Supporting Information

Selenium-containing polyurethane with elevated catalytic stability for sustained nitric oxide release

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Fig. S1. (A) Synthesis route of SeDO. (B) $^1$H NMR, (C) $^{13}$C NMR and (D) $^{77}$Se NMR spectra of SeDO.
Fig. S2. EDS spectrograms of PU and PU/PU-Se blend films.

Fig. S3. Catalytic NO release curves of SeDO at different concentrations.
Fig. S4. Se leaking from PU/PU-Se films in PBS buffer containing 50μM GSH at 37 °C.

Fig. S5. Normalized NO release rate of PU-PDA-Se and PU/PU-Se films during exposure in PBS at 37 °C for different time.
Fig. S6. (A) TGA and (B) DSC curves of different films under nitrogen atmosphere at the heating rate of 10 °C min⁻¹. (C) FT-IR spectra of different films.

It can be found that the decomposition temperatures (5% weight loss) were 300 and 270 °C for PU and PU-Se film, respectively. The blend films also showed the similar decomposition temperatures to PU (Fig.S6 A). DSC results showed that a Tₘ at about -45 °C was observed for these films (Fig.S6 B). PU exhibited a Tₘ,soft at 9 °C and a Tₘ,hard at 144 °C, while PU-Se showed a Tₘ,soft at 19 °C and a Tₘ,hard at 112 °C. The Tₘ,soft and Tₘ,hard of blend films were among that of PU and PU-Se. The films showed similar FT-IR spectra characteristic due to the similar polymer backbone (Fig.S6 C).