

## Supporting information

# Silk Fibroin Nanofibrous Mats for Visible Sensing of Oxidative Stress in Cutaneous Wounds

*Sushant Singh<sup>1</sup>, Gabriela Cortes<sup>2</sup>, Udit Kumar<sup>1</sup>, Tamil S. Sakthivel<sup>1</sup>, Stephen M. Niemiec<sup>4</sup>,  
Amanda E. Louiselle<sup>4</sup>, Mark Azeltine-Bannerman<sup>4</sup>, Carlos Zgheib<sup>4</sup>, Kenneth W. Liechty<sup>4</sup>, Sudipta  
Seal<sup>1,3\*</sup>*

<sup>1</sup>Advanced Material Processing and Analysis Center, Department of Material Science and  
Engineering University of Central Florida, Orlando, FL, 32816

<sup>2</sup>Dept. of Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA 30332

<sup>3</sup>College of Medicine, University of Central Florida, Orlando, FL, 32816

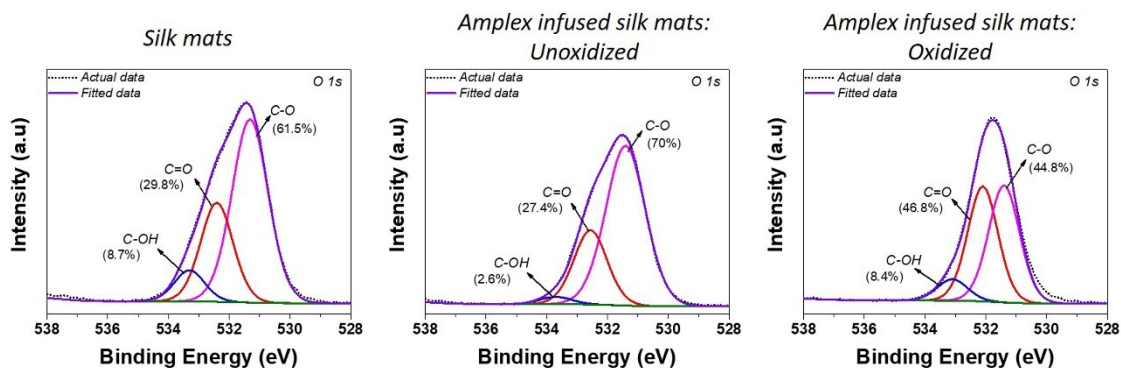
<sup>4</sup>Laboratory for Fetal and Regenerative Biology, Department of Surgery, University of Colorado  
Denver School of Medicine and Children's Hospital Colorado, Aurora, CO, 80045

### **Corresponding Author**

*Prof. Sudipta Seal ([Sudipta.Seal@ucf.edu](mailto:Sudipta.Seal@ucf.edu))*

Trustee Chair

University Distinguished Professor and Pegasus Professor  
Chair, Materials Science and Engineering, CECS



**Figure S1:** C 1s spectra of respective silk fibroin mats with the deconvolution of the experimental spectra results in peaks corresponding to the binding energy of C-O, C=O and C-OH and integrated peak area ratio of the individual oxygen species. Changes in the integrate peak area ratio of amplex infused silk fibroin mats after the  $\text{H}_2\text{O}_2$  treatment clearly indicates that the oxidation reaction occurs in the amplex infused silk fibroin mats