Supporting Information for

Reprocessable, closed-loop recyclable and shape programmable epoxy vitrimer

Hongxin Yao [a] *Hongjun Yang,* [b]* *Li Jiang,* [b] *Wenyan Huang,* [b] *Qimin Jiang,* [b] *and Bibiao Jiang*[b]*, Guangzhao Zhang* [a]*

[a]Faculty of Materials Science and Engineering, South China University of Technology, Guangzhou 510640, P. R. China.
[b] School of Materials Science and Engineering, Jiangsu Collaborative Innovation Centre of Photovoltaic Science and Engineering, Changzhou University, Changzhou 213164, Jiangsu, P. R. China.

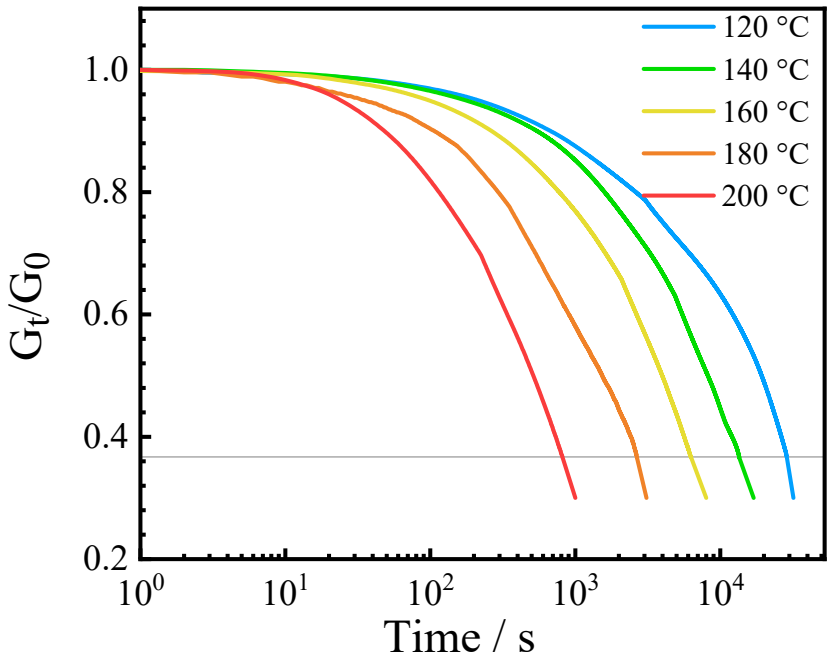

Figure S1. Stress relaxation curves of vitrimer ESO-MDA at different temperature.

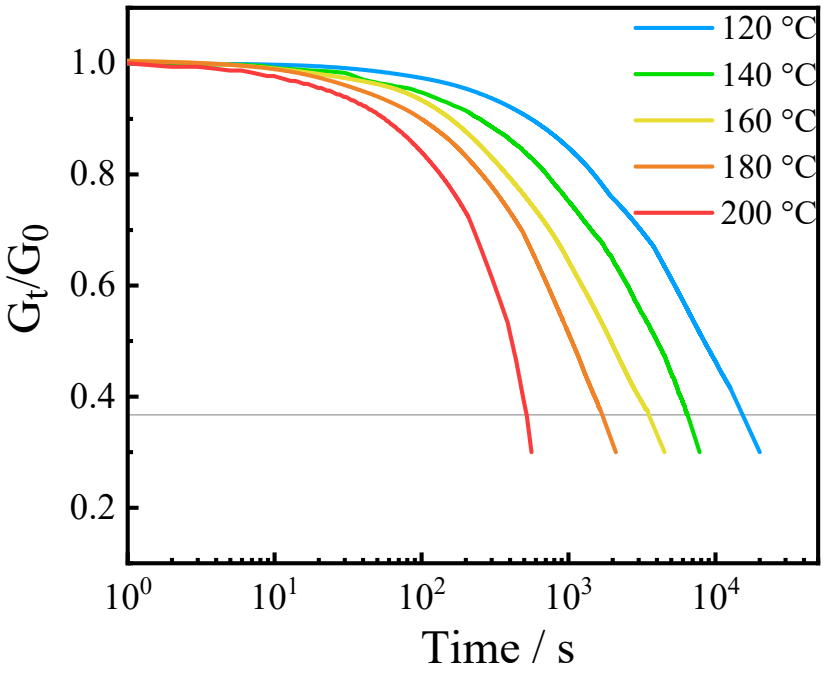

Figure S2. Stress relaxation curves of vitrimer ESO-MDA-BDDA at different temperatures.

