

Covalent decoration of cortical membranes with graphene oxide as a substrate for Dental Pulp Stem cells

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SUPPORTING INFORMATION

S1. Morphology of DSPCs

S2. Original AFM data for the mechanical studies

S1. Morphology of DPSCs

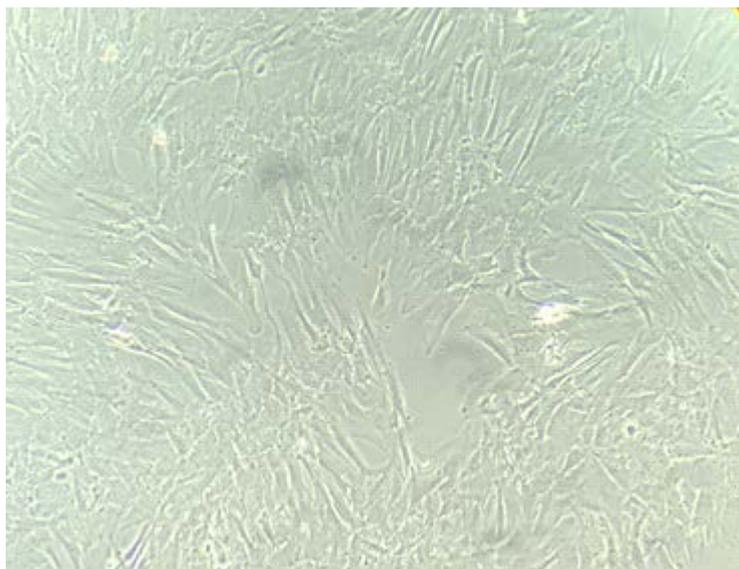


Figure S1. DPSCs observed with a light microscope before detachment and seeding for osteoblastic differentiation. Magnification 10 \times .

