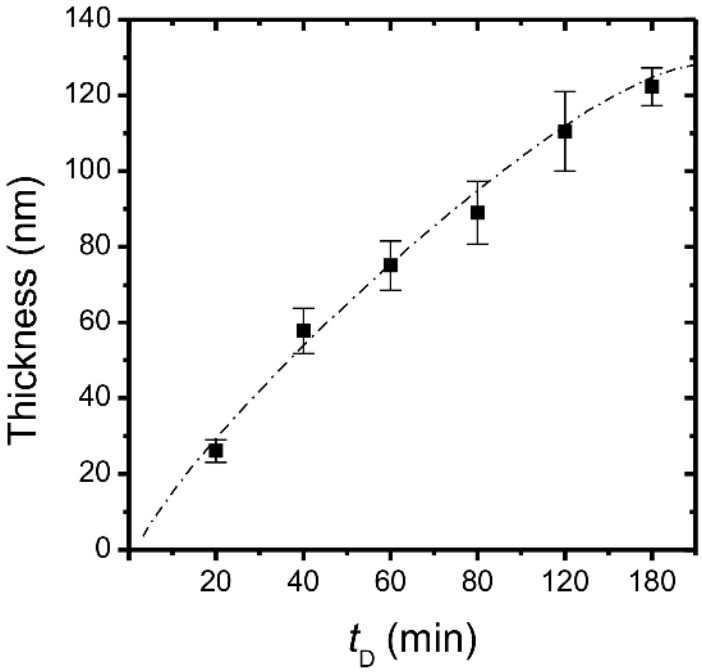

Figure S1. Pi/PAH coating thickness versus deposition time (t_D). The coating thickness was measured by atomic force microscopy (AFM). For this purpose, the depth of a thin linear furrow scraped in the samples was measured.

