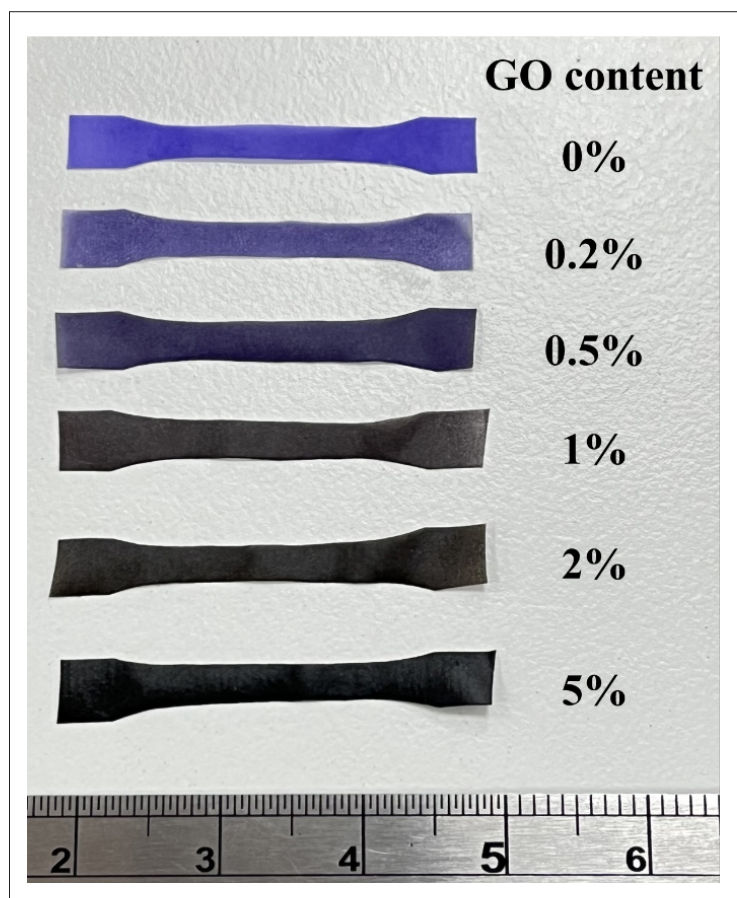


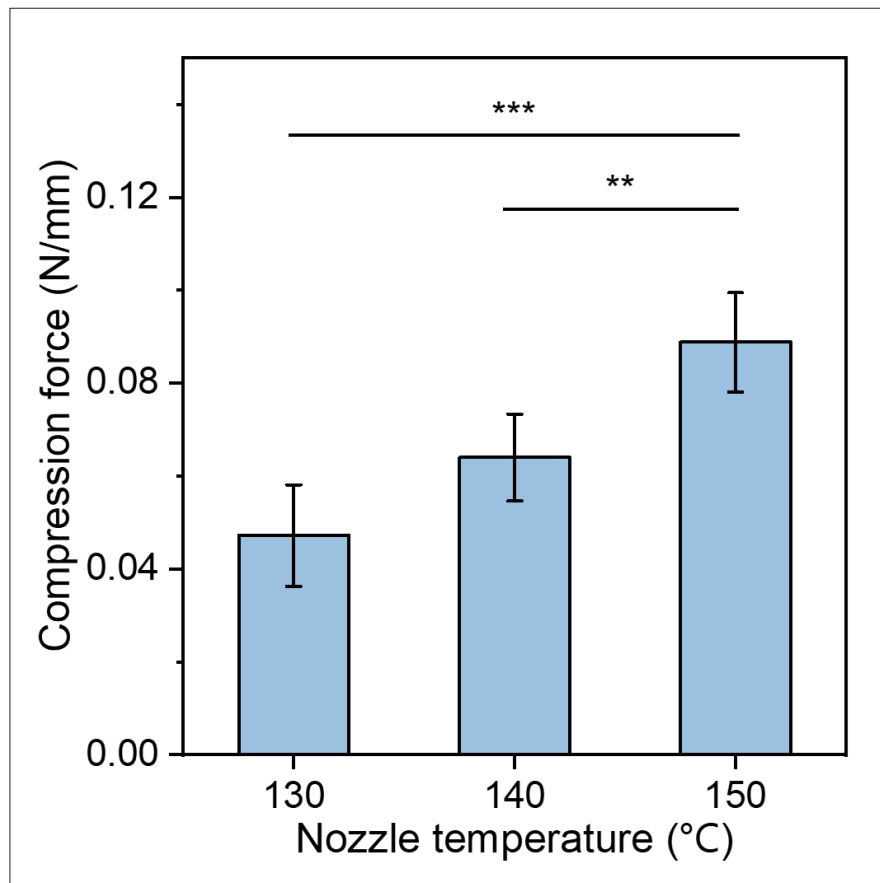
RESEARCH ARTICLE

3D-printed poly(*p*-dioxanone)/graphene oxide composite  
bioresorbable stents for congenital heart disease treatment