S2. Original AFM data used for the mechanical studies

S2.1 Original AFM micrograph of pure Lamina used for the mechanical studies

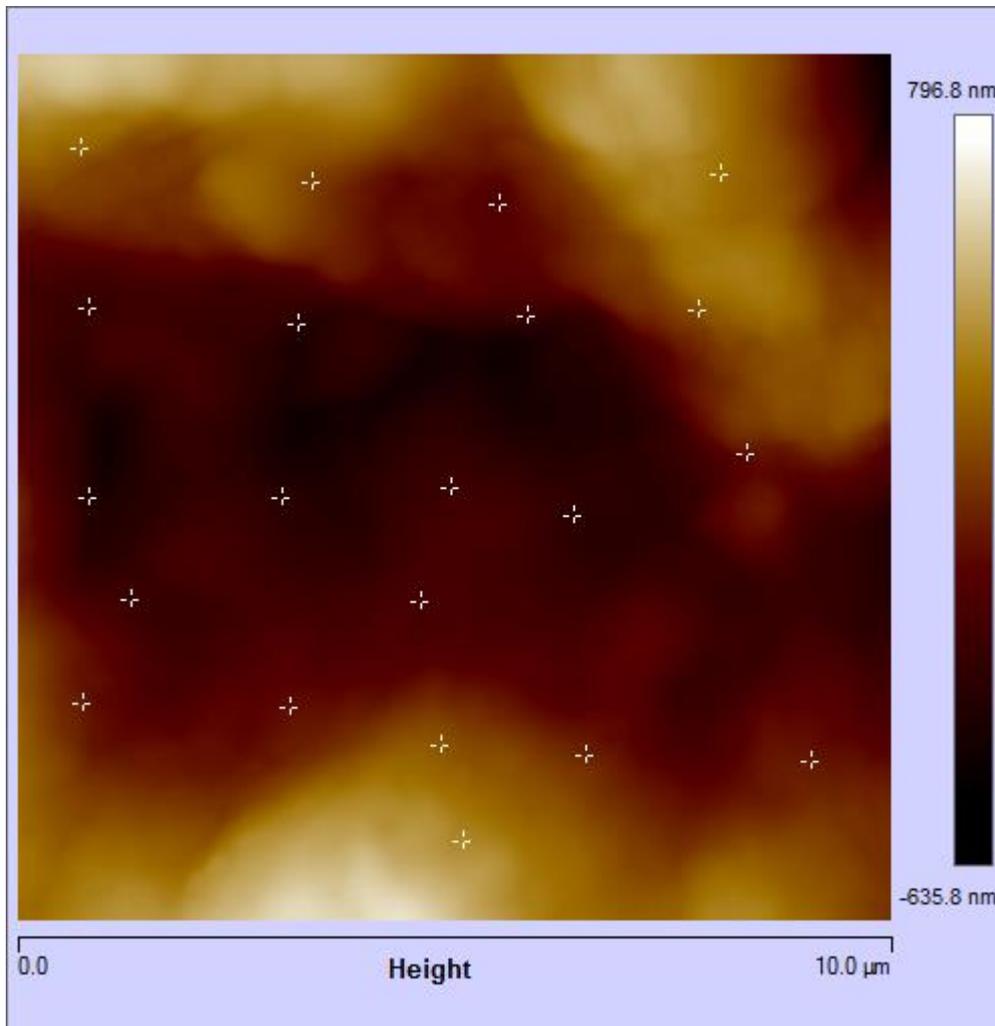


Figure S2. AFM micrograph of topographical height of pure Lamina indicating the points where the force curve has been extracted and used for the calculation of the Young's Modulus.

