

Supporting Information

Novel pH Responsive Hydrogels for Controlled Cell Adhesion and Triggered Surface Detachment

Xiao-Qiu Dou,^{‡a} Xiaomei Yang,^{‡b} Ping Li,^a Zhigang Zhang,^{*b} Holger Schönherr,^c Di Zhang^a and Chuan-Liang Feng^a

^a State Key Lab of Metal Matrix Composites, School of Materials Science and Engineering, Shanghai Jiaotong University, 800 Dongchuan Road, Shanghai 200240, China

^b State Key Laboratory of Oncogenes and Related Genes, Shanghai Cancer Institute, Renji Hospital, Shanghai Jiaotong University School of Medicine, 800 Dongchuan Road, Shanghai 200040, China

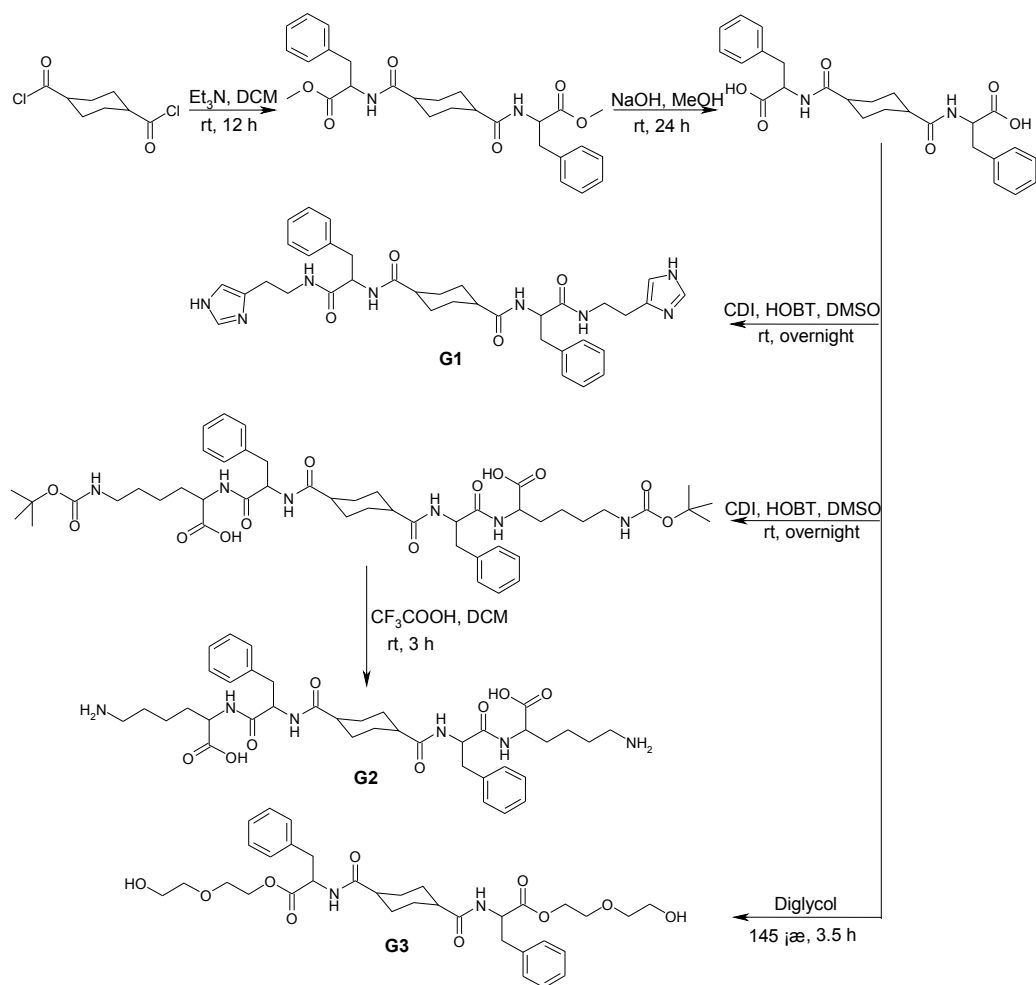
^c Physical Chemistry I, University of Siegen, Science & Technology, Department of Chemistry and Biology, Adolf-Reichwein-Str. 2, 57076 Siegen, Germany

* Corresponding author: Prof. Dr. C. L. Feng, Fax: +86 2154747651;

E-mail: clfeng@sjtu.edu.cn

Prof. Dr. Z. G. Zhang, E-mail: zzzhang@shsci.org

[‡] These authors contributed equally to this work and should be considered co-first authors.



Scheme S1. Synthetic route of G1, G2 and G3.

