Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Simulation of the first step of the sinusoidal surface fabrication process based

on the creation of a 3D preform through mask electrochemical micro machining.

File Name: Supplementary Movie 2

Description: Simulation of the second step of the sinusoidal surface fabrication process that

consists in the smoothing of the preform by mass transport limited dissolution.

File Name: Supplementary Movie 3

Description: Tracking of mouse mesenchymal stem cells migrating on a S3/30 sinusoidal surface. The topography is represented by a blue (concave) to yellow (convex) gradient.

File Name: Supplementary Movie 4

Description: Segmentation and tracking of mouse mesenchymal stem cells migrating on a S3/30 sinusoidal surface. The nucleus is coloured in red and the cytosol in white. The topography is represented by a blue (concave) to yellow (convex) gradient.

File Name: Supplementary Movie 5

Description: Tracking of a mouse mesenchymal stem cell migrating on a S3/30 sinusoidal surface. The cell divide during the time lapse (at time=500min). The topography is represented by a blue (concave) to yellow (convex) gradient.

File Name: Supplementary Movie 6

Description: Mouse mesenchymal stem cells migrating on a \$10/100 sinusoidal surface 30 minutes after inoculation. The topography is represented by a blue (concave) to yellow (convex) gradient.

File Name: Supplementary Movie 7

Description: Mouse mesenchymal stem cells migrating on a S10/100 sinusoidal surface 16h after seeding. The topography is represented by a blue (concave) to yellow (convex) gradient.