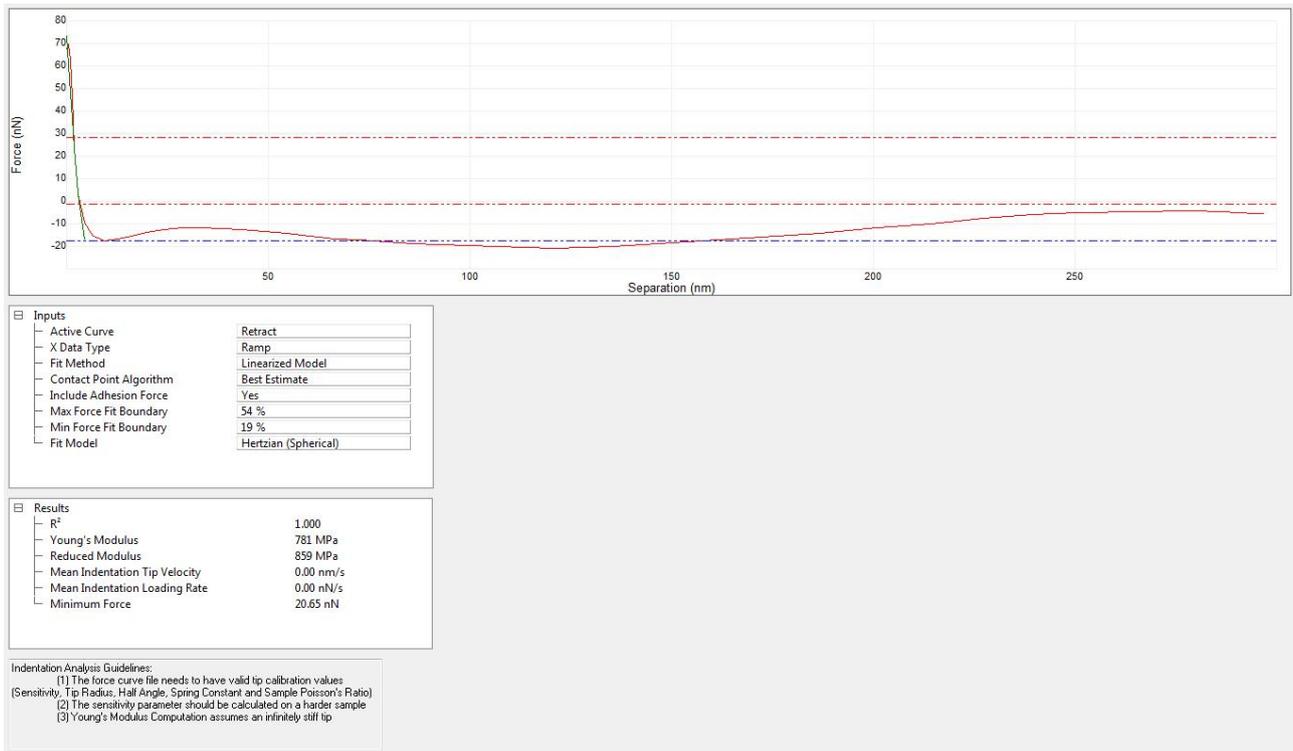


Figure S3. Representative Force Curve and corresponding Young's modulus calculation for pure Lamina. The final value is the average value among 21 data.

S2.2 Original AFM micrograph of Lamina enriched with 5 $\mu\text{g/mL}$ GO used for the mechanical studies