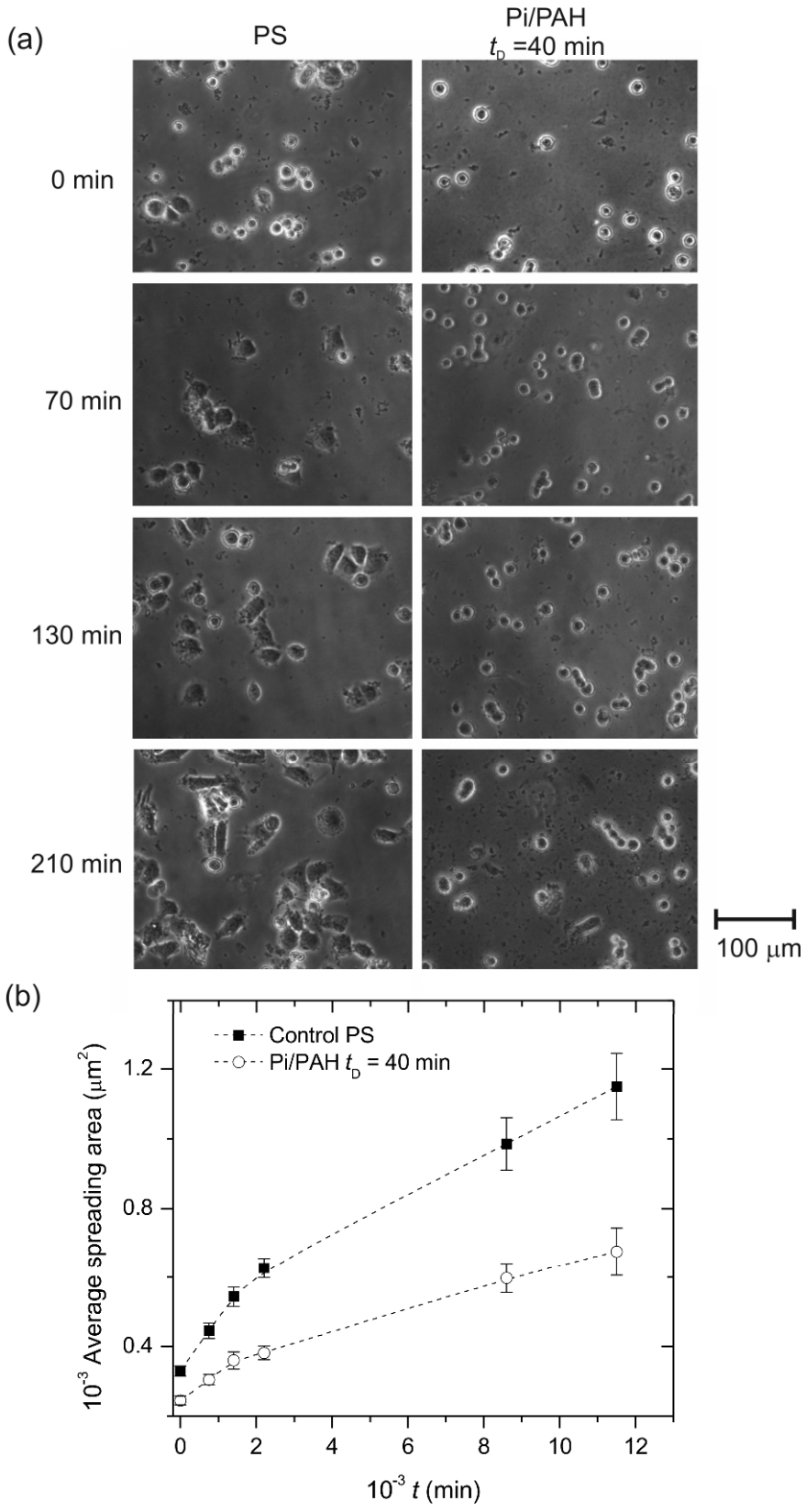

Figure S2a. Evolution of HeLa cell spreading area at short culture times. The starting time was 2 h after seeding. (a) Typical phase contrast images taken at the times indicated in the figure. (b) Average cell spreading area versus culture time.

