

Description of Additional Supplementary Files

File name: Supplementary Video 1

Description: Video of light delivery with biointerface implantation location on the rat femur.

File name: Supplementary Video 2

Description: Video with corresponding plot of wireless recording of strain of the left femur during gait.

File name: Supplementary Video 3

Description: Video of real time smartphone recording of strain on a sheep humerus cadaver.

File name: Supplementary Video 4

Description: Video of real time smartphone recording of strain on a human femur model.