Lithographically-Fabricated HA-Incorporated PCL-Nanopatterned Patch for Tissue Engineering

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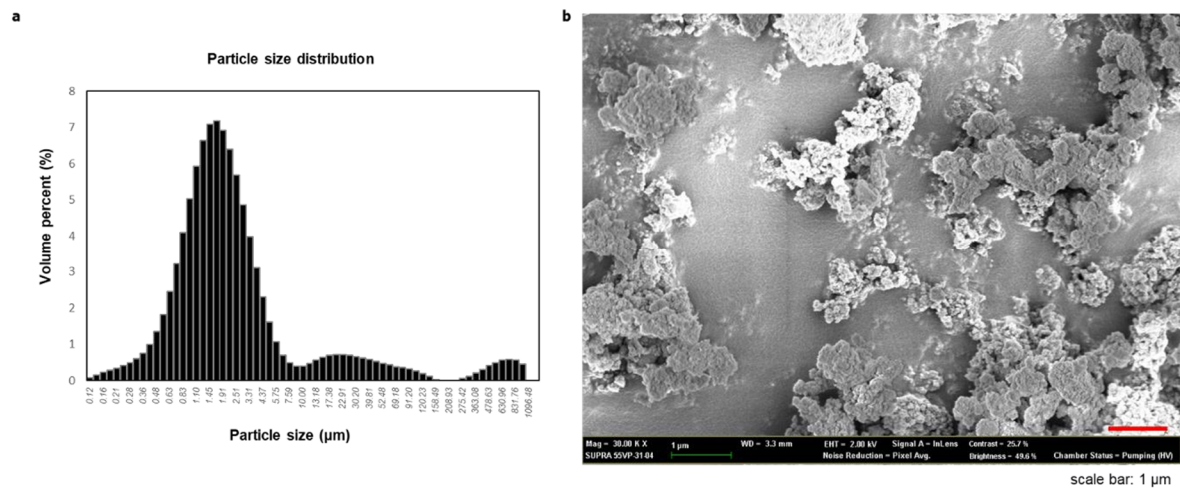
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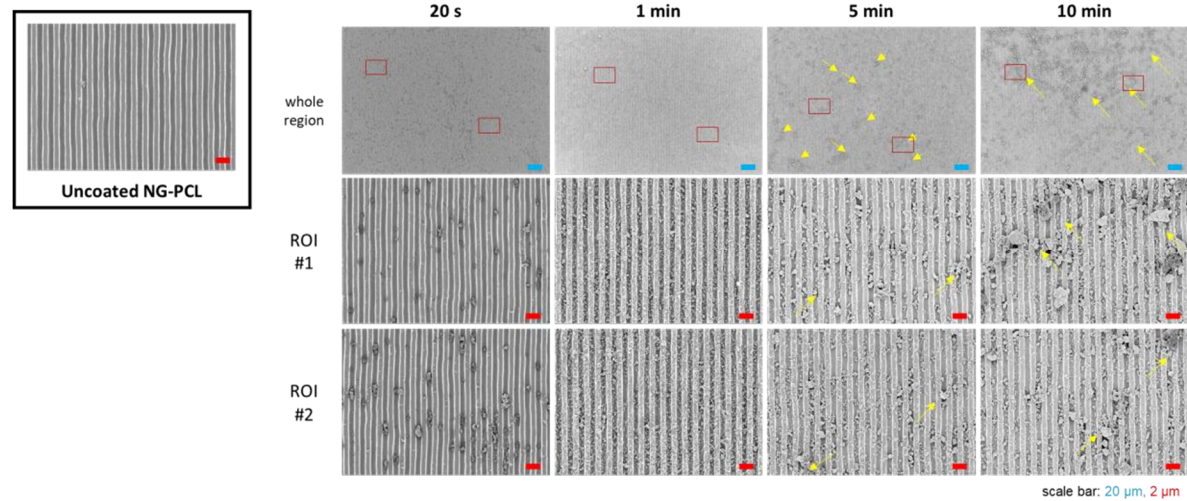
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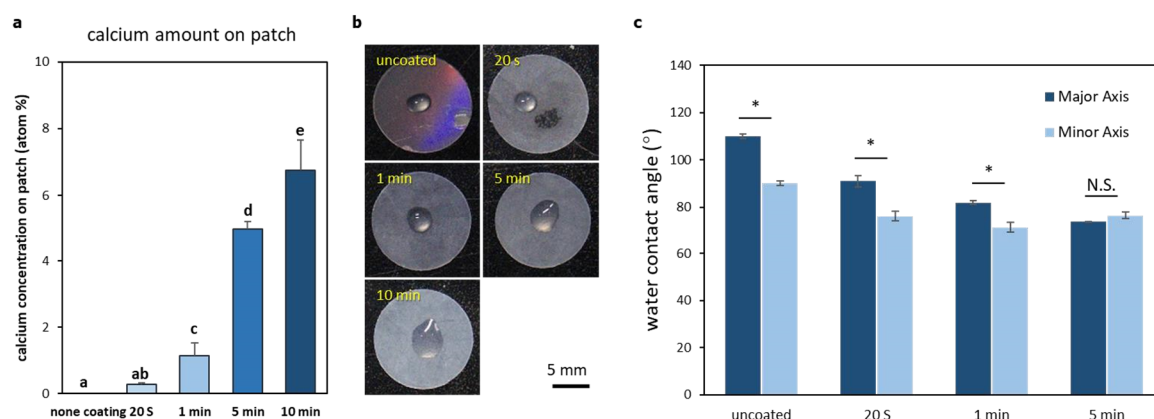National University, Sunchon, 57922, Republic of Korea.; uhun906@gmail.com (H.S.)