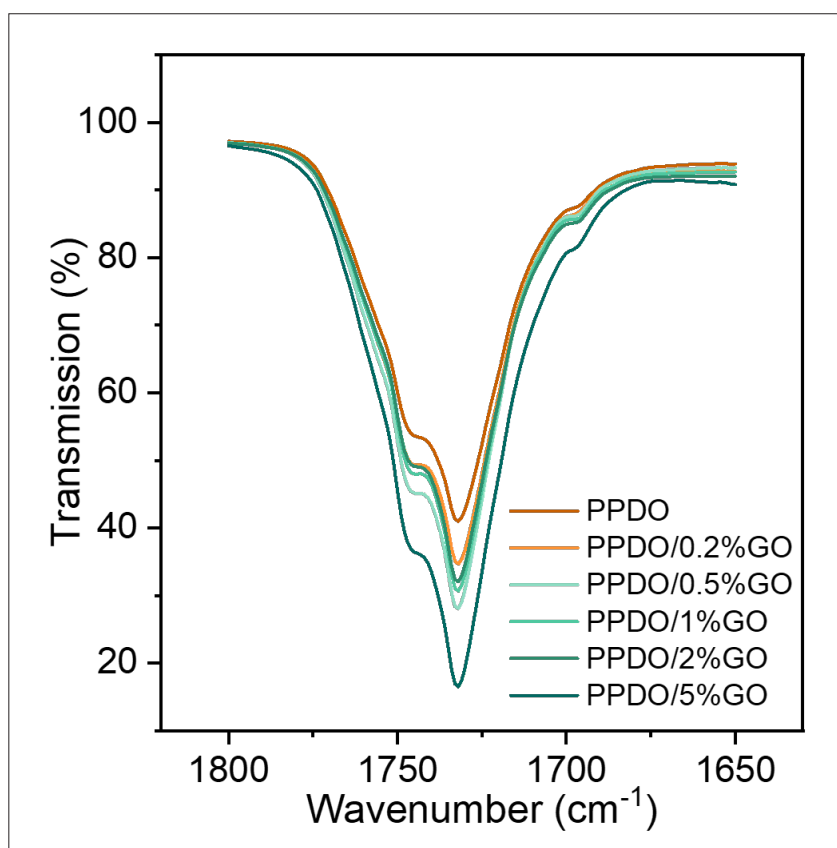
Supplementary File



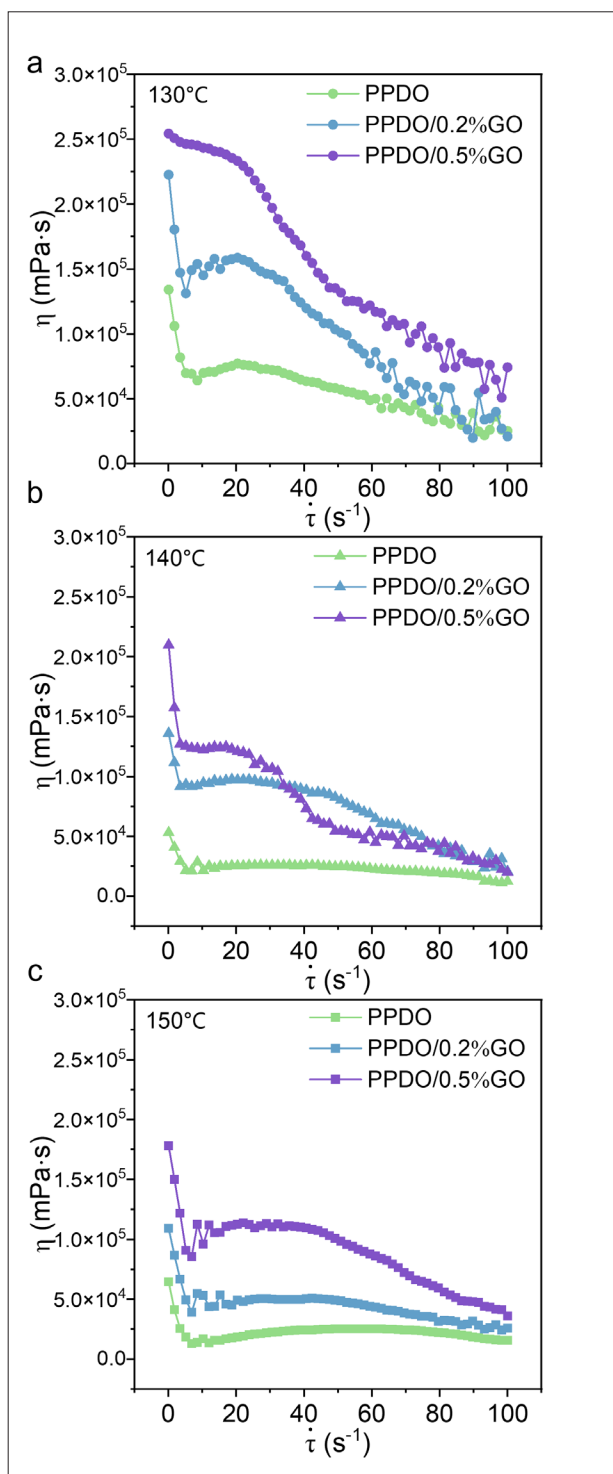
**Figure S1.** PPDO/GO films with different GO contents that were cut into dog-bone specimens for tensile test. Abbreviations: GO, graphene oxide; PPDO, poly(*p*-dioxanone).