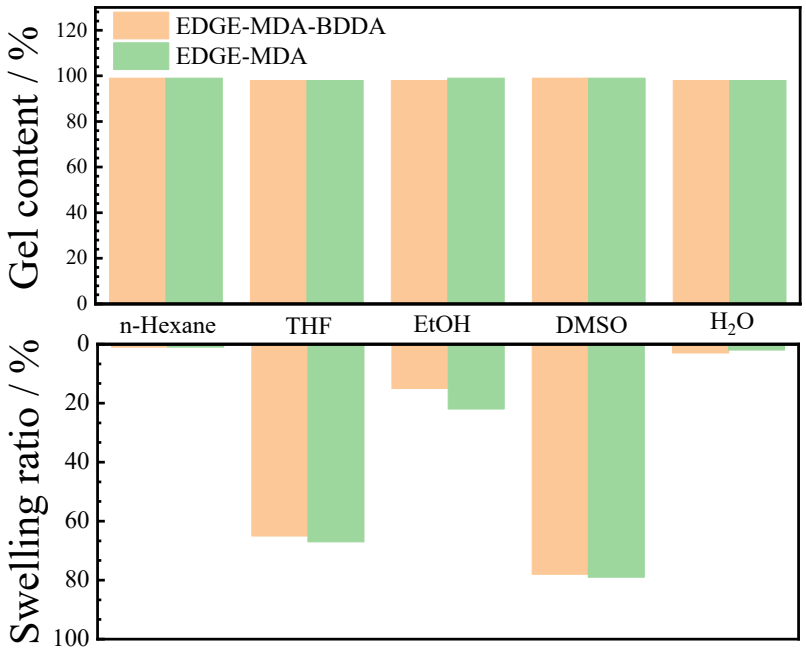

Figure S3. Swelling ratio and gel content of vitrimer EDGE-MDA-BDDA and EDGA-MDA in different solvents.

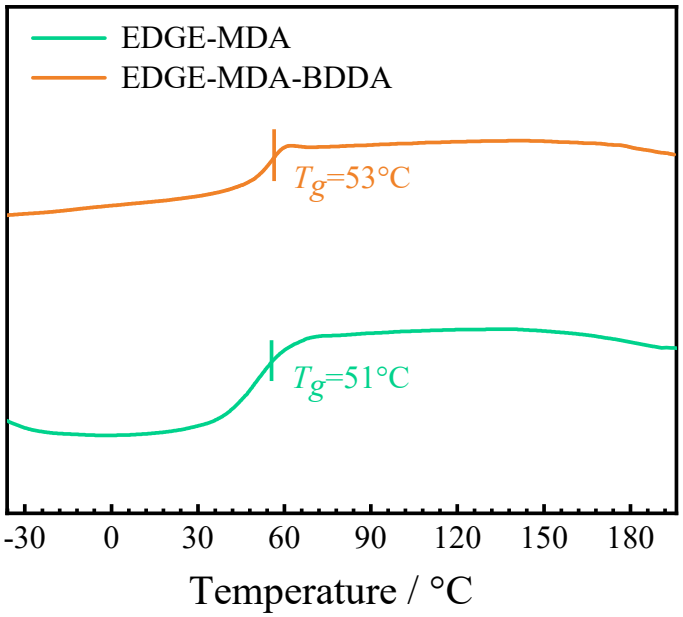

Figure S4. DSC curves of vitrimer EDGE-MDA-BDDA and EDGA-MDA.