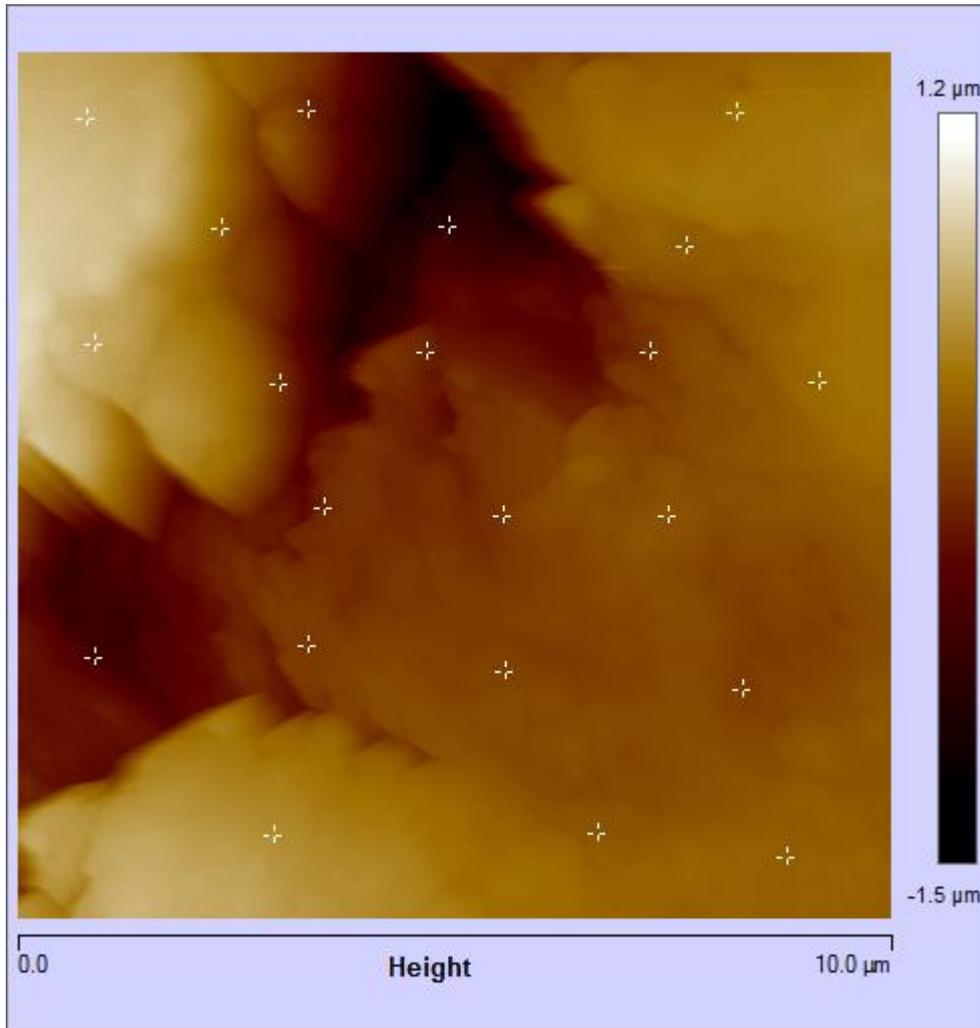


Figure S4. AFM micrograph of topographical height of Lamina enriched with 5 $\mu\text{g/mL}$ GO indicating the points where the force curve has been extracted and used for the calculation of the Young's Modulus.

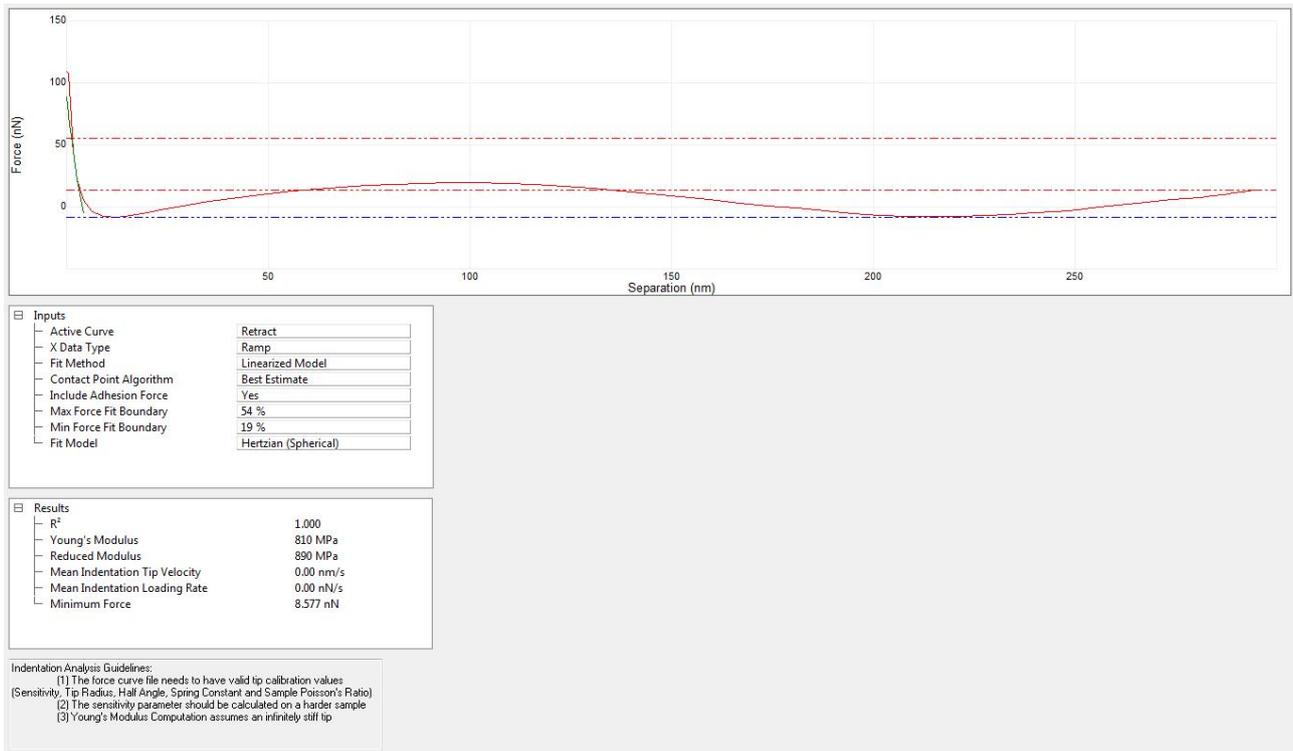


Figure S5. Representative Force Curve and corresponding Young's modulus calculation for Lamina enriched with 5 $\mu\text{g}/\text{mL}$ GO. The final value is the average value among 21 data.

