SUPPORTING INFORMATION

Injectable Dopamine-Modified Poly(ethylene glycol) Nanocomposite Hydrogel with Enhanced Adhesive Property and Bioactivity

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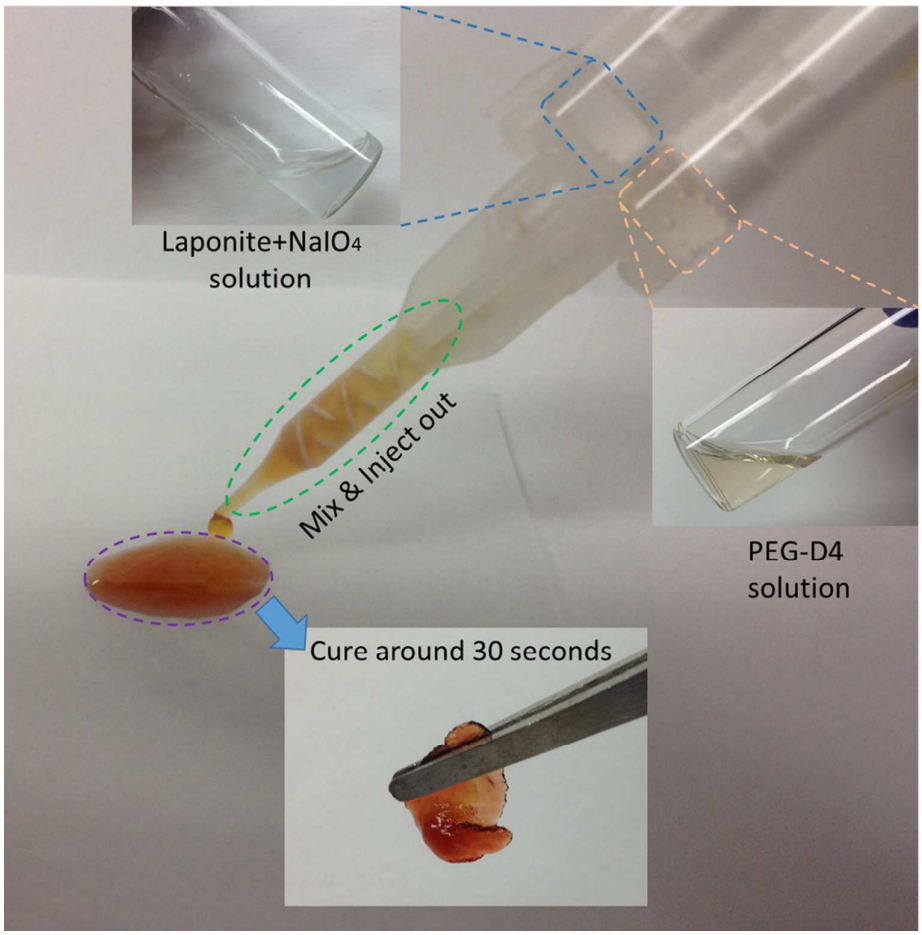


Figure S1. Photographs of injecting PEG-D4 nanocomposite hydrogel precursor solutions using a dual-barreled syringe system. The bottom inset showed the cured hydrogel. The final concentration for the nanocomposite hydrogel contains a $NaIO_4$:dopamine molar ratio of 0.5 and 2 wt% Laponite.

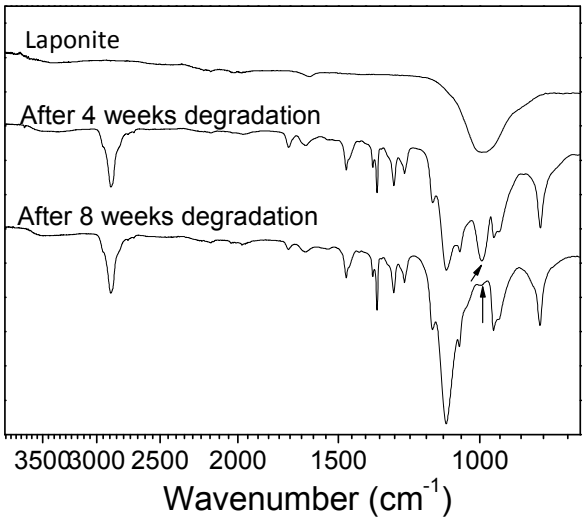


Figure S2. FTIR spectra of Laponite, PEG-D4 with 2 wt% Laponite hydrogel after 4 and 8 weeks of degradation. The arrows indicate the Si-O-Si peak in the nanocomposite hydrogel.