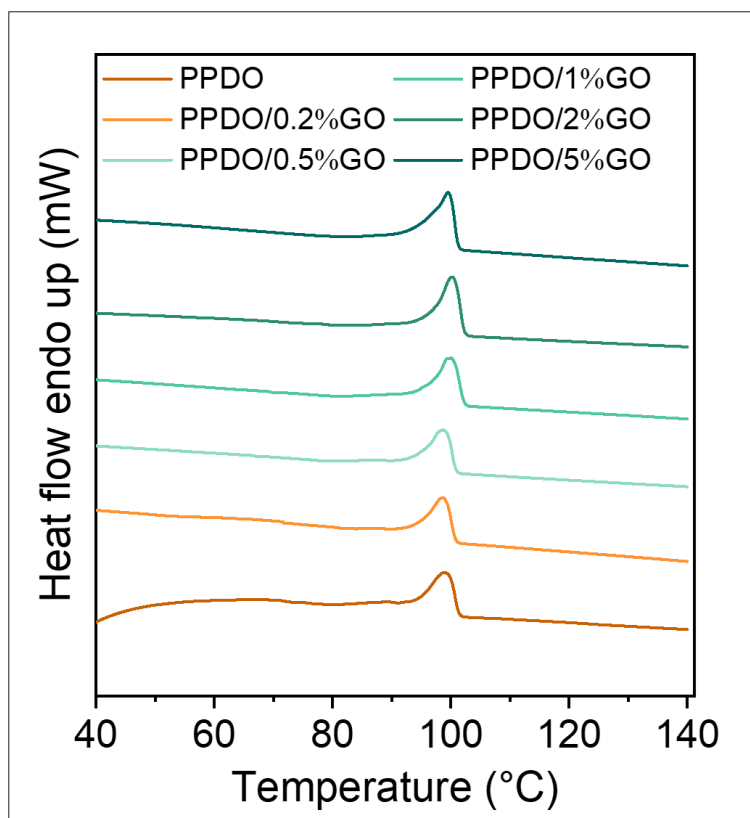
**Figure S2.** Compression force results of the 3D-printed PPDO sliding-lock stent at different nozzle temperatures ( $n = 5$ ).  $**p < 0.01$ ,  $***p < 0.001$ . Abbreviation: PPDO, poly(*p*-dioxanone).