S2.3 Original AFM micrograph of Lamina enriched with 10 $\mu\text{g}/\text{mL}$ GO used for the mechanical studies

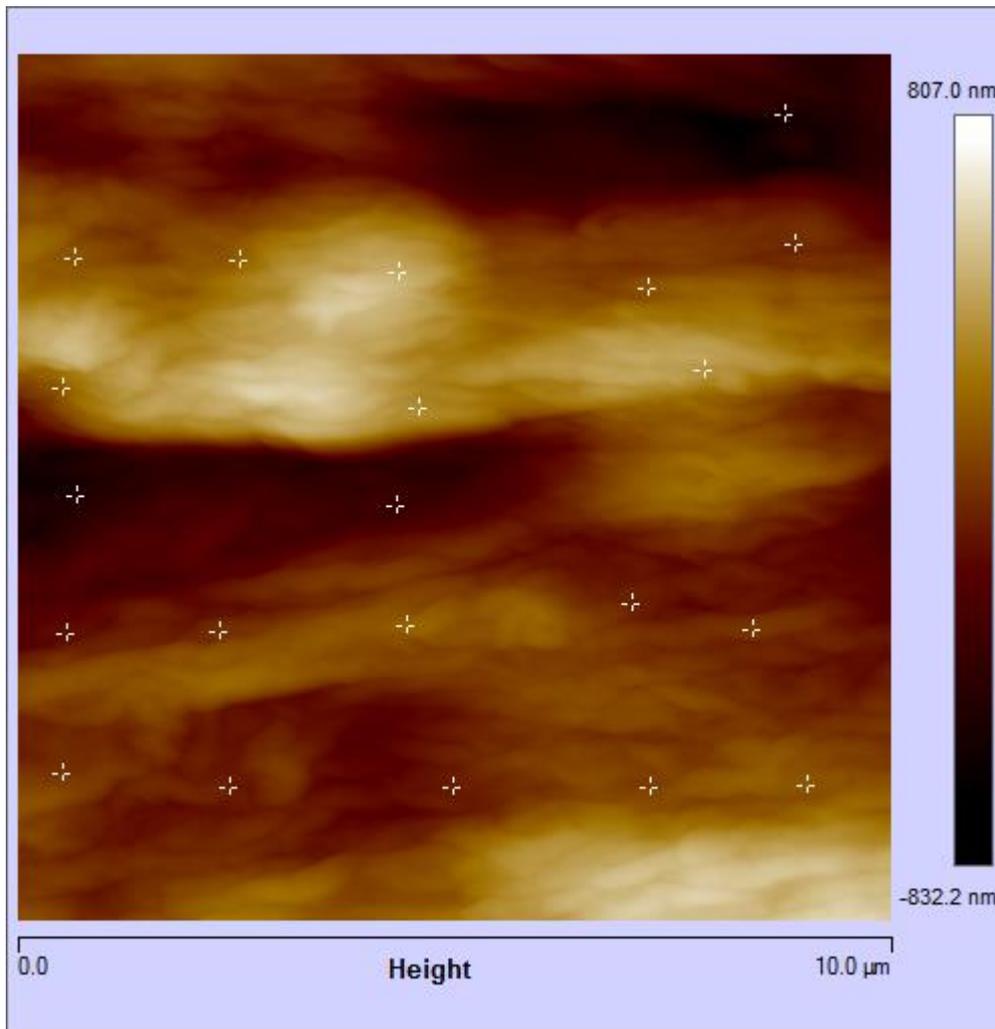


Figure S6. AFM micrograph of topographical height of Lamina enriched with 10 $\mu\text{g}/\text{mL}$ GO indicating the points where the force curve has been extracted and used for the calculation of the Young's Modulus.