Formation of hydrogel

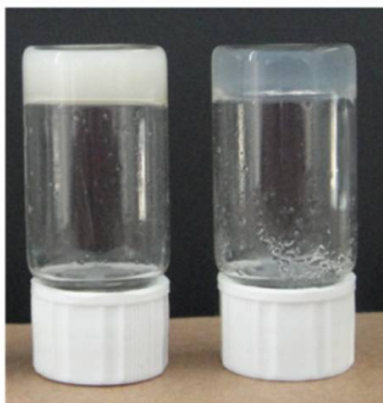


Fig. S1 Hydrogel of G1 (left, 10mg/ml) and G2 (right, 5mg/ml).

X-Ray Diffraction (XRD) studies

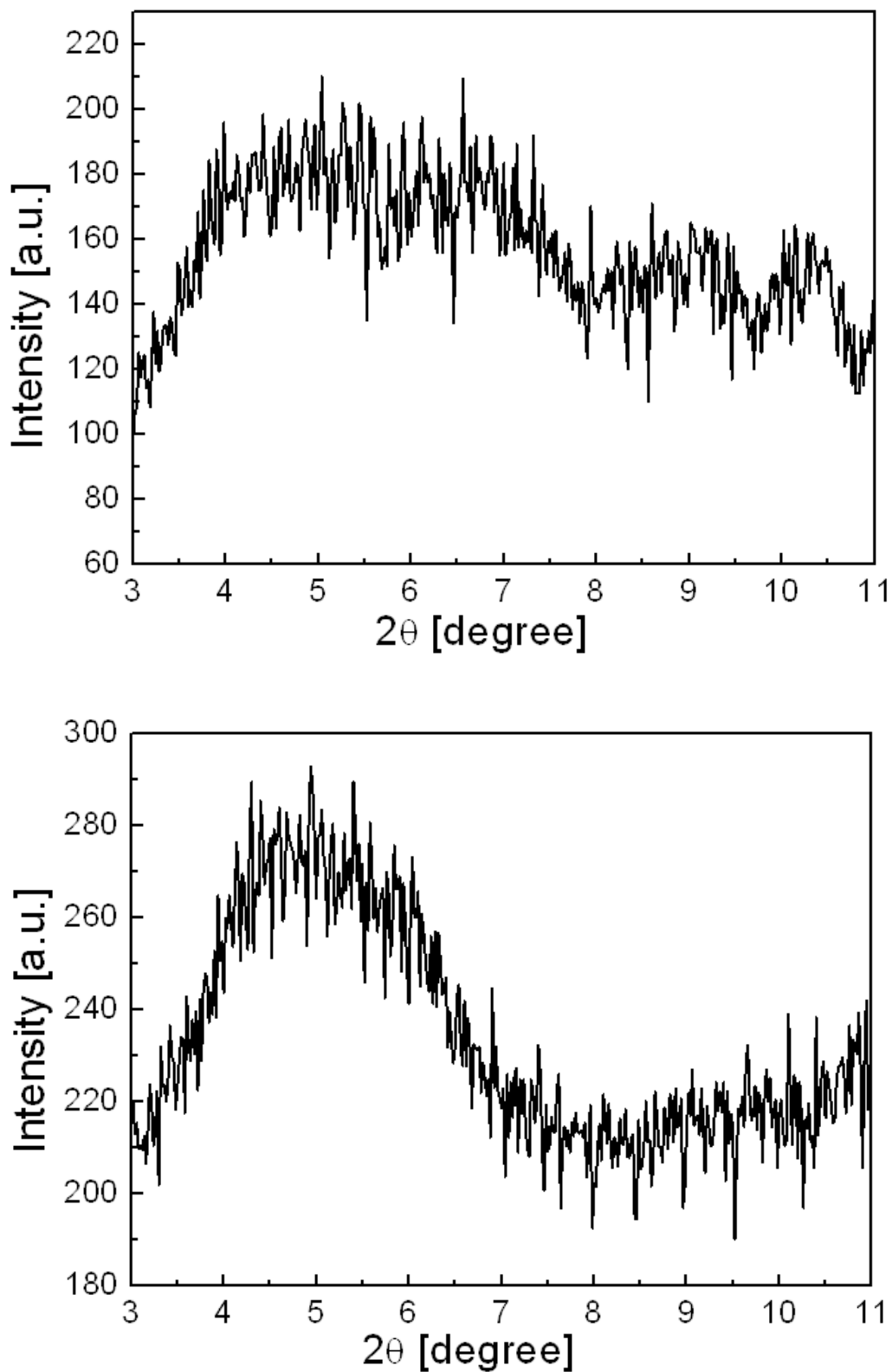


Fig. S2 XRD patterns of dried hydrogel of G1 (top) and G2 (bottom).

