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## Supplementary Materials for

### **Trimethylamine N-oxide–derived zwitterionic polymers: A new class of ultralow fouling bioinspired materials**

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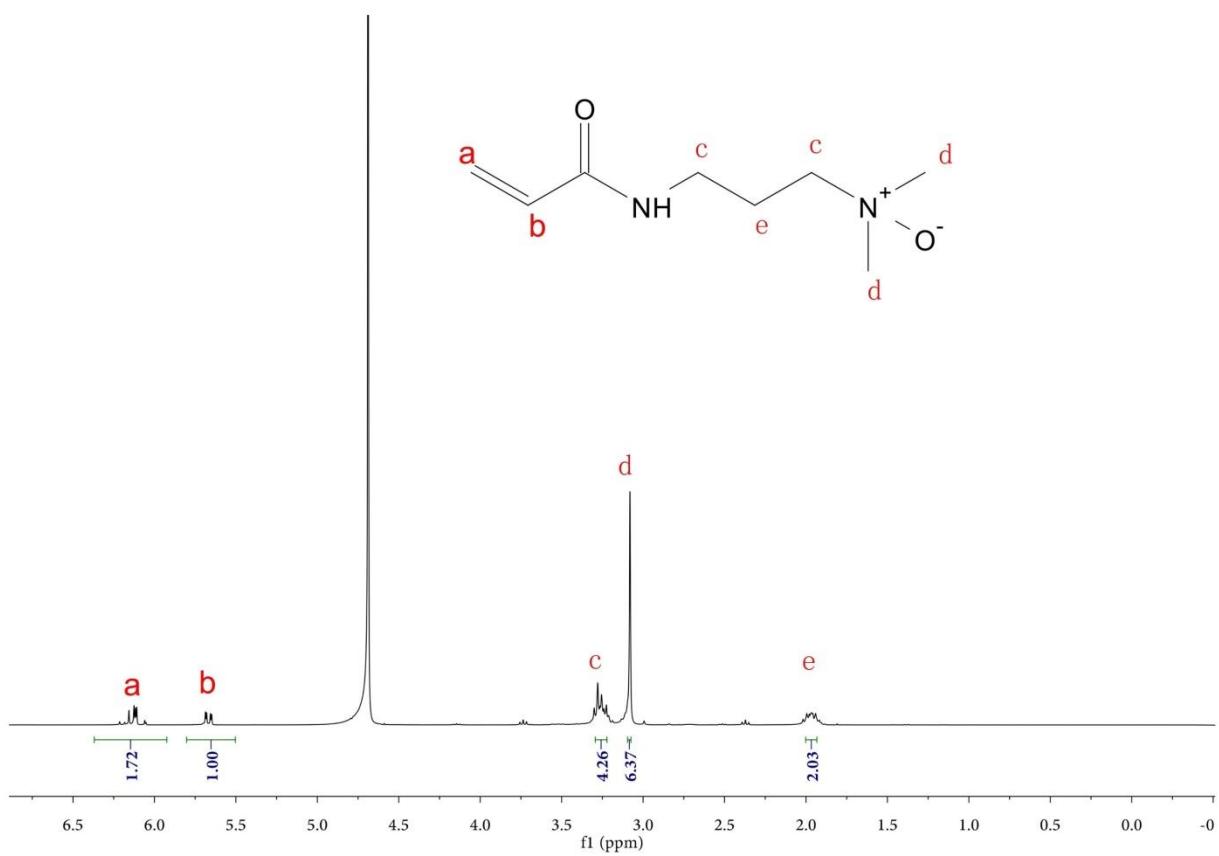
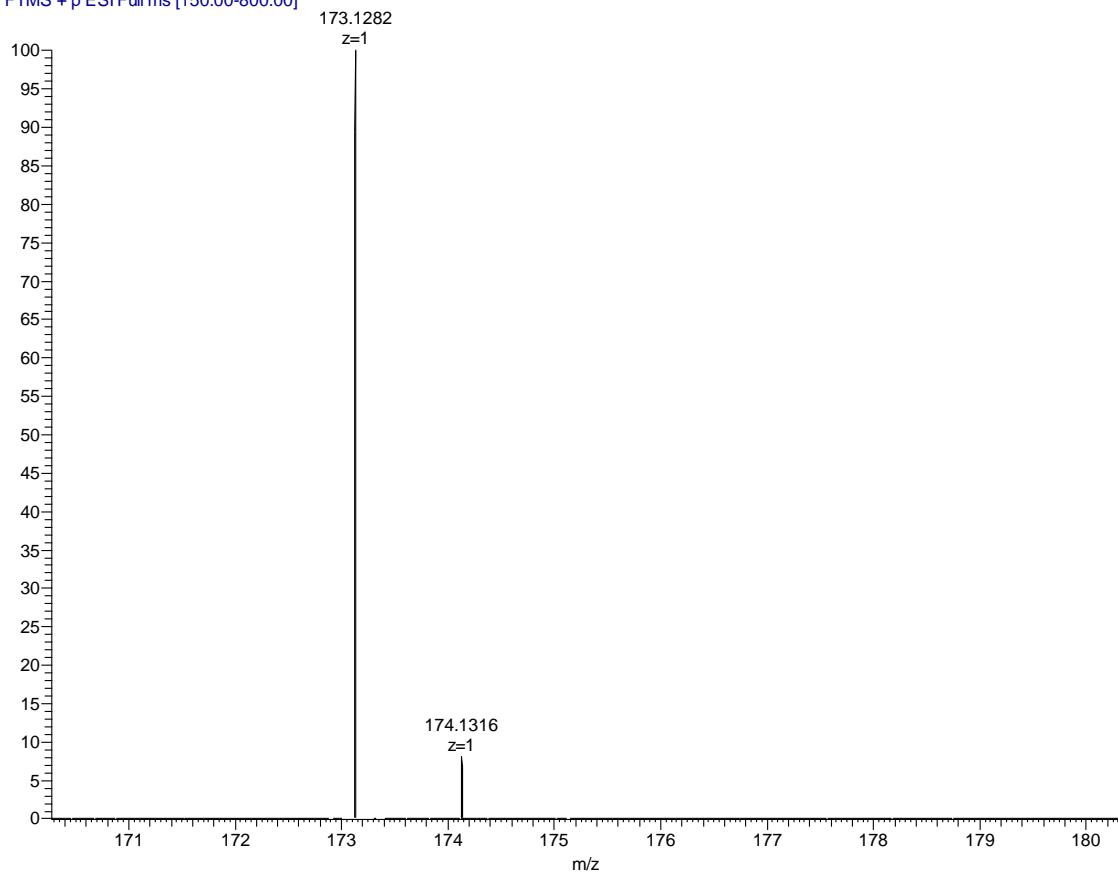
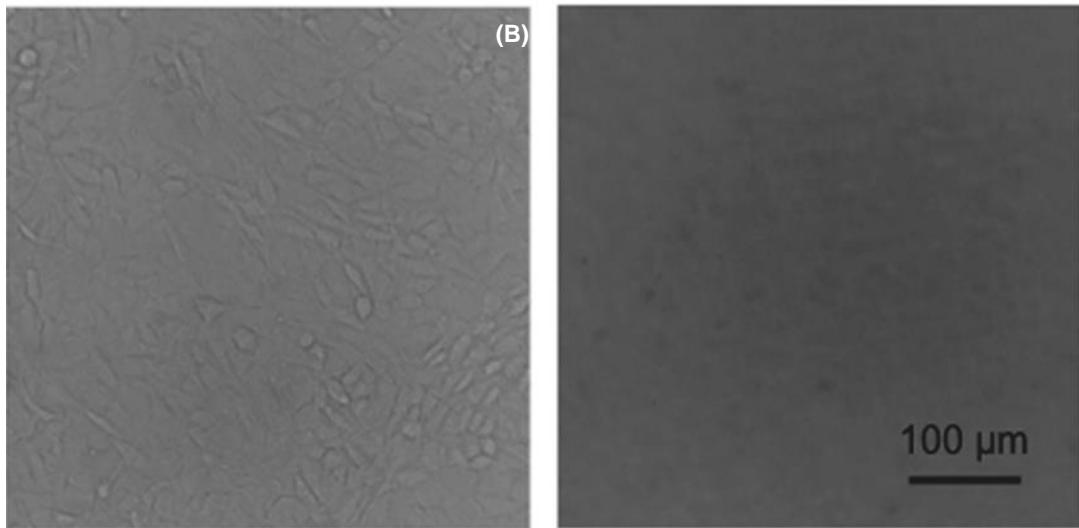