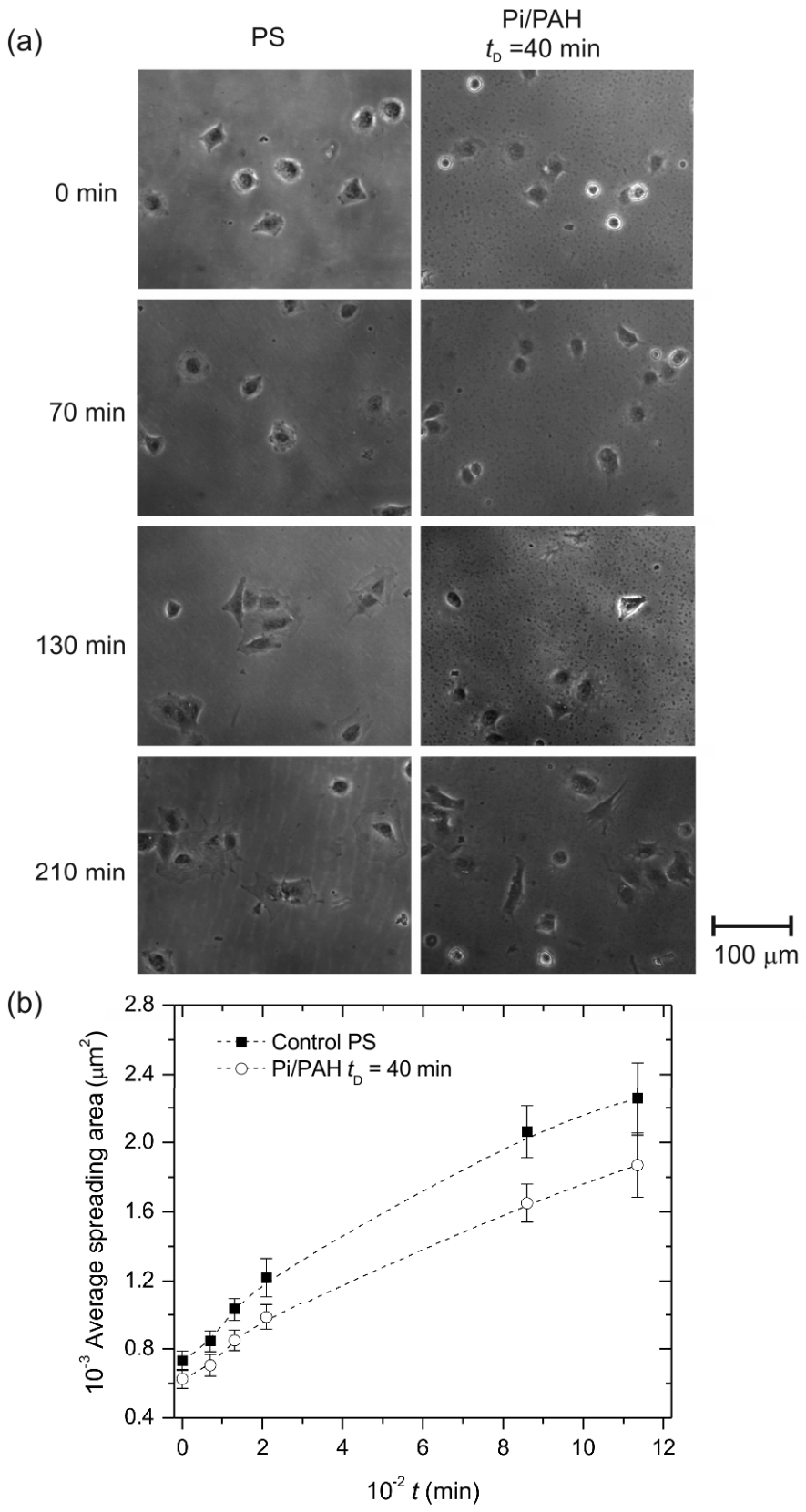

Figure S2b. Evolution of C2C12 cell spreading area at short culture times. The starting time was 2 h after seeding. (a) Phase contrast images taken at the times indicated in the figure. (b) Average cell spreading area versus culture time.