Circular dichroism spectroscopy (CD) studies

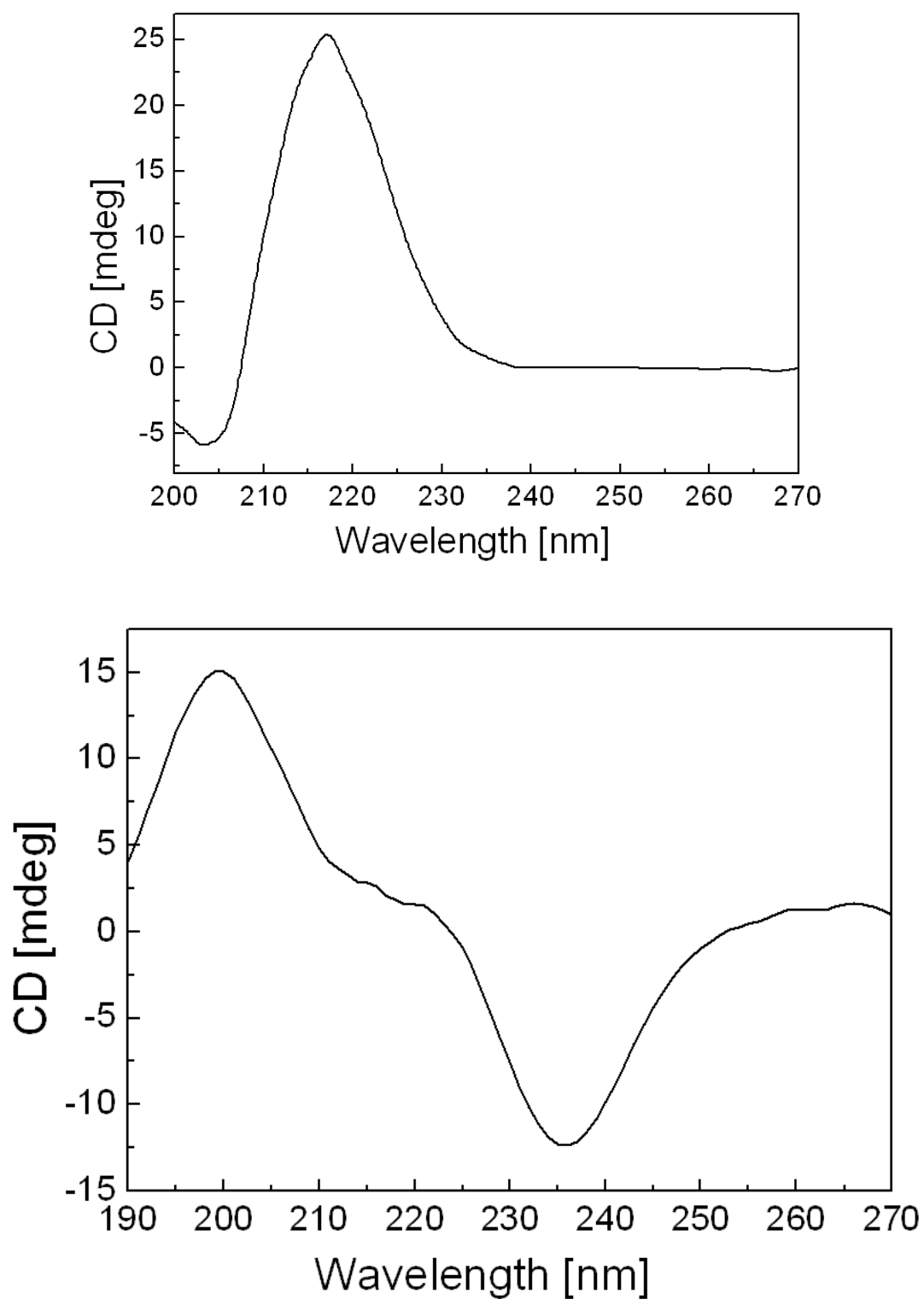


Fig. S3 CD spectra of G1 (top) and G2 (bottom).

2D Cell Culture:

