Electronic Supplementary Information

Supramolecular medical antibacterial tissue adhesive prepared based on natural small molecules

Junying Chen[a], Tian Yuan[c], Zuozhen Liu[a,b,*]

[a]Key Laboratory for Specially Functional Polymers and Related Technology of Ministry of Education, School of Materials Science and Engineering, East China University of Science and Technology, Shanghai 200237, China
[b]Key Laboratory for Functional Biopolymer Materials and Technology of Ministry of Education, School of Biological Engineering, East China University of Science and Technology, Shanghai 200237, China
[c]Institute of Nano and Biopolymeric Materials, Department of Polymeric Materials, School of Materials Science and Engineering, Tongji University, Shanghai 201804, China

E-mail: lzz@ecust.edu.cn or a794202291@outlook.com

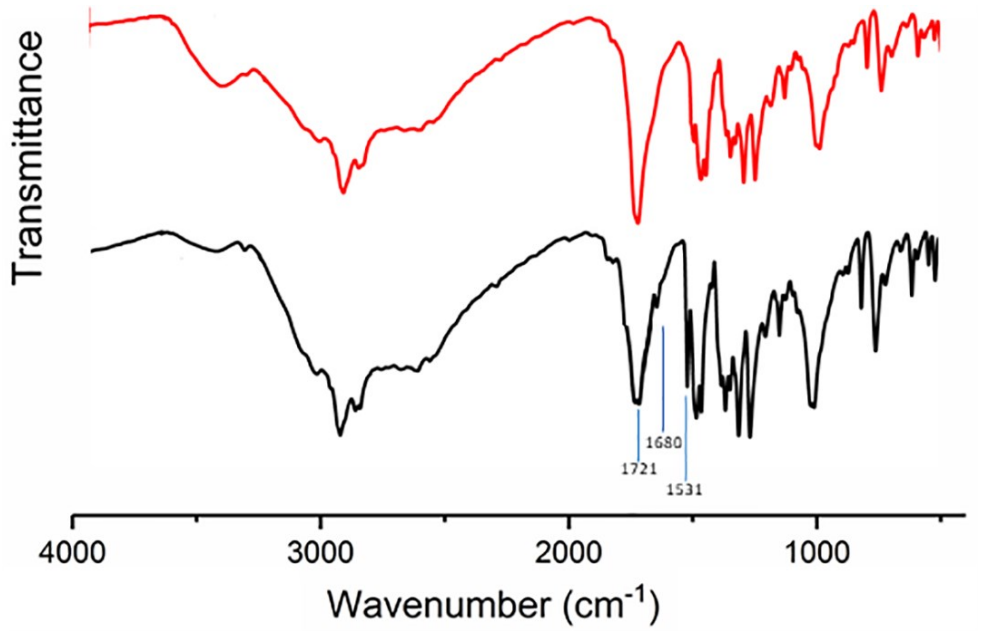

Figure. S1. FTIR spectra of TAN (black curve) powder and TA (red curve).