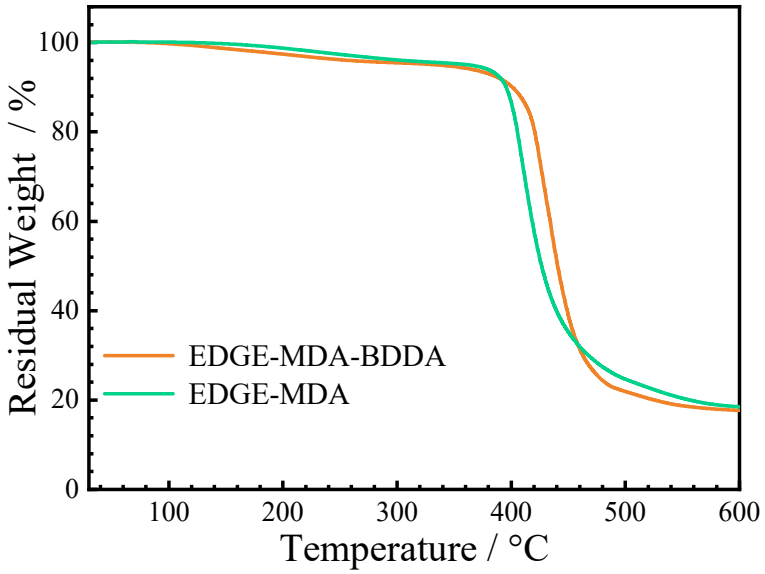

Figure S5. TG curves of vitrimer EDGE-MDA-BDDA and EDGA-MDA.

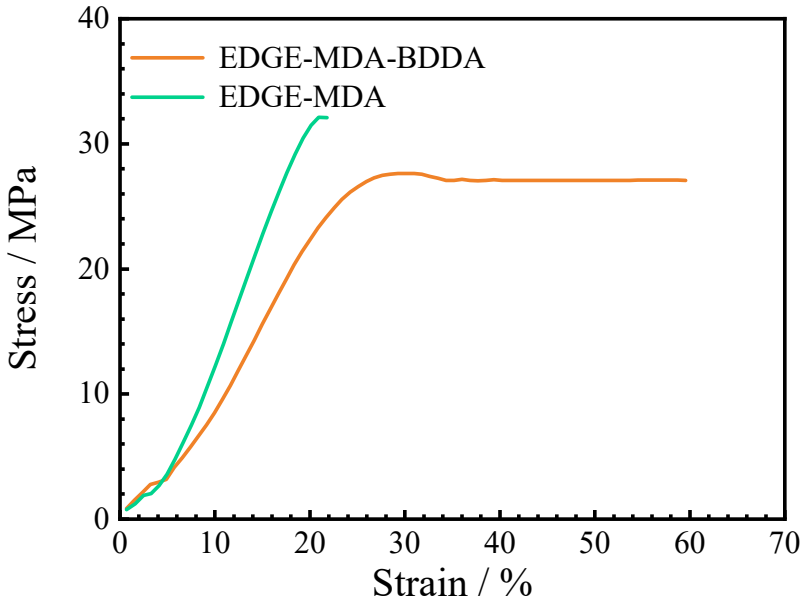

Figure S6. The stress-strain curves of vitrimer EDGE-MDA-BDDA and EDGA-MDA.

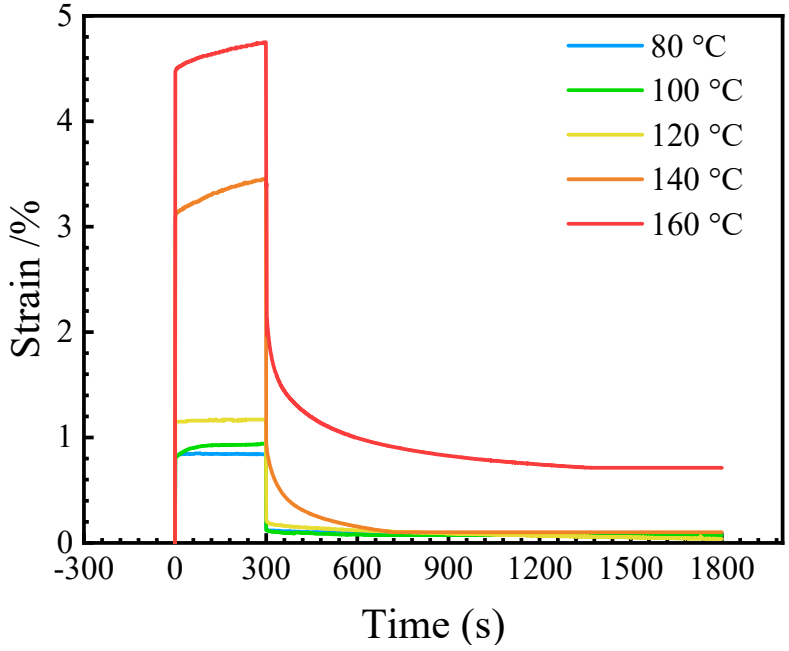

Figure S7. Creep resistance curves of vitrimer EDGE-MDA-BDDA at different temperature.