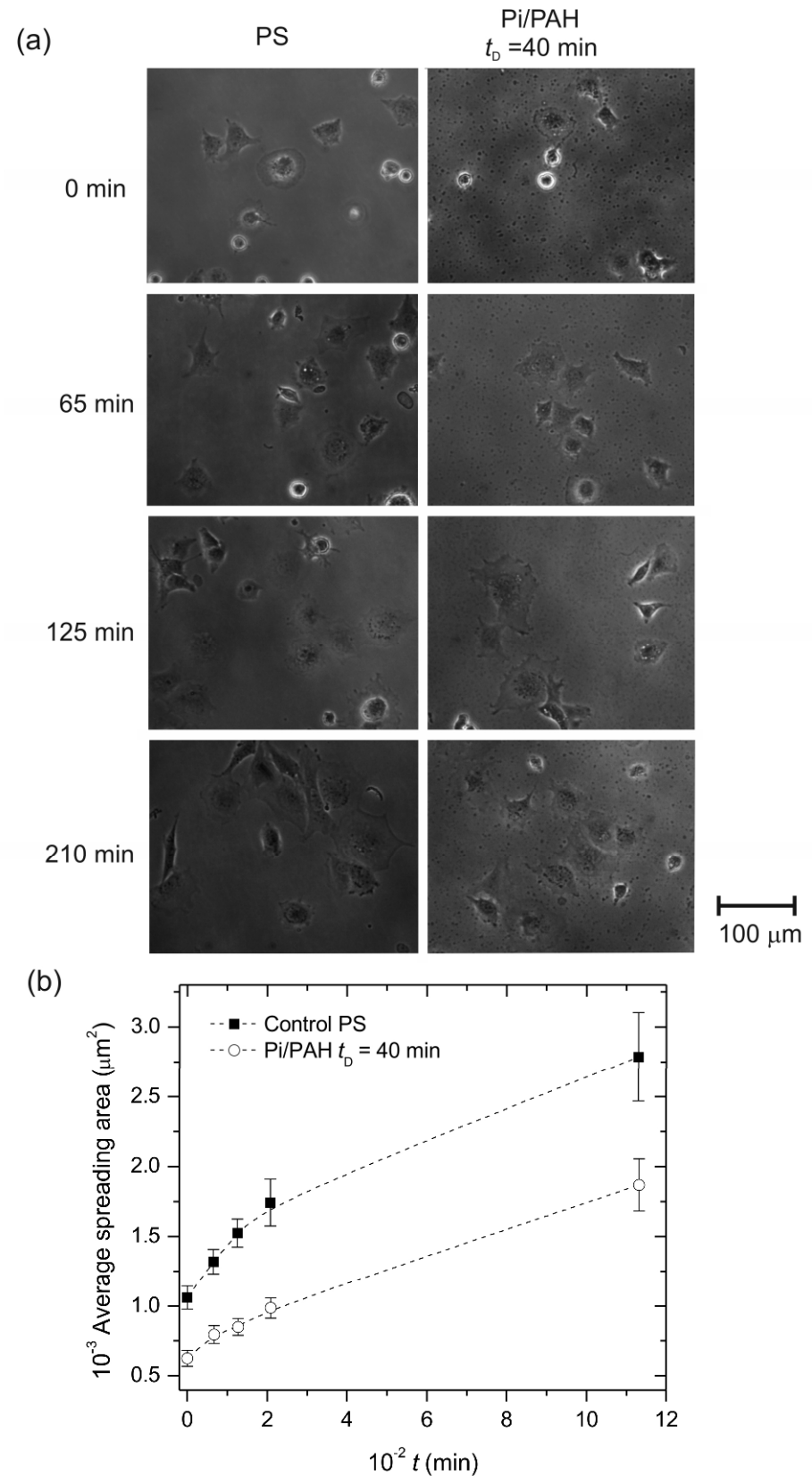

Figure S2c. Evolution of MC3T3 cell spreading area at short culture times. The starting time was 2 h after seeding. (a) Phase contrast images taken at the times indicated in the figure. (b) Average cell spreading area versus culture time.

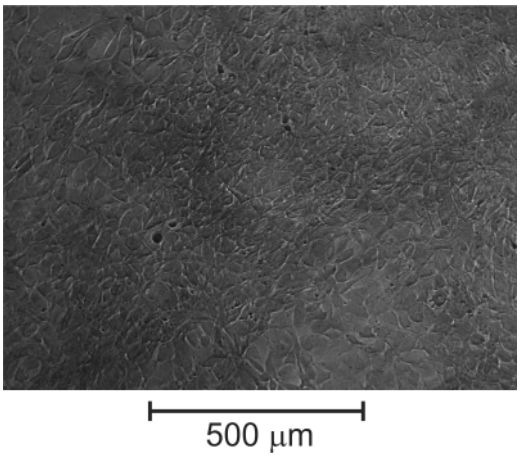

Figure S3. Phase contrast image of a MC3T3 culture grown for 20 days on Pi/PAH-coated substrate with t_D = 30 min. Culture conditions: alpha-MEM supplemented with 10% FBS. A compact monolayer of cells is distinguished.