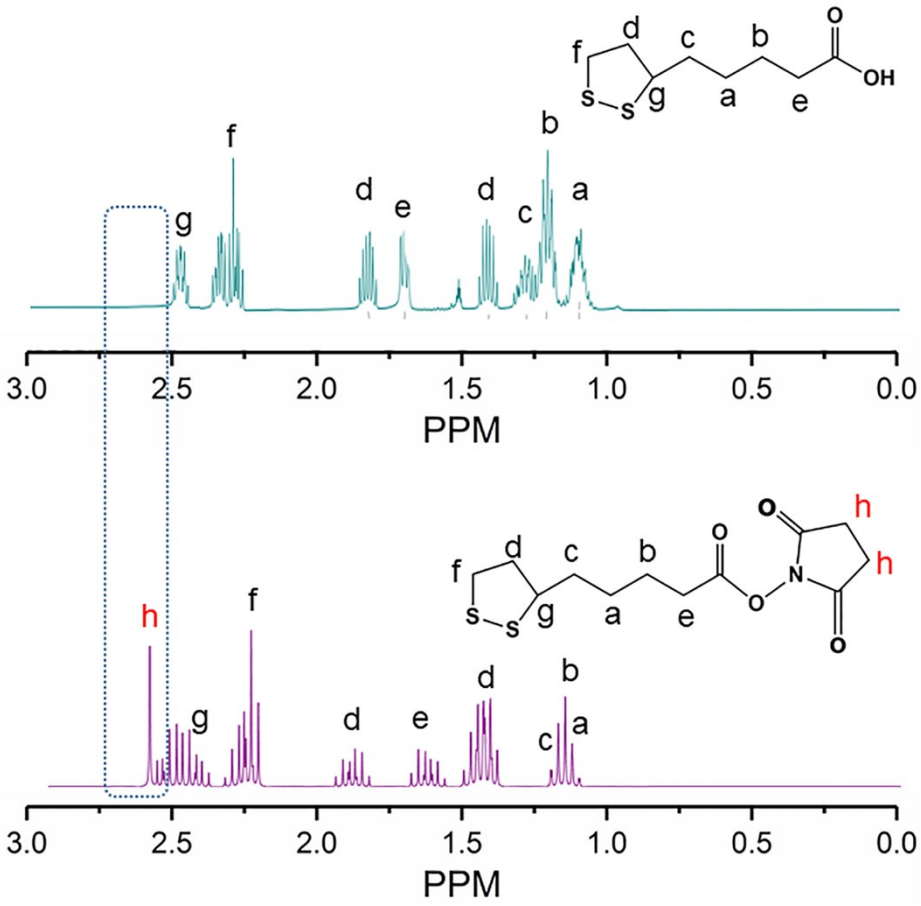

Figure. S2. ^{1}H NMR spectra of TA and TAN.

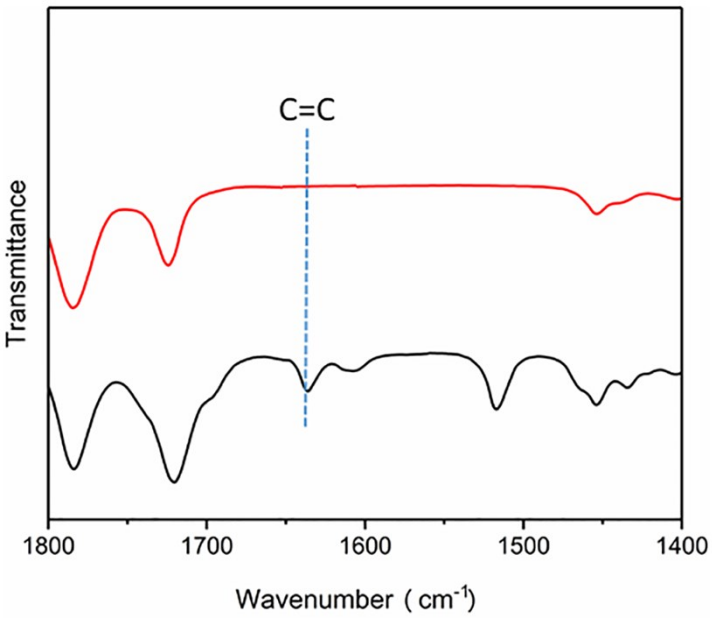

Figure. S3. FTIR spectra of TAN-PEGDA (before polymerization, black curve) and TAN-PEGDA (after polymerization, red curve) from 1800 to 1400 cm^{-1}.

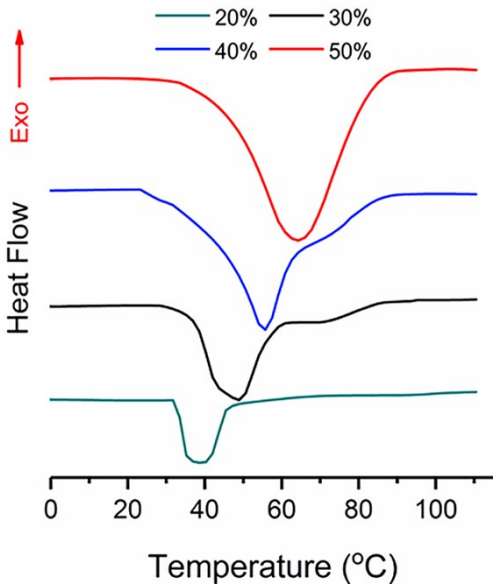

Figure. S4. Melting temperature distribution of TAN-PEGDA, measured by DSC.