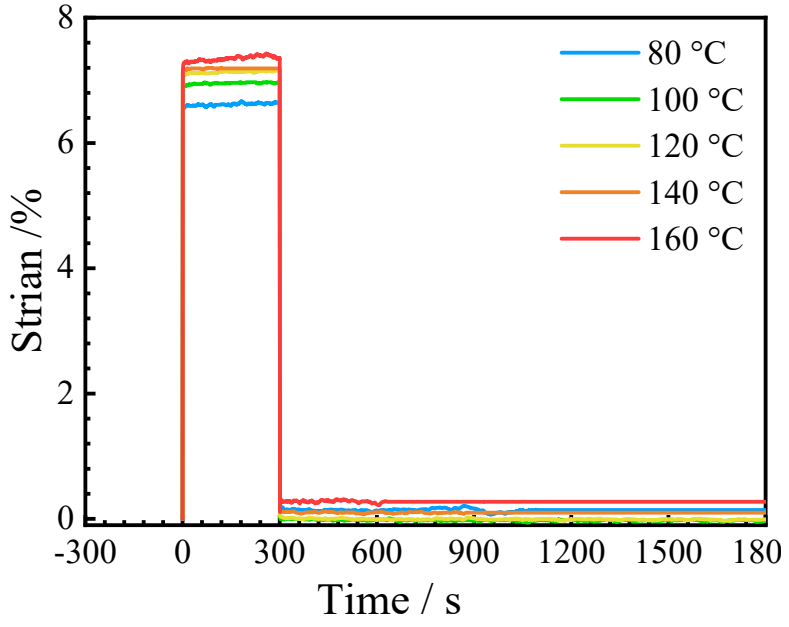

Figure S8. Creep resistance curves of vitrimer EDGE-MDA at different temperature.

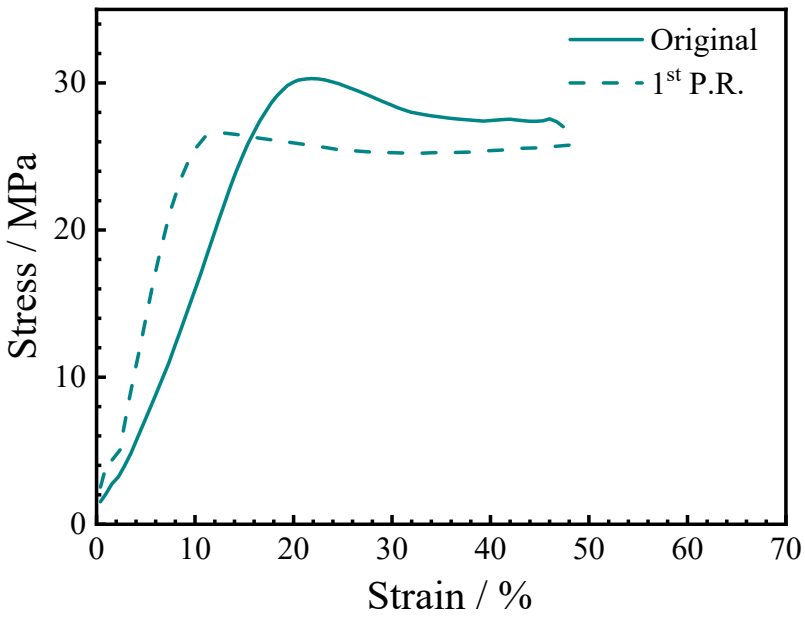

Figure S9. Stress-strain curves of original vitrimer EDGE-MDA-BDDA and after physical reprocessing.