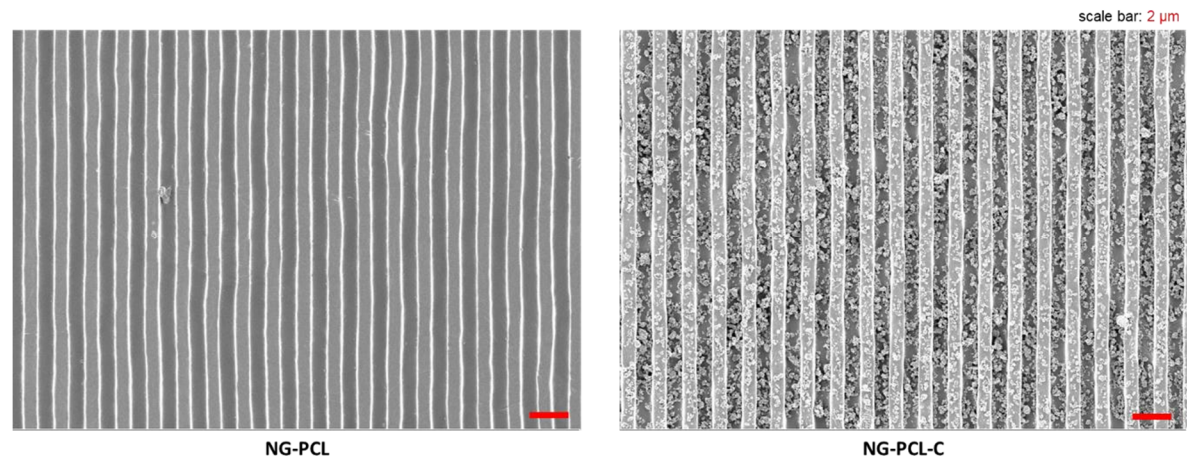***** Correspondence: uhun906@gmail.com (H.S.); rain2000@jnu.ac.kr (J.K.)

Figure S.1. Characterization of equine bone powders. (a) Size distribution of equine bone powders. (b) A representative FE-SEM image of equine bone powders used in this work.
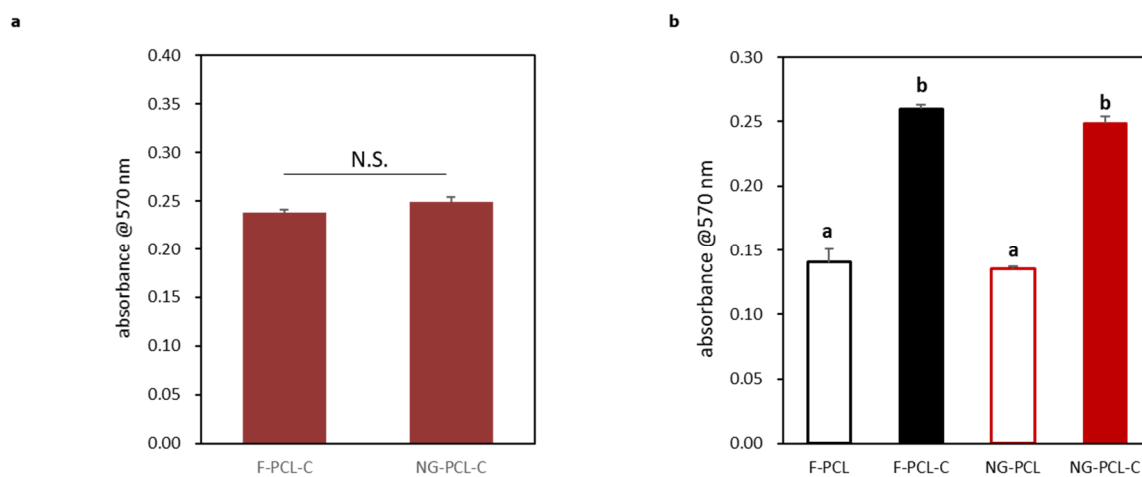
Figure S.2. Representative FE-SEM images of equine bone powders coated nanopatterned patches with coating conditions. Regions of interest (ROIs) indicate the magnification region of the whole region. (The red rectangular indicates the ROIs).

Figure S.3. Evaluation of coating conditions. (a) Measurements of calcium atom concentration on the patches through EDS. (n = 3, Bars with the same letter are not significantly different according to Duncan's multiple range test at 5% probability.) (b) the digital camera images of a water droplet on the coated NG- PCL with different concentrations; water droplet morphologies became more circular as increasing EBP coating concentration. (c) The water contact angle was gradually decreasing by increasing the EBP coating concentration. Furthermore, the difference between major and minor axis contact angle became decreasing by increasing EBPs coating concentrations.

Figure S.4. High-resoloution surface image of NG-PCL with or without equine bone powder coating.

Figure S.5. (a) The quantification data of EBP coating density of F-PCL-C and NG-PCL-C. The flat surface and nanogroove pattern had the same amount of EBP on their surfaces. (b) The graph indicated 101 that the ARS quantification assay of day 3 MC3T3 cell culture (cell confluent on patches). All ARS 102 quantification results had subtracted this value. (n = 5).