Fig. S1.  $^1\text{H}$  NMR spectrum of TMAO monomer.

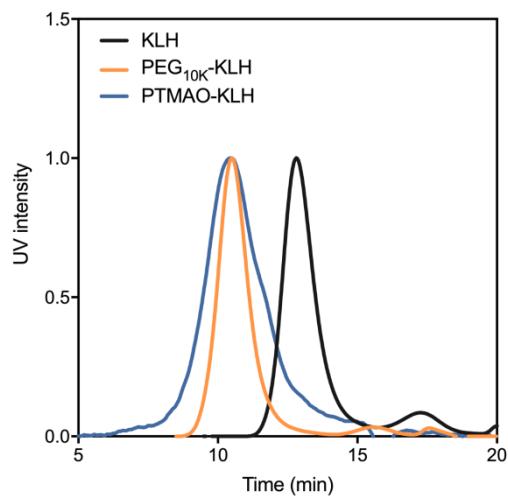
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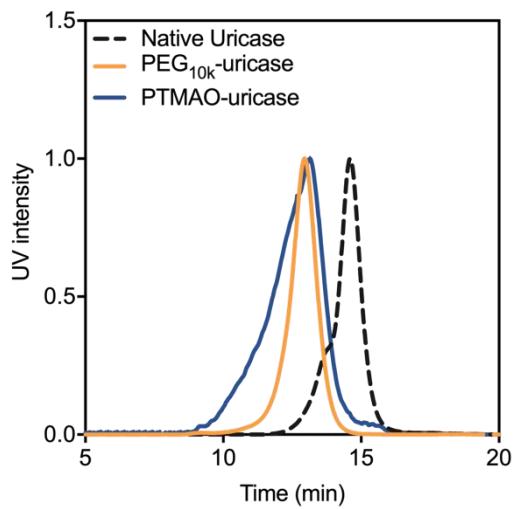
**Fig. S2.** HRMS spectrum of TMAO monomer.



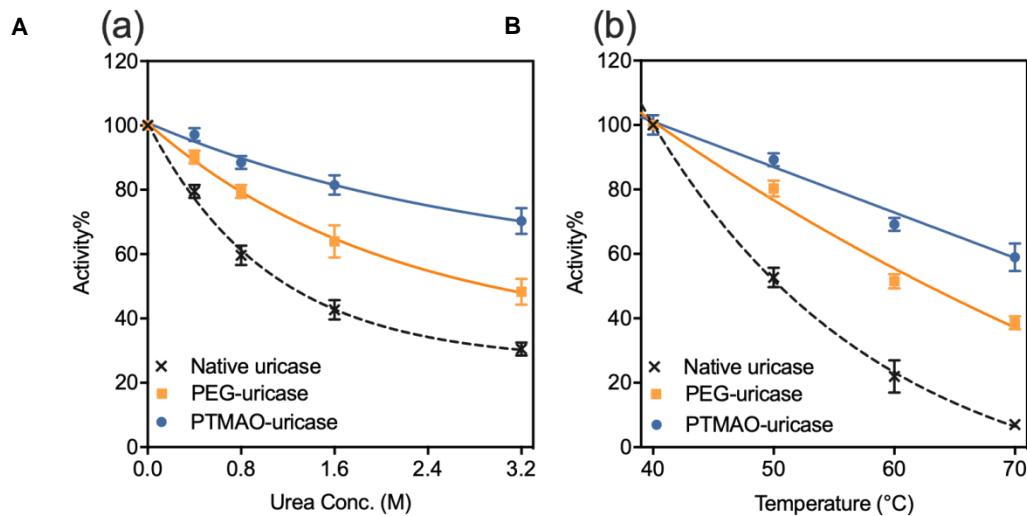
**Fig. S3. Cell adhesion test.** Representative photographs showing cell adhesion on TCPS (A) and TMAO (B) hydrogel surfaces.



**Fig. S4. GPC graph of KLH, PEG<sub>10k</sub>-KLH and TMAO-KLH conjugates.**



**Fig. S5. GPC graph of native uricase, PEG<sub>10k</sub>-uricase and TMAO-uricase conjugates.**



**Fig. S6. Protein stability test.** (a) Retained activity of uricase, PEG-uricase and PTMAO-uricase conjugates after incubation with urea (0-3.2M) for 6 hours; (b) Retained activity of uricase, PEG-uricase, PTMAO-conjugates after incubation at 40-70°C for 30min.

**Table S1. Circulation time of uricase samples after repeated intravenous injections.**

Sample Parameters \	Native uricase		PEG-uricase		TMAO-uricase	
Injection times	1	3	1	3	1	3
$t_{1/2}$ (h)	3.9	1.9	16.2	10.1	19.1	18.2