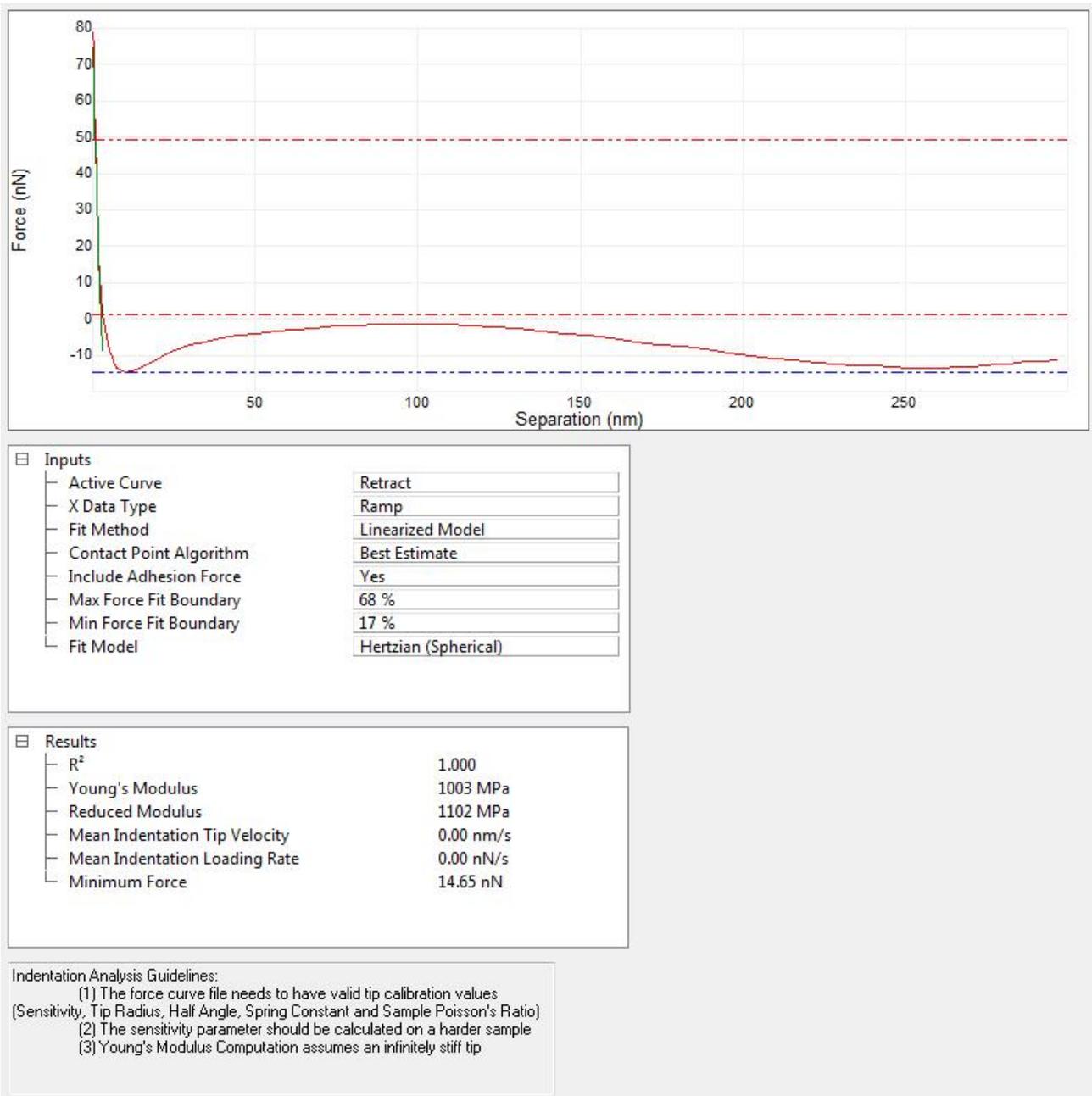


Figure S7. Representative Force Curve and corresponding Young's modulus calculation for Lamina enriched with 10 $\mu\text{g/mL}$ GO. The final value is the average value among 22 data.

