

Response to Reviewer 3 Comments

In my opinion, this is a well-written manuscript, describing an interesting piece of research into the effect of coatings based on ferric-tannin complexes on blood clotting. I believe that, ultimately, this would be worthy of publication.

Response: Thanks for your kind comments.

Point 1: The authors point out (in the abstract and within the introduction) the risk of toxicity, if conventional tannic acid sprays are used to treat large area wounds. Yet, while the haemostatic properties of ferric-tannic complex coatings are adequately demonstrated, whether this approach avoids the risk of tannic acid poisoning is not investigated further. In my opinion, the manuscript would be considerably improved by addressing this point.

Response 1: Thanks for your valuable comments. Because the original tannic acid powder as small molecular can penetrate into the body through the wound, showing toxic to the human body [30]. In contrast, the self-assembled TA coating that crosslinking with Fe ions can be regarded as a supramolecular material, and the TA coating has good stability in the physiological environment without the diffusion of the TA small molecular (Figure S3). As a result, the rabbits used in the animal wound models were alive, showing the safety of the TA coating. This explanation is added in the page 8.

References:

[30] Chung, K. T.; Wei, C. I.; Johnson, M. G., Are tannins a double-edged sword in biology and health?. *Trends in Food Science & Technology* **1998**, 9(4), 168-175.

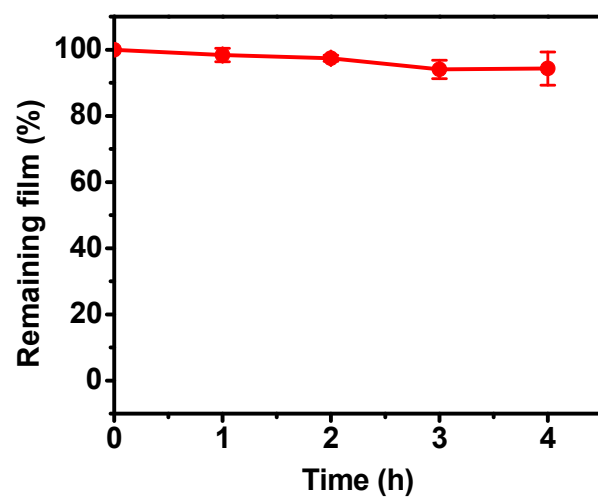


Figure S3. Stability of TA₅ coating on the slide in the PBS containing 4 mg/mL of BSA.