

SUPPORTING INFORMATION

Assembled anti-adhesion polypropylene mesh with self-fixable and degradable in situ mussel-inspired hydrogel coating for abdominal wall defect repair

Wanjun Hu^a, Zhigang Zhang^b, Shenglin Lu^b, Tianzhu Zhang^{a,}, Naizhen Zhou^a, Pengfei Ren^a, Faming Wang^a, Yang Yang^c, Zhenling Ji^{b,*}*

a State Key Lab of Bioelectronics, National Demonstration Center for Experimental Biomedical Engineering Education, School of Biological Science and Medical Engineering, Southeast University, Nanjing 210096, China.

b Department of General Surgery, Zhongda Hospital, School of Medicine, Southeast University, Nanjing 210009, China.

c Collage of clinical medicine, Panzhihua University, Panzhihua 617000, China.

* Corresponding author: zhangtianzhu@seu.edu.cn (Tianzhu Zhang); zlj@vip.sina.com (Zhenling Ji)

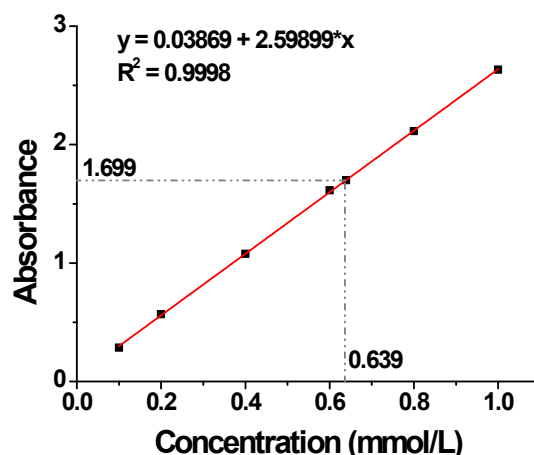


Figure S1. Standard curve was fitted for calculating catechol content.

The difference concentration dopamine solution (0.1, 0.2, 0.4, 0.6, 0.8 and 1.0 mmol L⁻¹) was prepared. Then standard curve was fitted for calculating dopamine content (mole ratio). 0.1082 g OCMC-DA was weighted accurately and dissolved in 100 mL water completely. The absorbance of OCMC-DA was determined. Subsequently, the content of grafting was calculated as follow equation.

$$\text{Content (\%)} = C \times V \times 189.64 / W$$

Where C , V and W are the concentration of catechol group, total volume, and weight of samples, respectively. The 189.64 is mole mass of dopamine.

Table S1. Adhesion score system

score	Area	Adhesion grading by resistance to lysis
0	None	No significant adhesions
1	≤ 25%	Thin, narrow, and easily detachable adhesions
2	≥ 25%, and ≤ 50%	Thick adhesions limited to one area
3	≥ 50%	Thick and broad adhesions
4	--	Thick and broad adhesions, involving the anterior or posterior abdominal wall, and the viscera