

Evaluation of Human Osteoblasts on NIPS Micro-Patterned PCL Carriers Containing Nanohydroxyapatite and Reduced Graphene Oxide Using PS μ M

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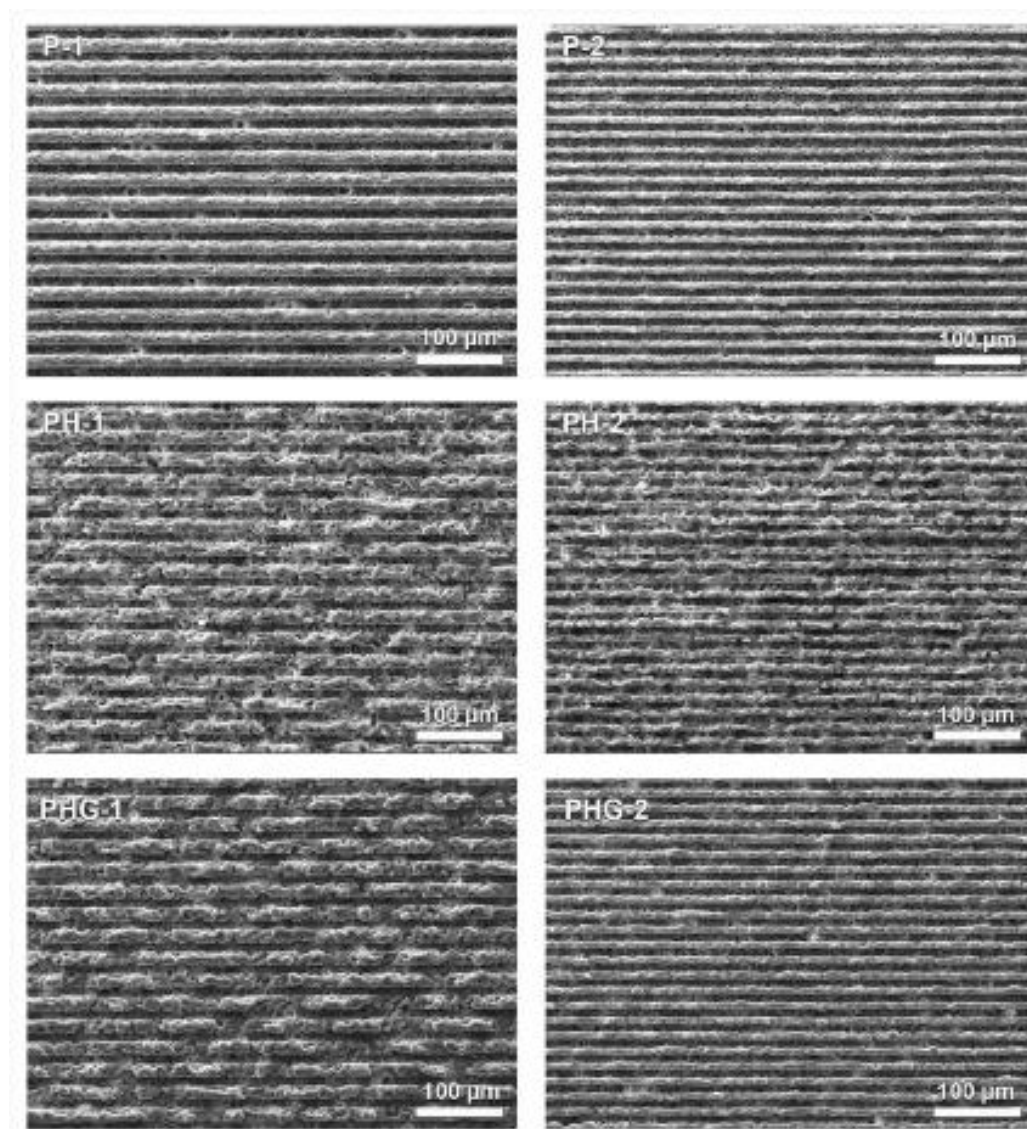


Figure S1. SEM micrographs of P, PH, PHG membranes fabricated by two different pattern dimensions. Silicon wafer pattern dimensions are; C: 20 μ m, R: 10 μ m, D: 20 μ m for pattern #1, and C: 10 μ m, R: 10 μ m, D: 20 μ m for pattern #2.

Table S1. Crystallization and melting temperatures and melting enthalpies calculated based on DSC cooling and secondary heating analysis

	P	PH	PHG
T_c (°C)	30.51	33.28	33.34
ΔH_c (J/g)	-54.422	-44.279	-49.815
T_m (°C)	56.22	57.91	56.91
ΔH_m (J/g)	57.431	44.085	49.999
χ_c (%)	41.1692	37.9225	43.02958565

Table S2. Temperature (in °C) values and ash residue amounts corresponding to 5% and 50% mass losses as a result of thermogram analysis.

