

Supporting Information

Hydrolytic degradation of bio-based (co)PLA-urethane networks

Figure S1 shows the weight loss profiles of the bio-based (co)PLA-urethane networks in water. All four samples demonstrated less than 3% of weight loss was observed after degradation for 168 h, which might be attributed to hydrophobicity of (co)PLA-urethane networks. To further investigate surface morphology changes during degradation process, N-PLA-1000 film was monitored using SEM, as shown in Figure S2. After degradation for 5 day, the surface was eroded, existed holes. The SEM results suggested that N-PLA-1000 film was slowly degraded in neutral condition, in agreement with weight loss results. During the hydrolytic degradation (degradation condition: 25 °C, pH=7), the pH decreased slightly with time. Figure S3 exhibits the DSC curves of N-PLA-1000 film during hydrolytic degradation. It can be seen that the glass transition temperatures of the film at different degradation time almost kept unchanged (~32.9 °C), indicating slow degradation in neutral condition.

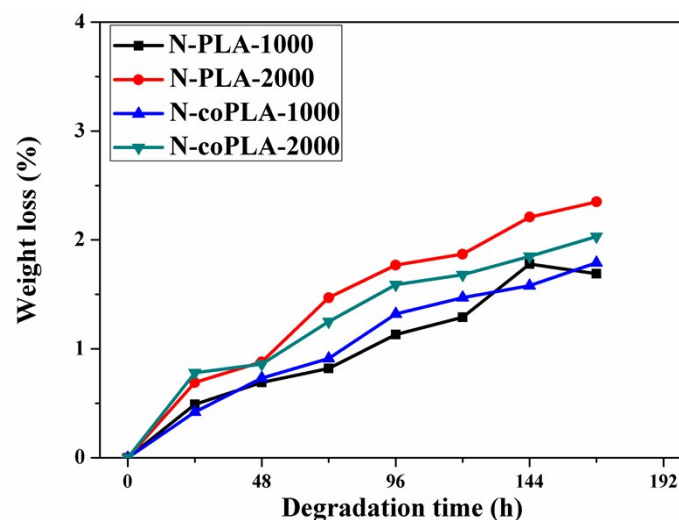


Figure S1 Degradation profiles of bio-based (co)PLA-urethane networks (degradation

condition: 25 °C, pH=7).

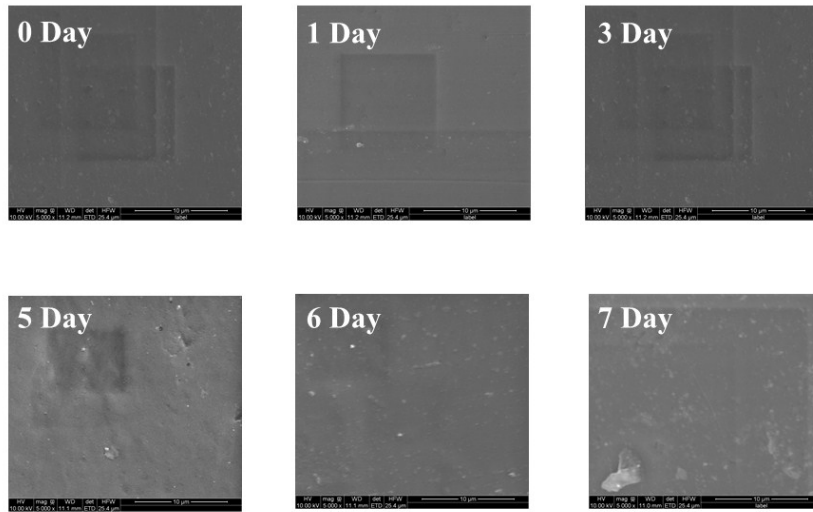


Figure S2. SEM images of N-PLA-1000 film during hydrolytic degradation at different time (degradation condition:25 °C, pH=7).

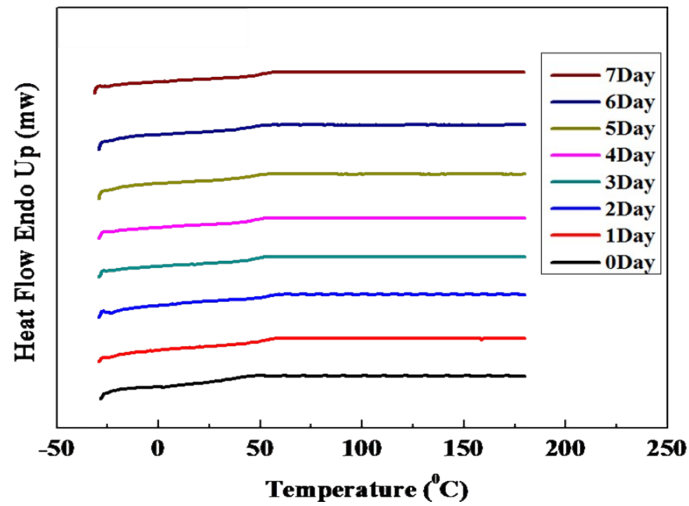


Figure S3. DSC curves of N-PLA-1000 film during hydrolytic degradation at different time (degradation condition:25 °C, pH=7).