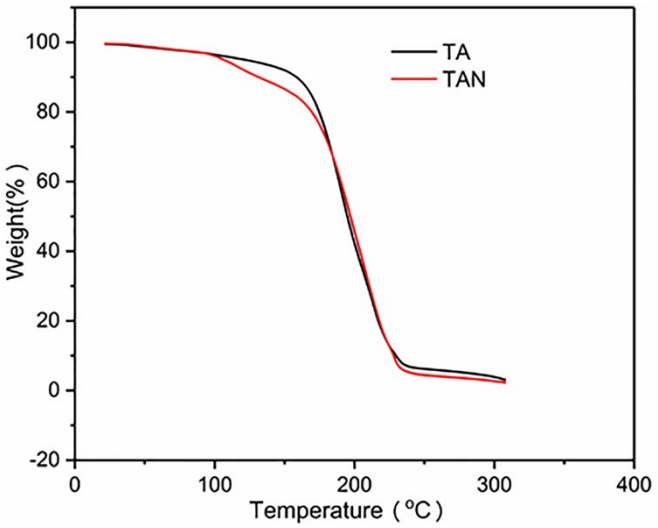

Figure. S5. Thermal decomposition behavior of TA and TAN.

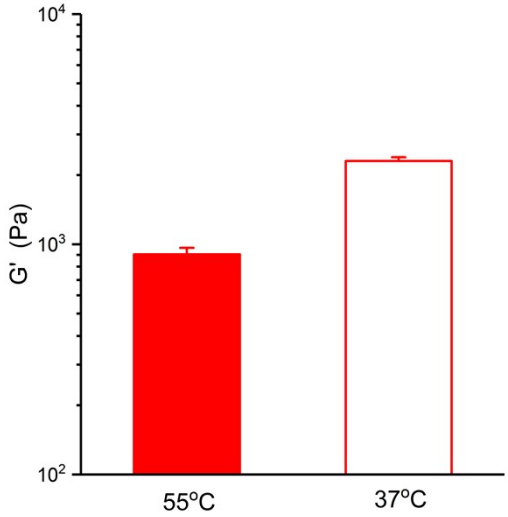

Figure. S6. Changes in storage modulus (G`) of the TAN-PEGDA at 55 or 37 ℃.

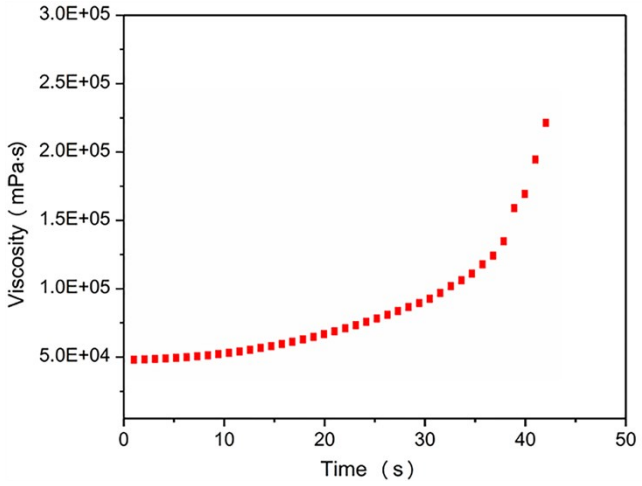

Figure. S7. Time course of viscosity after dropping the temperature from 55 ℃ to 37 ℃ for TAN-PEGDA.

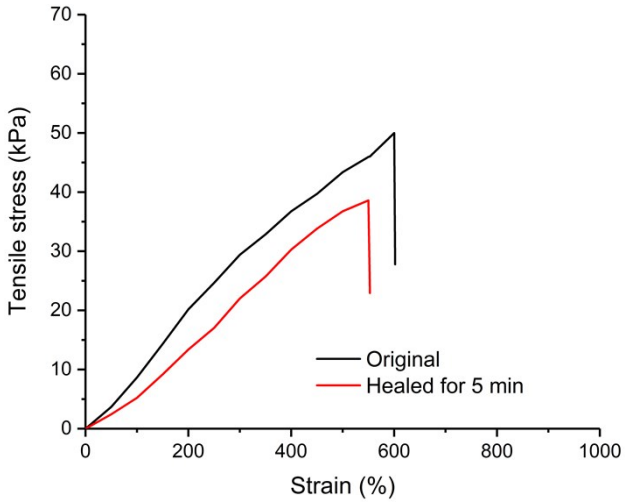

Figure. S8. Stress-strain curves of the healed samples.