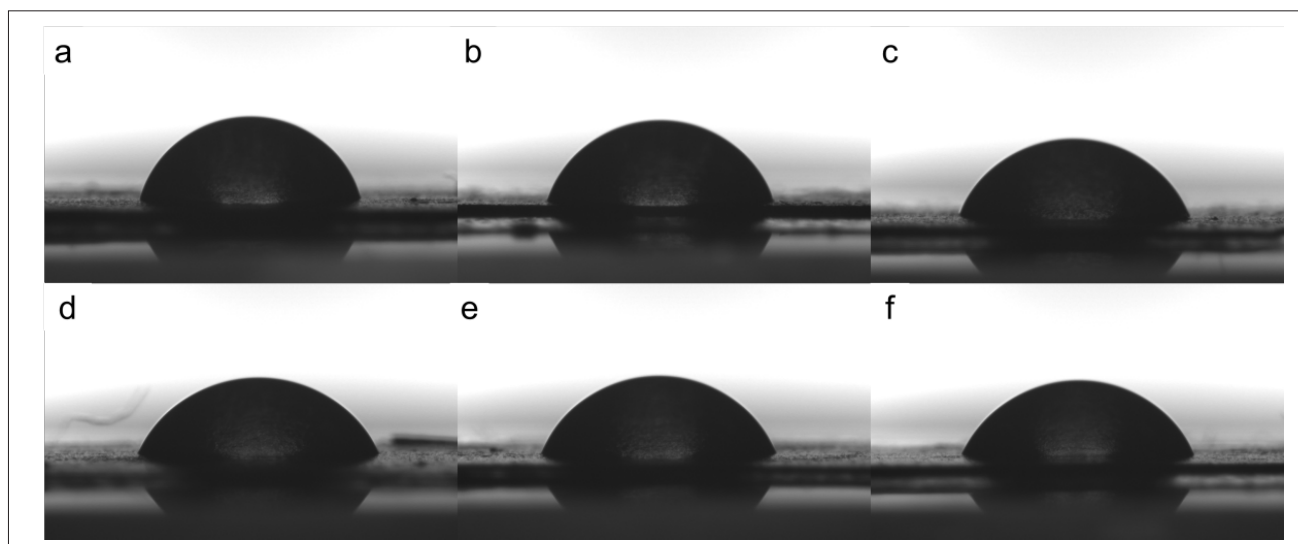
**Figure S3.** Detailed FT-IR spectra of PPDO/GO and PPDO films within the wavenumber range of 1800–1650 cm<sup>-1</sup>. Abbreviations: FT-IR, Fourier transform infrared; GO, graphene oxide; PPDO, poly(*p*-dioxanone).



