


CORRECTION

Open Access



Correction: 3D-printed wound dressing platform for protein administration based on alginate and zinc oxide tetrapods

Philipp Schadte¹, Franziska Rademacher², Gerrit Andresen³, Marie Hellfritsch⁴, Haoyi Qiu¹, Gregor Maschkowitz³, Regine Gläser², Nina Heinemann², Daniel Drücke⁵, Helmut Fickenscher³, Regina Scherließ^{4,6}, Jürgen Harder², Rainer Adelung^{1,6*} and Leonard Siebert^{1,6*} 

Correction to: *Nano Convergence* (2024) 10:53.

<https://doi.org/10.1186/s40580-023-00401-6>.

Following publication of the original article [1], the author identified an error in Fig. 3. The scale bar value should be “1 cm” instead of “1 mm” in panel C of the figure. The revised Fig. 3 has given below.

The original article has been corrected.

The online version of the original article can be found at <https://doi.org/10.1186/s40580-023-00401-6>.

*Correspondence:

Rainer Adelung
ra@tf.uni-kiel.de
Leonard Siebert
ra@tf.uni-kiel.de

¹Department for Material Science, Functional Nanomaterials, Kiel University, Kiel, Germany

²Department of Dermatology, Kiel University and University Medical Center Schleswig-Holstein, Kiel, Germany

³Institute for Infection Medicine, Kiel University and University Medical Center Schleswig-Holstein, Kiel, Germany

⁴Department of Pharmaceutics and Biopharmaceutics, Kiel University, Kiel, Germany

⁵Department of Reconstructive Surgery, Kiel University and University Medical Center Schleswig-Holstein, Kiel, Germany

⁶Kiel Nano, Surface and Interface Science - KINSIS, Kiel University, Kiel, Germany



© The Author(s) 2024. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

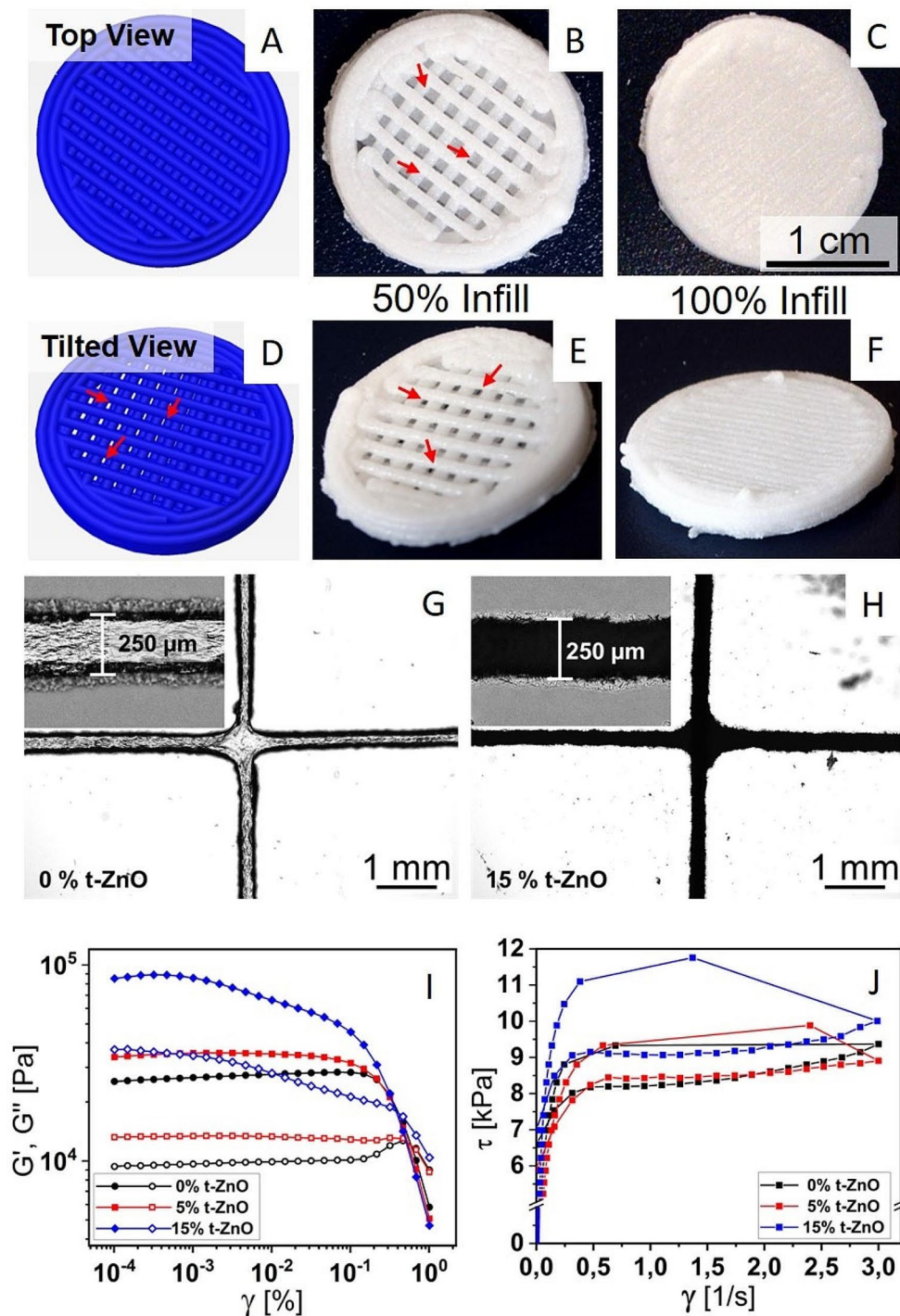


Fig. 3 Bioprinting of the alginate-based inks. **A–F** Simulated and printed constructs. The pattern is picked in a way that no contaminants can enter from the top in a direct way. Still, open porosity, yet no direct path is implemented for the 50% filled constructs to retain oxygen permeability. **A** and **D** depict the simulated constructs generated in the slicing software from the respective G-Code. **A** represents the top view, where no direct path through the construct can be perceived. **D** shows the same constructs at a tilted angle where the open structure can be observed. **B** and **E** show the final printed constructs at a filling factor of 50% in the same viewing angles as **A** and **D**, showing both the blocked and the open pathways as stated before. **C** and **F** show the constructs with complete filling of 100%, with no easy pathways for oxygen or contaminants. **G** and **H** are optical micrographs depicting two crossing lines of printed alginate-based ink with 0% and 15% t-ZnO loading, respectively. The insets show a magnification of an individual line. The more jagged contour of the lines in **H** are caused by protruding t-ZnO arms. **I:** Graphs of an amplitude sweep for alginate-based inks with 0% to 15% t-ZnO. The moduli increase with the content of t-ZnO. **J:** Flow curves of alginate-based inks with 0% to 15% t-ZnO. Both static and dynamic yield stress do not change from 0 to 5% t-ZnO content. A significant increase in static and dynamic yield stress can be seen for 15% t-ZnO

Published online: 08 July 2024

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.