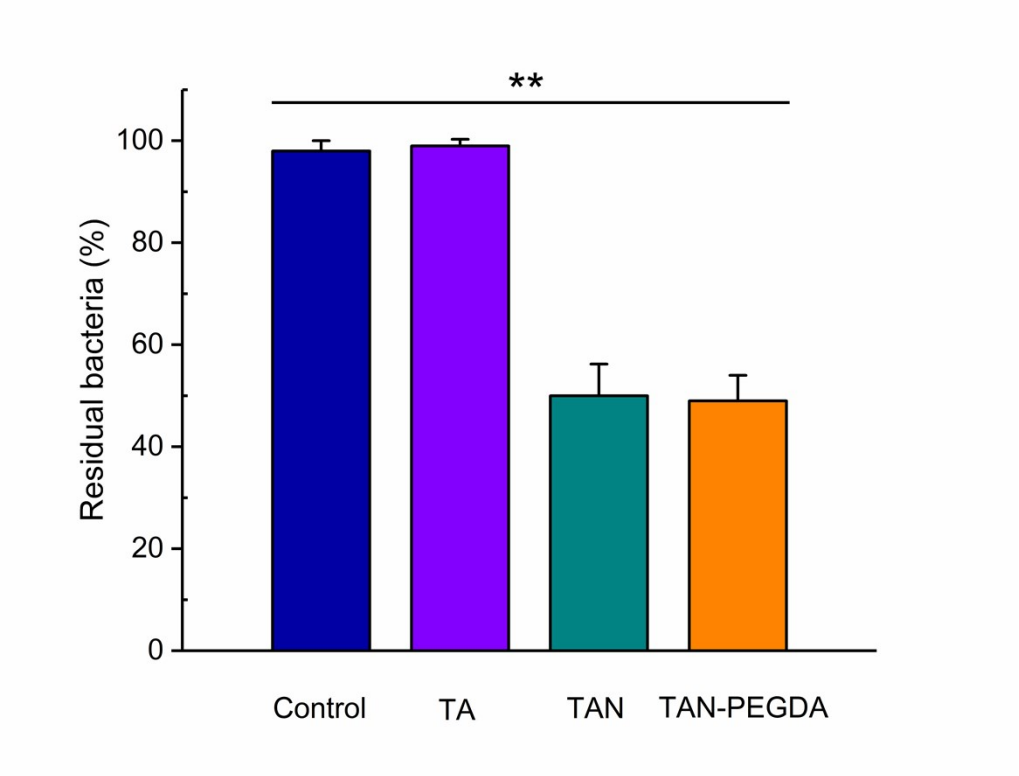

Figure. S9. The bacterial colonies of E. coli.

