Supporting information for

## Electroactive scaffolds of biodegradable polyurethane/polydopamine-

## functionalized graphene oxide regulating inflammatory response and

## revitalizing axonal growth cone for peripheral nerve regeneration

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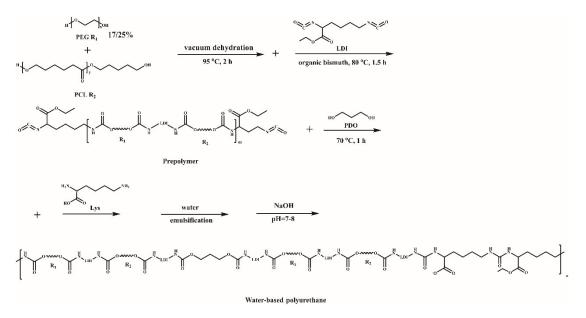


Fig. S1 Schematic of the synthesis of BWPU.

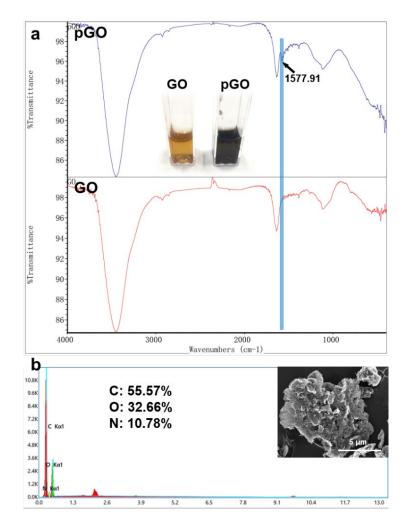


Fig. S2 (a) FTIR spectrum of pGO and GO. Inset: photographs of the aqueous dispersion of pGO and GO. (b) EDS spectrum and the corresponding SEM image of pGO.

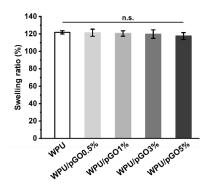


Fig. S3 Swelling ratios of WPU/pGO scaffolds. After measuring the volume of scaffolds in the dry state, they were soaked in PBS overnight to obtain the volume in the swelling state, and then the swelling ratio was calculated as the ratio between the wet and wet states.

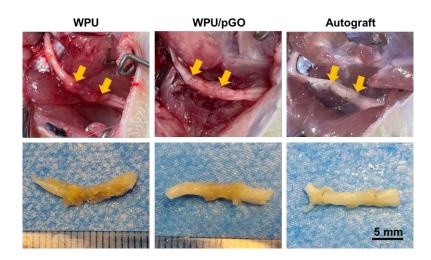


Fig. S4 Gross observation of the regenerated sciatic nerve (between yellow arrows) at weeks 12 postoperatively.