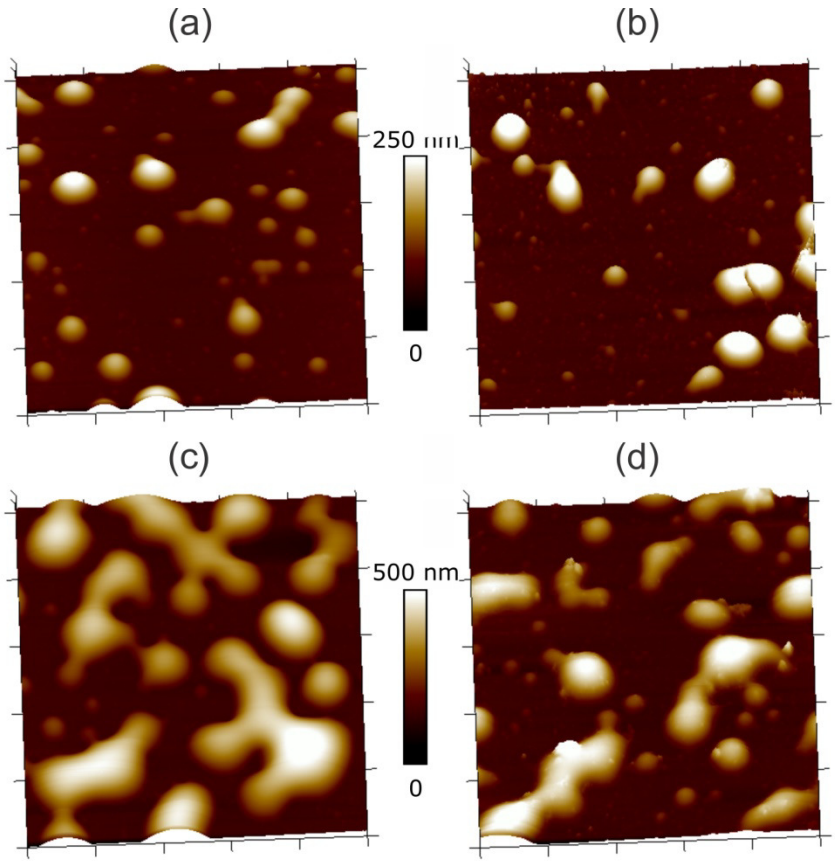

Figure S4. AFM peak force height images of freshly prepared and 4d-aged/4-day-aged Pi/PAH-coated substrates. Freshly prepared unannealed Pi/PAH-coated substrate with t_D = 40 min (a) and t_D = 120 min (c). Four-day-aged unannealed Pi/PAH-coated substrate with t_D = 40 min (b) and t_D = 120 min (d). All images are 25 x 25 μm^2 in size.

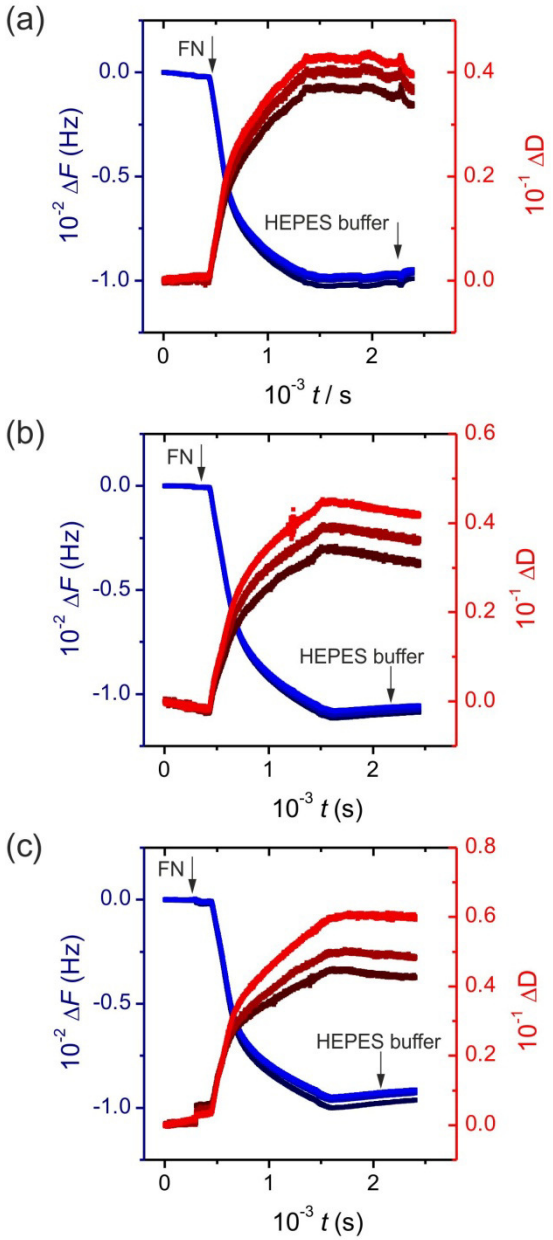

Figure S5. Frequency and dissipation changes as a function of the time for fibronectin adsorption from a 20 mg mL^{-1} solution in HEPES buffer, on (a) Pi/PAH-coated substrate with t_D = 40 min, (b) Pi/PAH-coated substrate with t_D = 120 min, and (c) annealed Pi/PAH-coated substrate with t_D = 120 min. Arrows indicates the time of insertion of each solution.