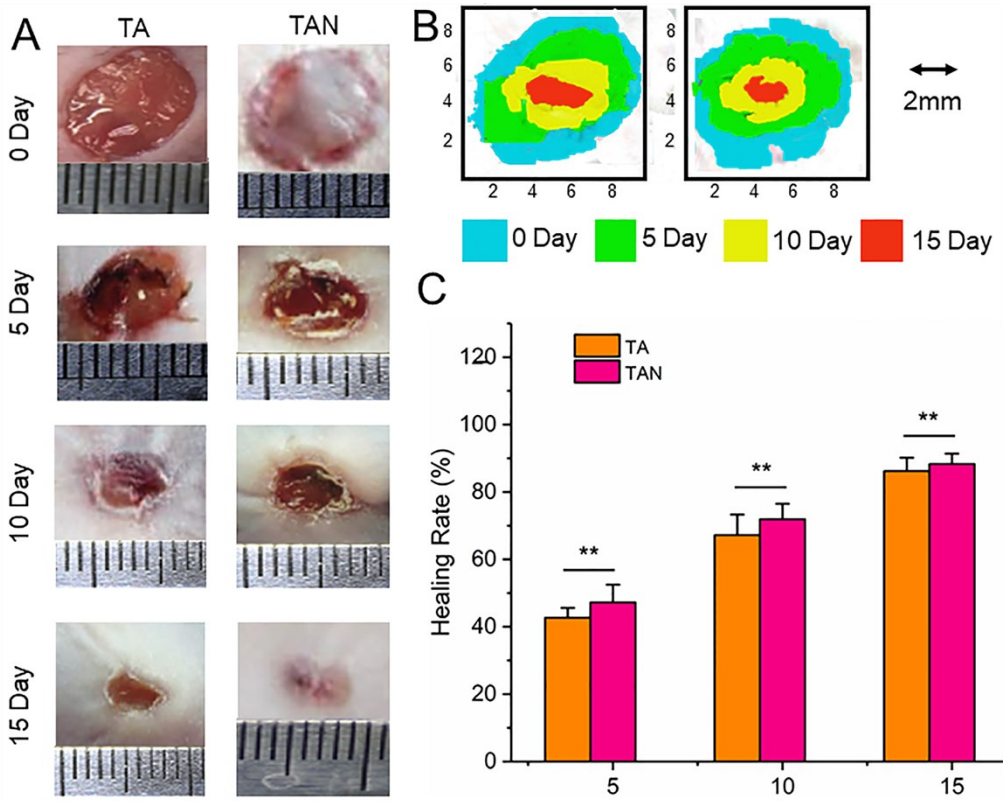

Figure. S10. A) Photographs of wounds on 0th, 5th, 10th, and 15th day for TA and TAN; B) Schematic diagram of wound area during 15 d for TA and TAN; C) Healing rate for each group.

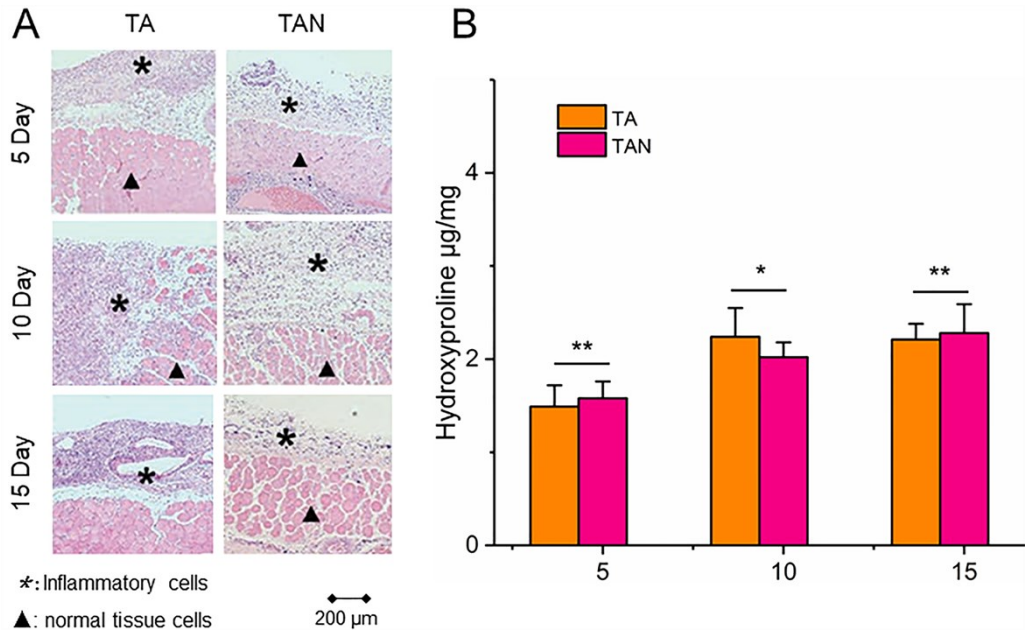

Figure. S11. A) H&E staining sections of the specimens and surrounding tissues taken at different time points; B) Collagen amount by determining the hydroxyproline.