S2.4 Original AFM micrographs used for the roughness index calculation

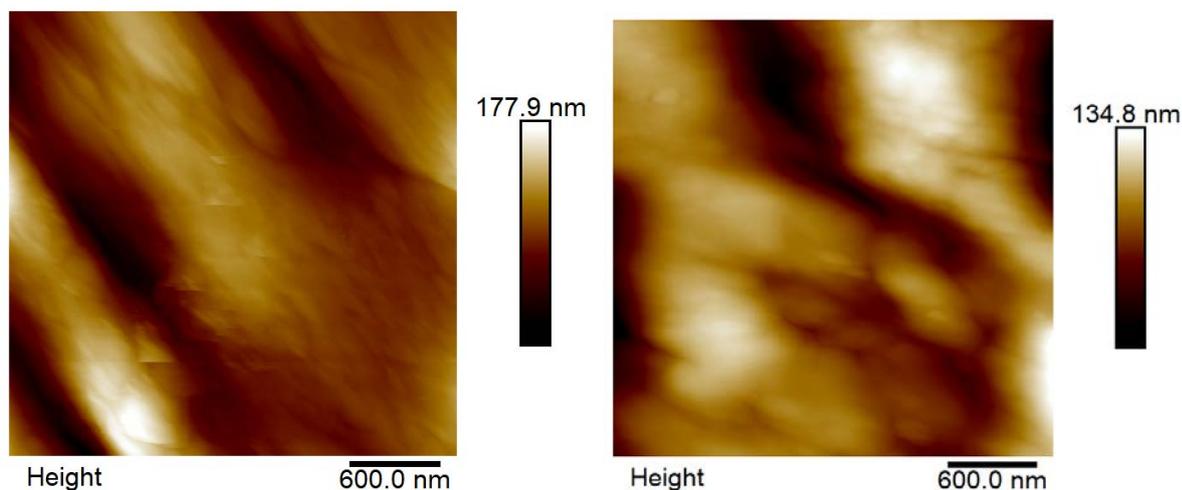


Figure S8. Height panels of bare Lamina sample used for the calculation of roughness indexes.

Table S1. Roughness indexes recovered from Panels of Figure S8 for bare Lamina sample.

| Roughness recovered | Ra | Rq | Rmax | Sdq | Sdr |
|---------------------|---------|---------|--------|--------|--------|
| Panel 2 | 36.7 nm | 45.8 nm | 241 nm | 13.8 ° | 2.86 % |
| Panel 2 | 49.9 nm | 60.3 nm | 270 nm | 11.6 ° | 2.09 % |

S2.5 Original AFM micrographs of Lamina enriched with 5 $\mu\text{g}/\text{mL}$ GO used for the roughness indexes calculation