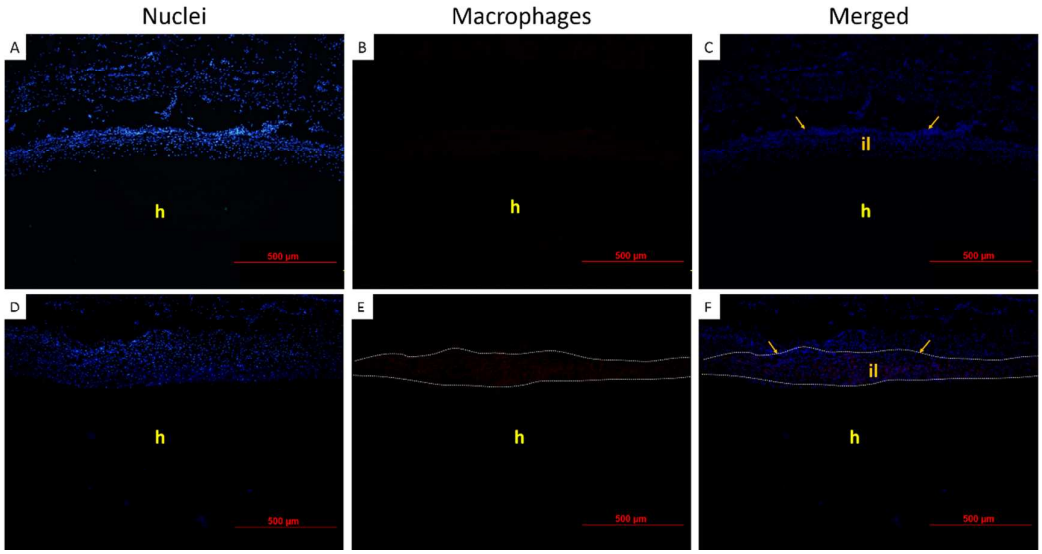
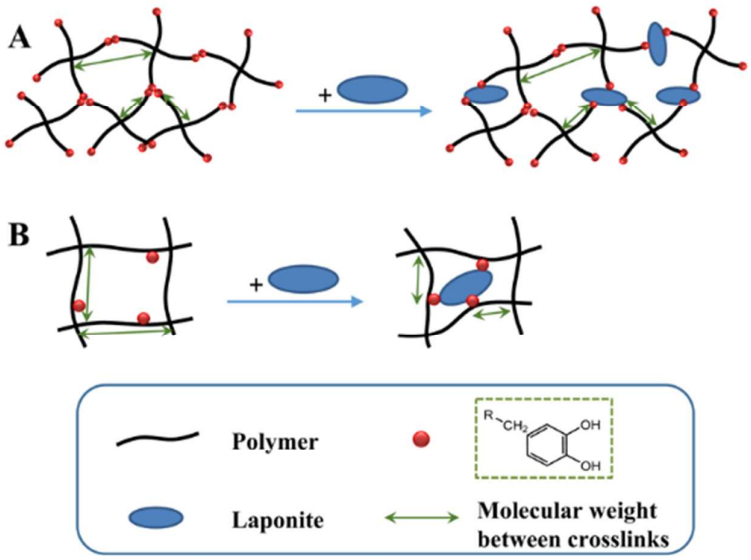


Figure S3. Immunohistochemical staining images of PEG-D4 hydrogels with 0wt% (**A**, **B**, **C**) and 2 wt% (**D**, **E**, **F**) Laponite and surrounding tissues after 4 weeks of subcutaneous implantation. Cell nuclei were stained by DAPI (blue), and macrophages were stained by marker CD68 (red). "**h**": hydrogel; "**il**": infiltraion layer; arrows: interface between hydrogel and tissue. Panels **E** and **F** contain faint red spots enclosed within the white dashed lines, corresponding to the presence of macrophages. No macrophage was detected for Laponite-free samples (**B** and **C**).



Scheme S1. Schematic representation of how the network structure change with the introduction of Laponite. For PEG-D4, crosslinking (i.e., polymerization of dopamine or dopamine-Laponite interaction) occurs at the terminal dopamine moiety and no new crosslinking points are made with the addition of Laponite, resulting in minimal change to the molecular weight between crosslinks (**A**). This is different when compared to a network where dopamine is present as a dangling functional group on the polymer chain and the addition of Laponite forms new crosslinking points, which drastically alter the molecular weight between crosslinks (**B**).