



Supplimentary Materials

Supplimentary Materials: Carbon Nanotubes Transform Soft Gellan Gum Hydrogels into Hybrid Organic–Inorganic Coatings with Excellent Cell Growth Capability

Anatolii Abalymov ^{1,2,3}, Louis Van der Meeren ¹, Dmitry Volodkin ⁴, Bogdan Parakhonskiy ^{1,*} and Andre G. Skirtach ^{1,*}

- ¹ Department of Biotechnology, Ghent University, 9000 Ghent, Belgium; anatolii.abalymov@ugent.be (A.A.); louis.vandermeeren@ugent.be (L.V.d.M.)
- ² Remote Controlled Theranostic Systems Lab, Educational Research Institute of Nanostructures and Biosystems, Saratov State University, Saratov 410012, Russia
- ³ Center for Photonics and Quantum Materials, Skolkovo Institute of Science and Technology, 121205 Moscow, Russia
- ⁴ School of Science and Technology, Nottingham Trent University, Clifton Lane, Nottingham NG11 8NS, UK; dmitry.volodkin@ntu.ac.uk
- * Correspondence: Bogdan.Parakhonskiy@UGent.be (B.P.); Andre.Skirtach@UGent.be (A.S.)

Materials and Methods.

Swelling Coefficient

The swelling coefficient was calculated using Equation (1)

$$SC = \frac{m - m0}{m0} * 100$$
 (1)

where *m* is the mass of hydrogel and *m0* is the mass of dissolved GG.

Absorbance of GG-CNTs hydrogels:

To measure the adsorption of hydrogels, the wells of a 96-well plate were filled with 100 μ L of the GG-CNTs solution. After that, the crosslinking process took place using 100 μ l of 0.3 M CaCl2 for 20 minutes. After that, calcium chloride was removed. A 595 nm filter was used to check the adsorption of the hydrogel.

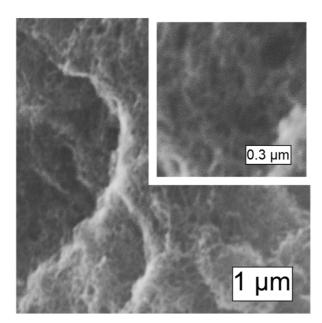
Citation: Abalymov, A.; Van der Meeren, L.; Volodkin, D.; Parakhonskiy, B. Skirtach, A. Carbon Nanotubes Transform Soft Gellan Gum Hydrogels into Hybrid Organic-Inorganic Coatings with Excellent Cell Growth Capability. C 2021, 7, 18. https://doi.org/10.3390/ c7010018

Received: 16 December 2020 Accepted: 30 January 2021 Published: 4 February 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).



Results and Discussion.

Figure S1. (a) SEM image of CNTs.

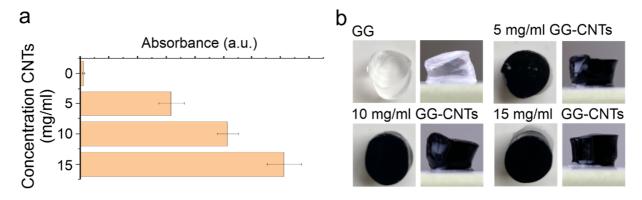
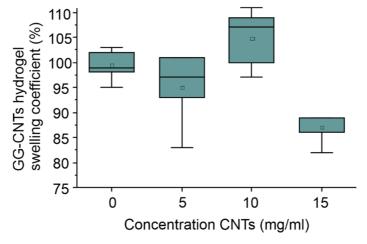


Figure S2. (a) Absorbance of the GG-CNTs hydrogels. (b) Photo of the GG-CNTs hydrogels.



 $\label{eq:Figure S3.} Figure \ S3. \ Swelling \ coefficient \ of \ the \ GG-CNTs \ hydrogels.$

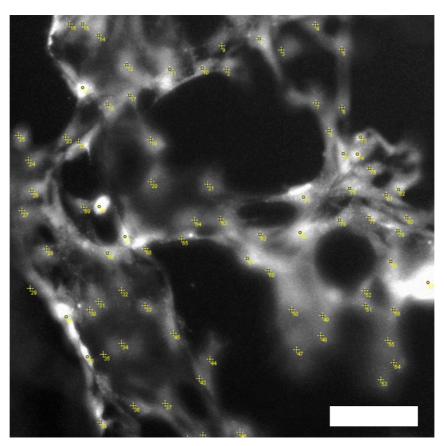


Figure S4. Counted cells. Scalebar is 125 μ m.