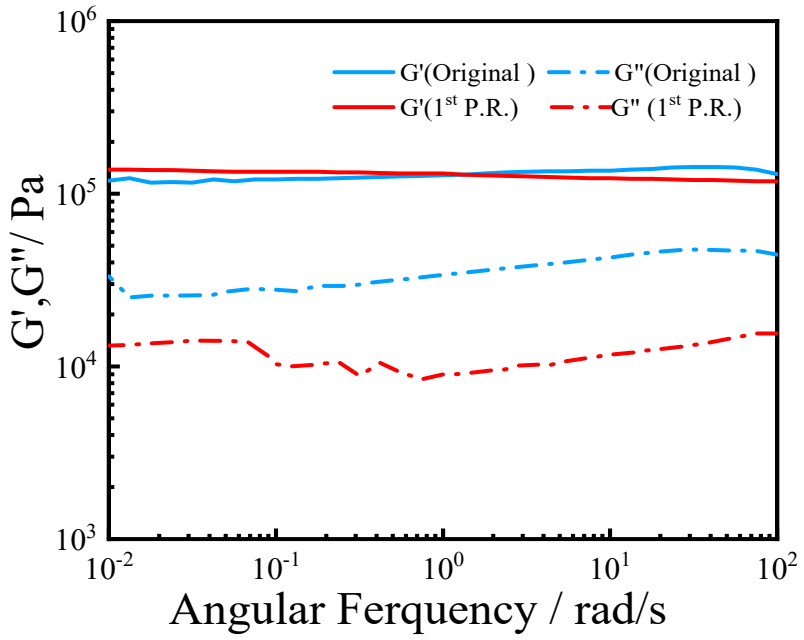

Figure S10. Frequency sweep curves of original vitrimer EDGE-MDA-BDDA and after physical reprocessing at180 ℃

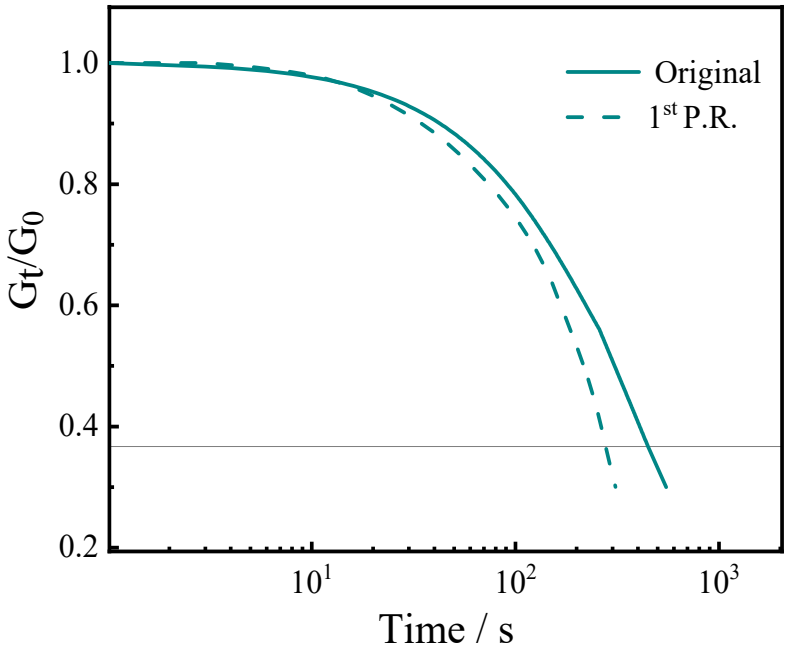

Figure S11. Relaxation modulus vs time of original vitrimer EDGE-MDA-BDDA and after physical reprocessing at 200 ℃.