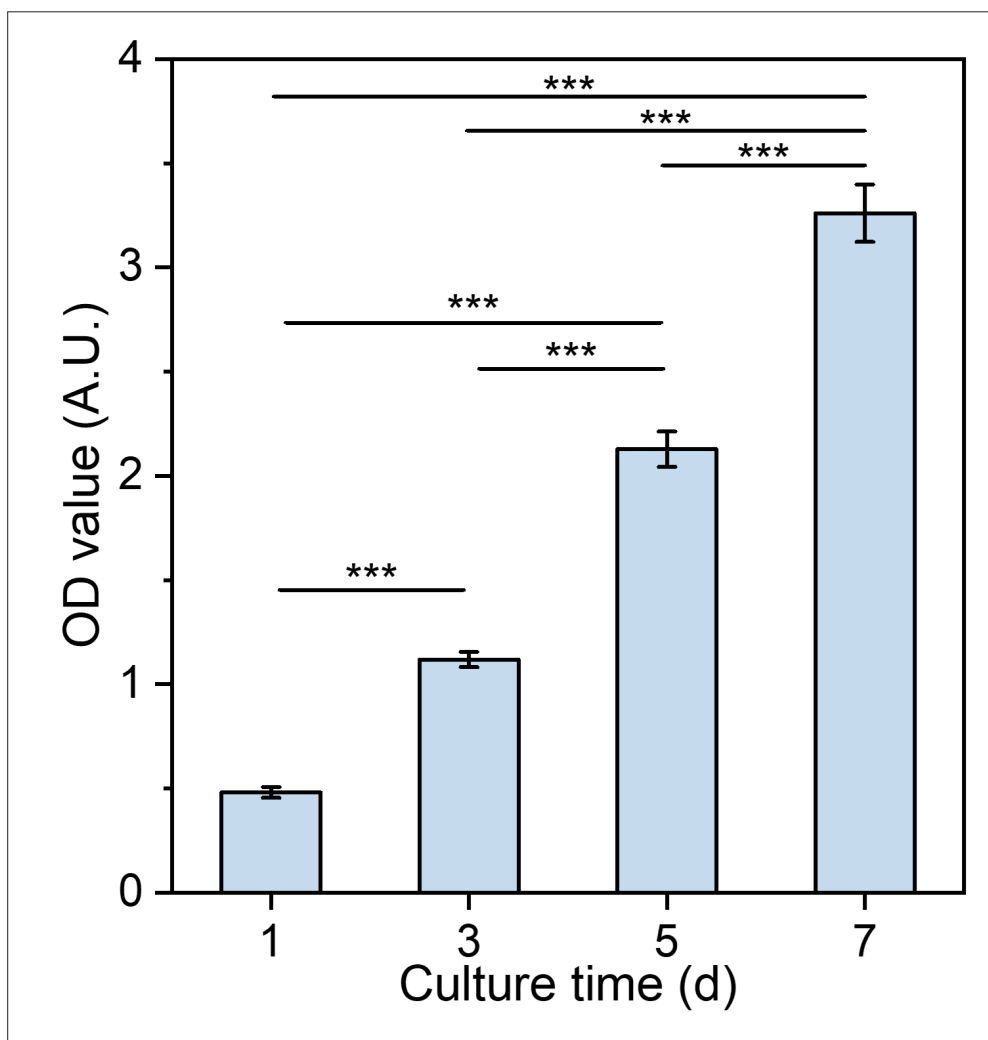
**Figure S4.** Melt viscosity of PPDO and PPDO/GO materials at different temperatures: (a) 130°; (b) 140°; and (c) 150°. Abbreviations:  $\dot{\tau}$ , shear rate;  $\eta$ , melt viscosity; GO, graphene oxide; PPDO, poly(*p*-dioxanone).