Constructs	T (5%)	T (50%)	Residual (%)
P	376.73	406.15	2
PH	305.1	389.55	20
PHG	312.89	397.1	17

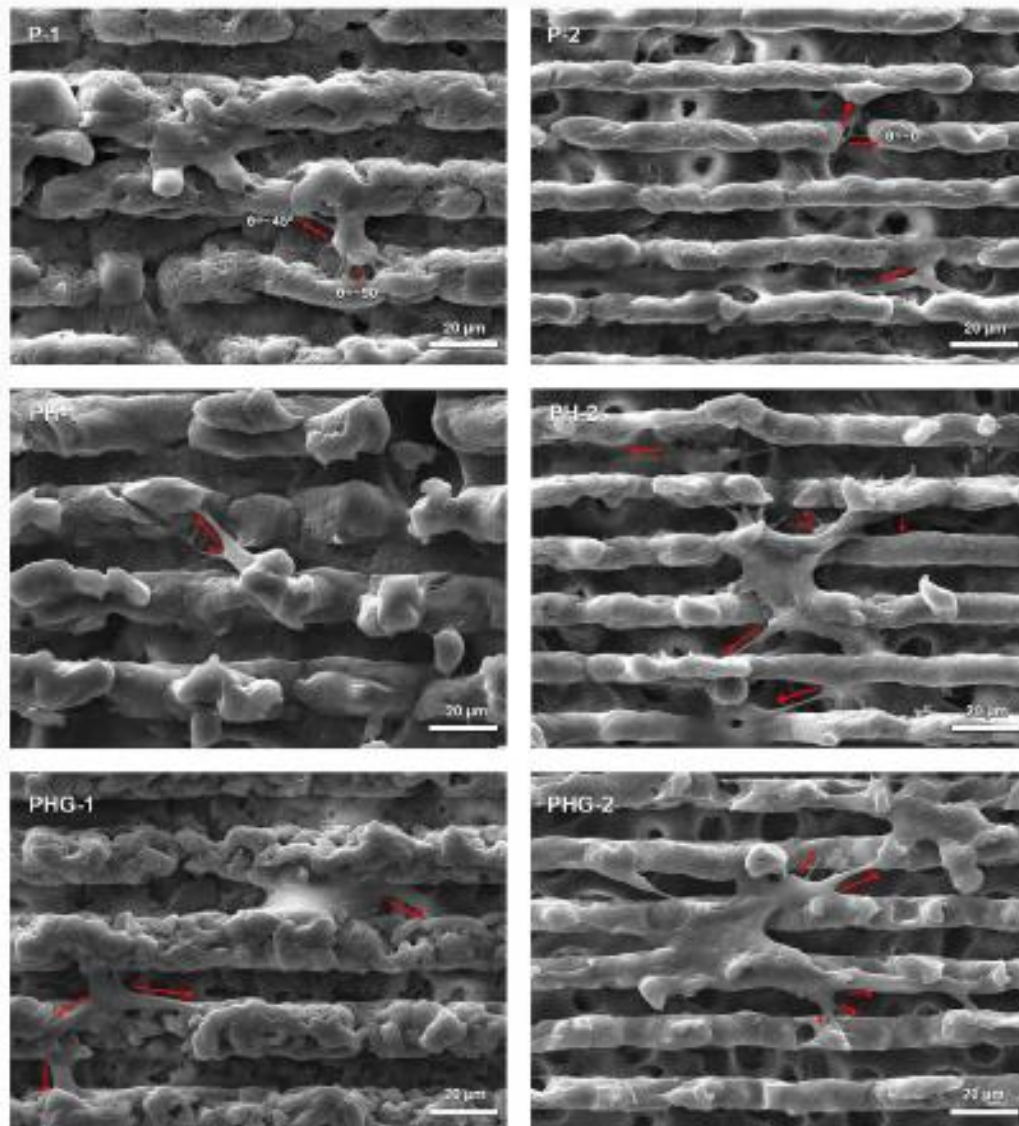


Figure S2. SEM micrographs demonstrating the orientation of human osteoblast cells with respect to groove direction on the first day of culture on P, PH, PHG membranes with different pattern types (1 and 2). Although the cell proliferation levels may differ, similar cell orientations were observed in different membrane types. The orientation angles of the cells with respect to groove direction are between 0° and 90°. When the average orientation angle is around 45° or higher, cells spread lateral direction with respect to groove. .