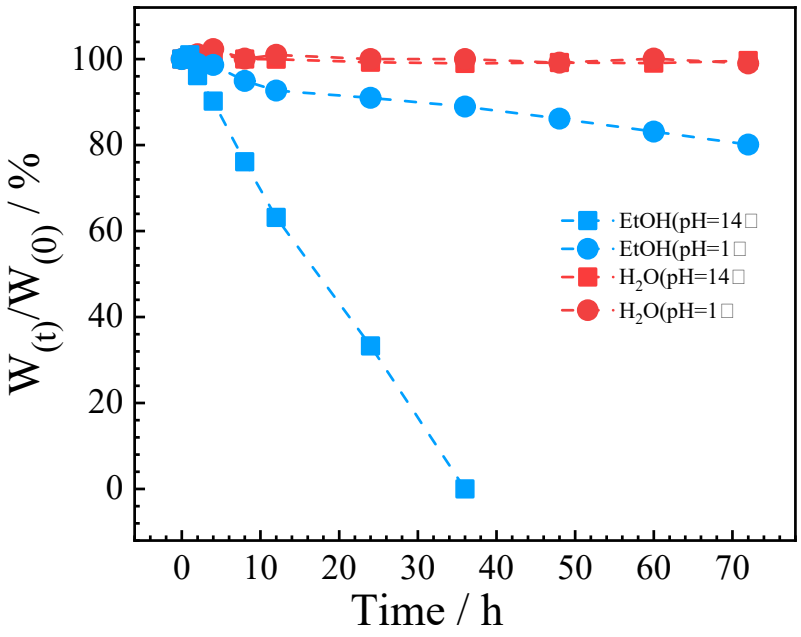

Figure S12. Degradation rate curves of vitrimer EDGE-MDA-BDDA in different solvents and pH values.

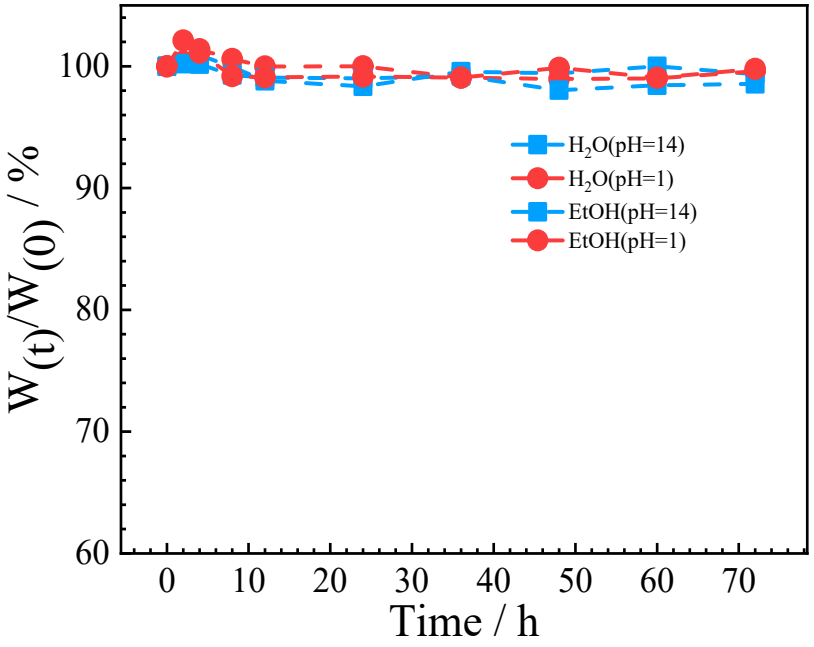

Figure S13. Degradation rate curves of EDGE-MDA in different solvents and pH values.