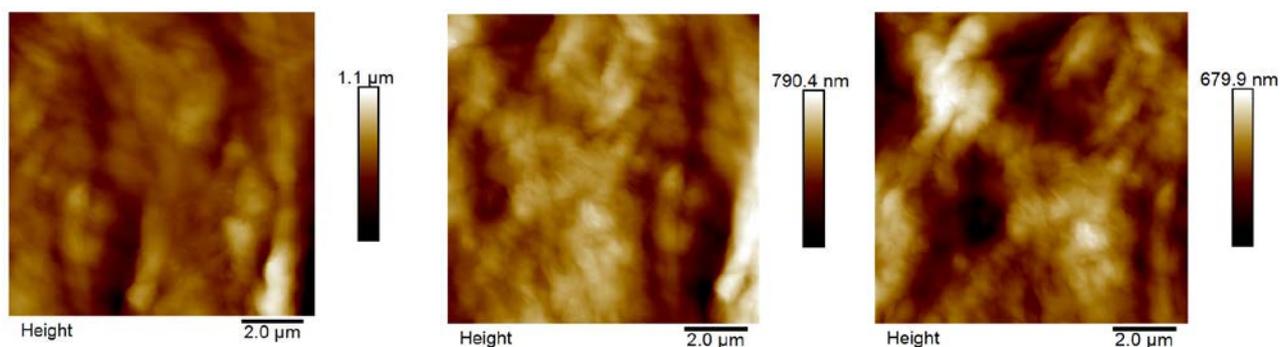


Figure S9. Height panels of bare Lamina enriched with 5 $\mu\text{g}/\text{mL}$ GO sample used for the calculation of roughness indexes.

Table S2. Roughness indexes recovered from Panels of Figure S9 for Lamina enriched with 5 $\mu\text{g}/\text{mL}$ GO sample.

| Roughness recovered | Ra | Rq | Rmax | Sdq | Sdr |
|---------------------|--------|--------|---------|--------|--------|
| Panel 1 | 159 nm | 200 nm | 1239 nm | 23.4 ° | 8.32 % |
| Panel 2 | 166 nm | 208 nm | 1257 nm | 20.7 ° | 6.72 % |
| Panel 3 | 200 nm | 240 nm | 1414 nm | 20.1 ° | 6.44 % |

S2.6 Original AFM micrographs of Laminas enriched with 5 $\mu\text{g}/\text{mL}$ GO used for the roughness indexes calculation

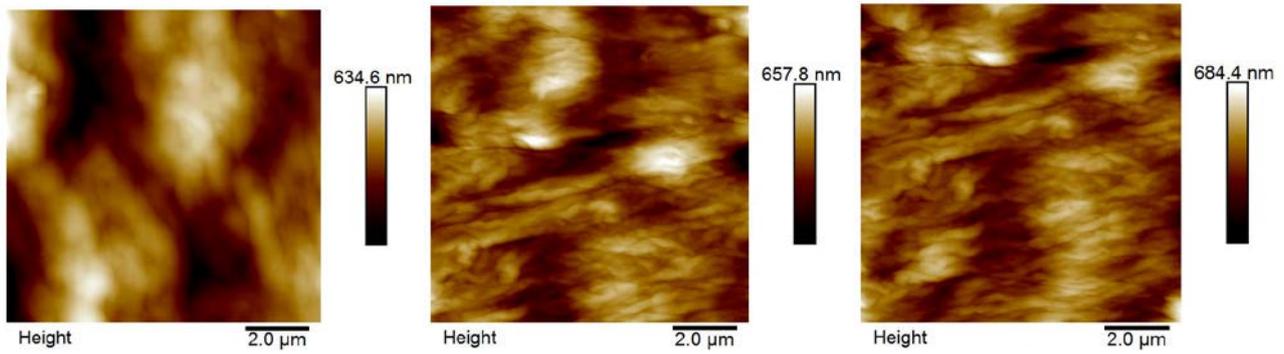


Figure S10. Height panels of bare Laminas enriched with 10 $\mu\text{g}/\text{mL}$ GO sample used for the calculation of roughness indexes.

Table S3. Roughness indexes recovered from Panels of Figure S10 for Lamina enriched with 10 $\mu\text{g}/\text{mL}$ GO sample.

| Roughness recovered | Ra | Rq | Rmax | Sdq | Sdr |
|---------------------|--------|--------|---------|--------|--------|
| Panel 1 | 169 nm | 206 nm | 996 nm | 13.3 ° | 2.72 % |
| Panel 2 | 258 nm | 316 nm | 1540 nm | 32.3 ° | 16.1 % |
| Panel 3 | 190 nm | 242 nm | 1397 nm | 32.1 ° | 15.8 % |