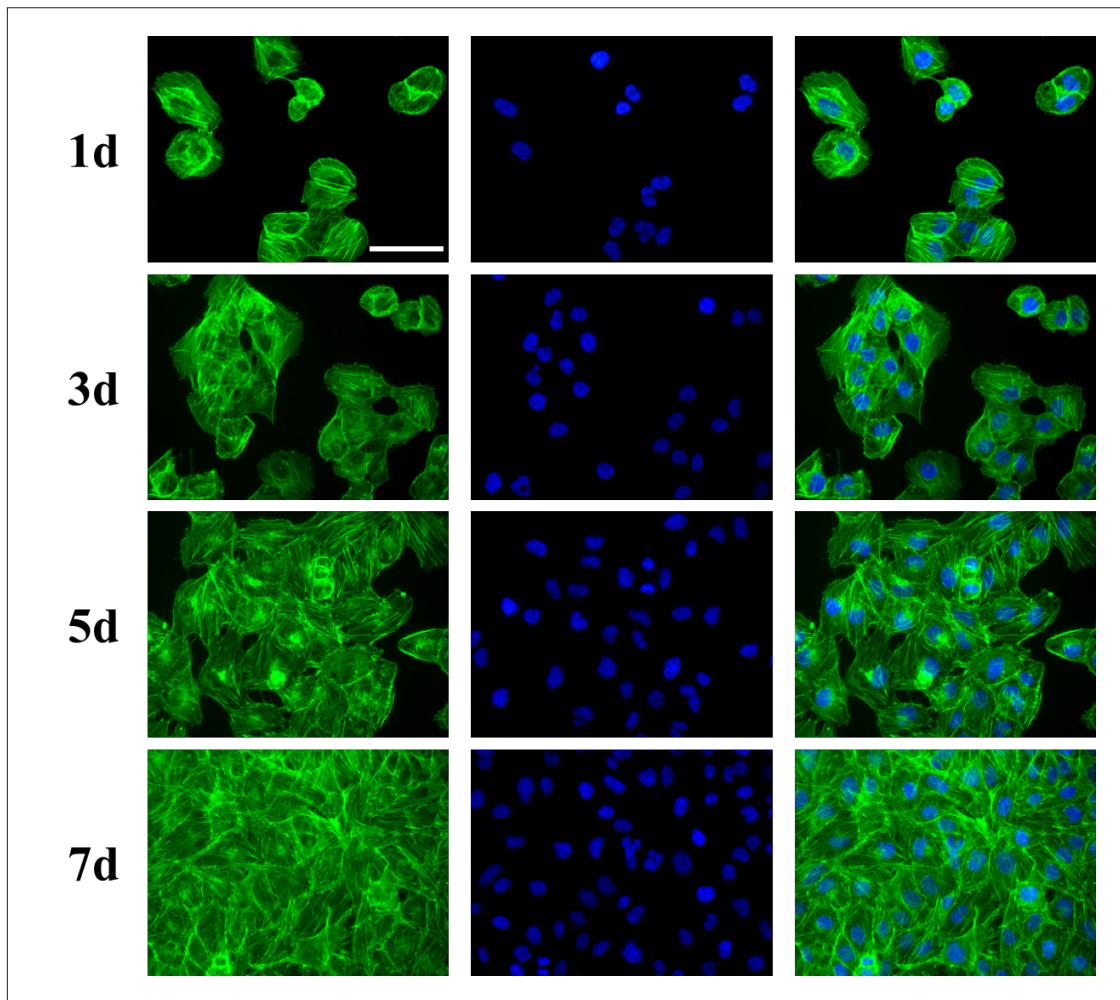
**Figure S5.** Differential scanning calorimetry (DSC) curves of the PPDO/GO and PPDO materials. Abbreviations: GO, graphene oxide; PPDO, poly(*p*-dioxanone).



**Figure S6.** Images of pure water droplets on the surface of PPDO/GO and PPDO films: (a) PPDO; (b) PPDO/0.2%GO; (c) PPDO/0.5%GO; (d) PPDO/1%GO; (e) PPDO/2%GO; and (f) PPDO/5%GO. Abbreviations: GO, graphene oxide; PPDO, poly(*p*-dioxanone).



**Figure S7.** Optical density (OD) value of Cell Counting Kit-8 (CCK-8) test of human umbilical vein endothelial cells (HUVECs) cultured on tissue culture plate (control group) for 1, 3, 5, and 7 days (d). \*\*\* $p < 0.001$ ;  $n = 3$ .



**Figure S8.** Immunofluorescence images of human umbilical vein endothelial cells (HUVECs) cultured on tissue culture plate (control group) for 1, 3, 5, and 7 days (d). Green: actin filaments; blue: nuclei. Scale bar: 75  $\mu\text{m}$ .