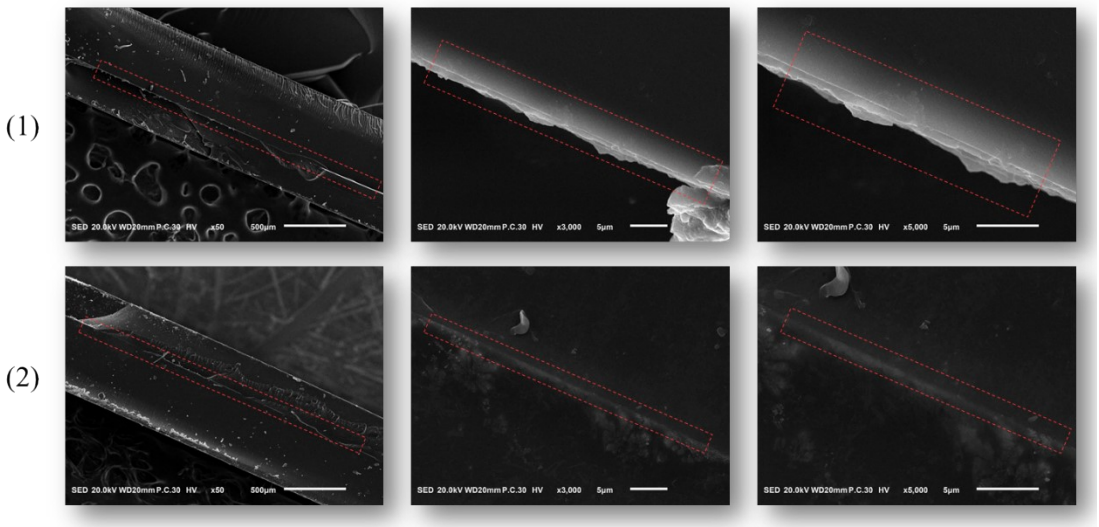

Figure S14. The SEM images of fracture surface of bilayer vitrimer after frozen in liquid nitrogen and then fractured - before (1) and after (2) heated at 160°C for 4 h.

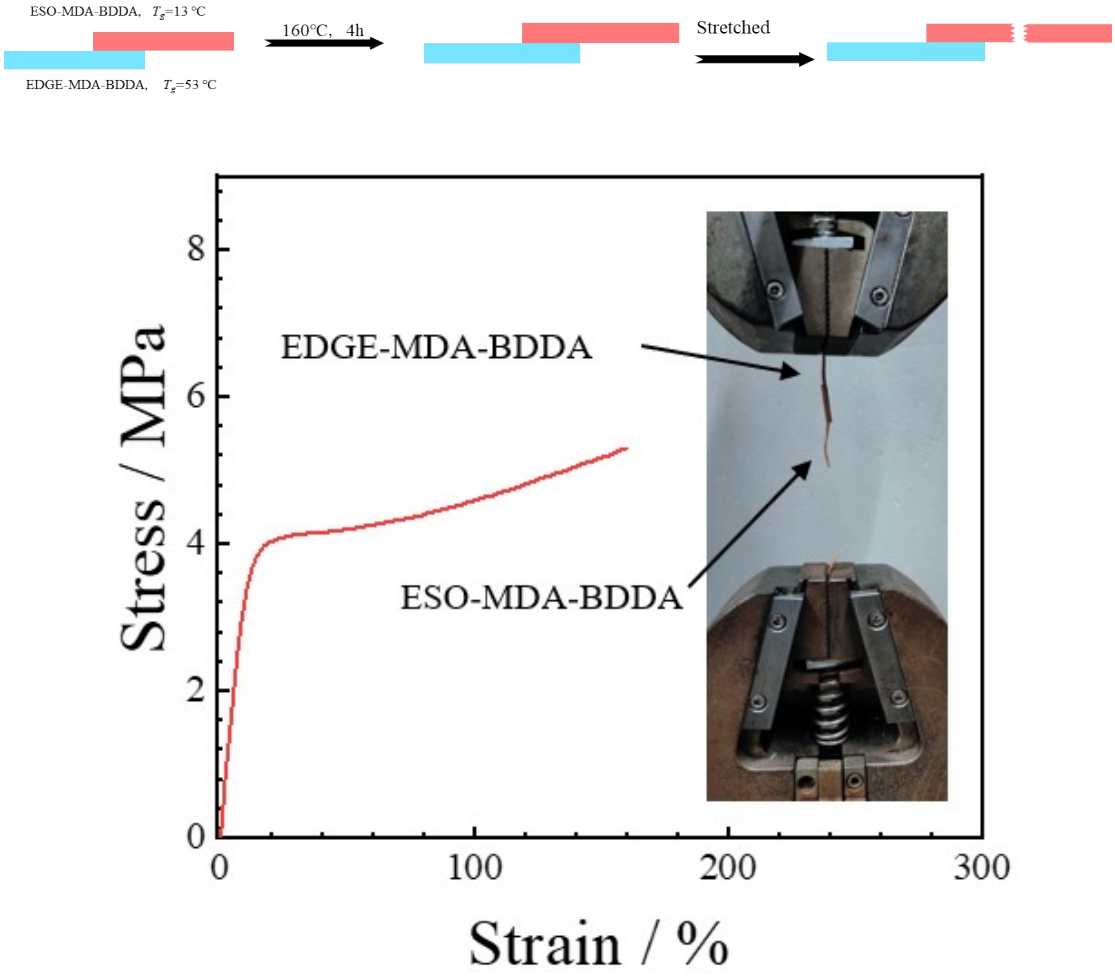

Figure S15. The adhesion strength of bilayer vitrimer.