Supplementary Material

**Supplementary Figure 1.** TEM image of PB on different scale.

**Supplementary Figure 2.** XPS spectrum of all elements(A) and C 1s(B).
Supplementary Figure 3. Raman spectrum.

![Supplementary Figure 3](image)

Supplementary Figure 4. Zeta potentials.

![Supplementary Figure 4](image)

Supplementary Figure 5. Changes in the hydrodynamic size of PB incubated in different media for 7 days.
Supplementary Figure 6. POD-like activity of PB. (A) The absorbance curves of TMB/ H$_2$O$_2$ + PB of 400-800 nm wavelength (inset: Digital photo of TMB/ H$_2$O$_2$ + PB system). The time-dependent absorbance changes of TMB/ H$_2$O$_2$ + PB at 650 nm wavelength at various (B) PB concentrations (pH=5.5, TMB 100uM, H$_2$O$_2$ 1mM), (C) pH (PB=20uM, TMB 100uM, H$_2$O$_2$ 1mM).

Supplementary Figure 7. Serum levels of ALT (A) and AST (B) from different treatment groups after 90 min of ischemia and 6 h of reperfusion (n=6).