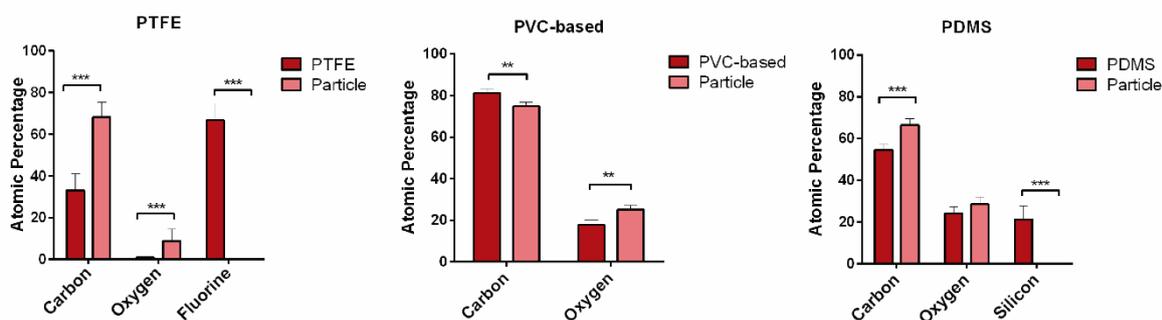
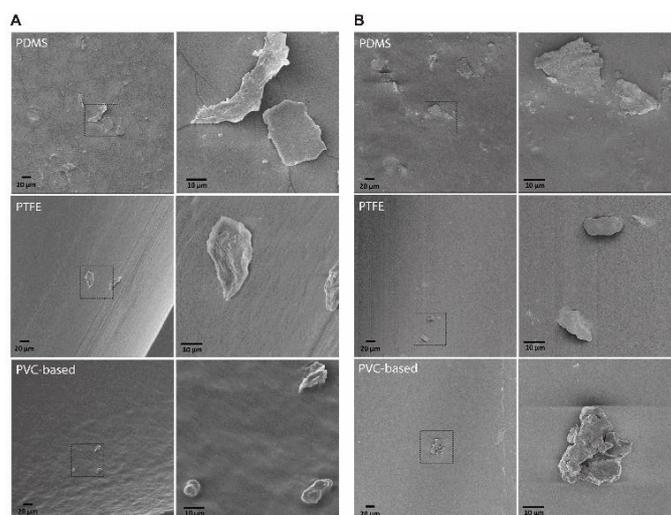
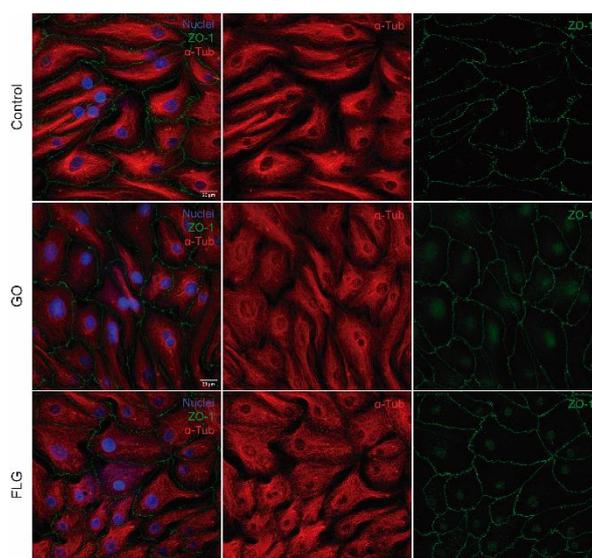


Supplementary information



Supplementary 2. Elemental analysis of GO particles on PTFE, PVC-based tubing and PDMS devices by EDS. Column graphs show the results obtained for the main elements present in the samples (mean values ± SD, n = 7, p-value: **<0.01, ***<0.001).



Supplementary 3. Effect of GO and FLG on RPTEC/TERT1 cells under static conditions. Immunostaining for α-tubulin (red), ZO-1 (green), and nuclei (blue). Scale bar 20 μm.

Video 1. Recreating a tubule-like structure inside a microfluidic device. Confocal microscopy reconstruction shows the integrity of the entire RPTEC/TERT1 cell monolayer after perfusing at a high flow of 0.48 dynes/cm² for 72 hours.