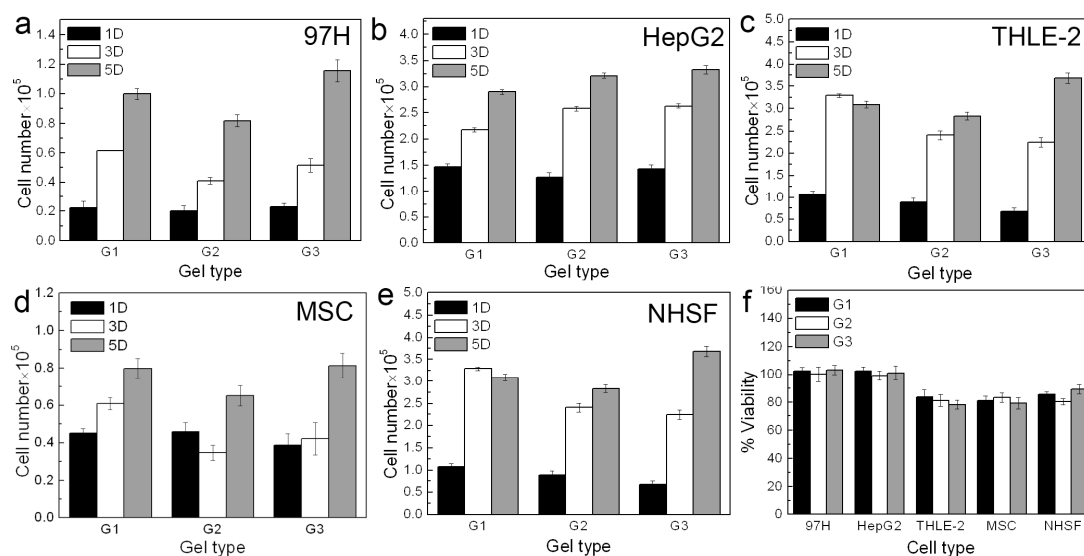


Fig. S4 Proliferation of cells on G1, G2 and G3 scaffolds: (a) 97H, (b) HepG2, (c) THLE-2, (d) MSC, (e) NHSF. (d) Cell viability after 24 h.

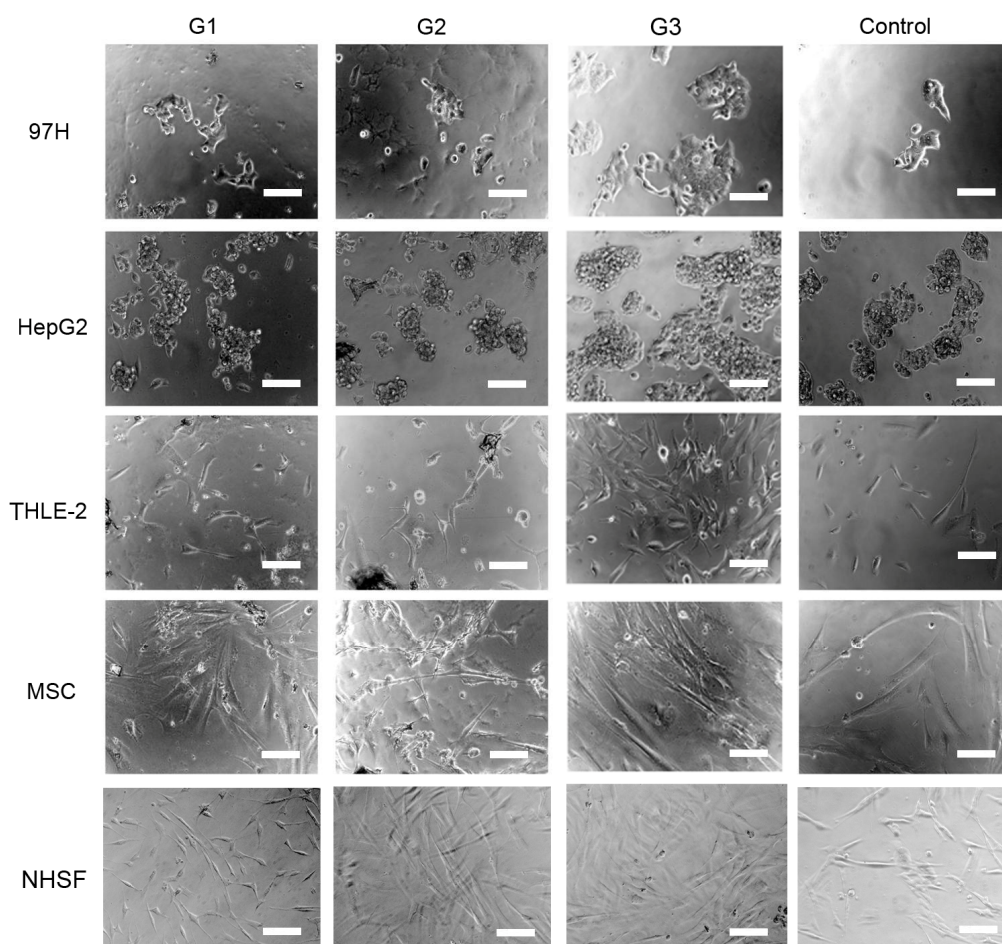


Fig. S5 Phase microscope images of cells morphology on G1, G2 and G3 hydrogel scaffolds, and the glass control over 24 h. The scale bars correspond to 250 μm.