

Supporting Information

Electron Transport in Muscle Protein Collagen

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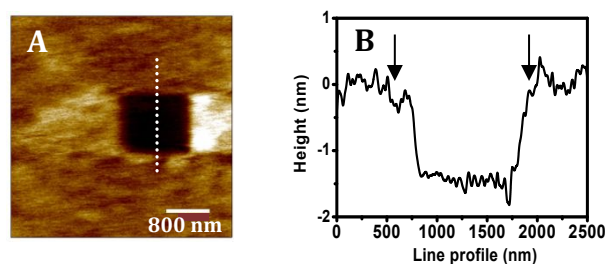


Figure S1: (A) ACAFM topography image of a scratched region of denatured collagen protein film formed onto silicon substrate; (B) cross-sectional line profile over the scratched region indicating layer thickness of 1.48 nm.

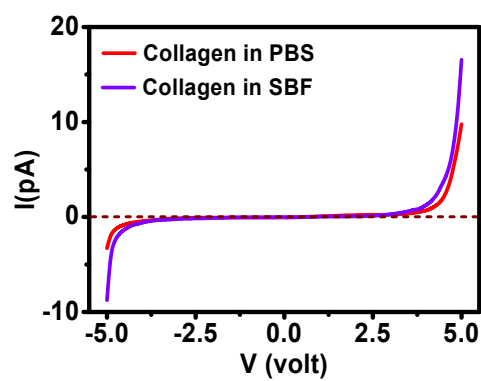


Figure S2: Overlay of averaged I-V curves of collagen in PBS and SBF under same force (54-60 nN) for ± 5 V sweep range, 10 sec sweep duration, up sweep direction, using CSAFS.

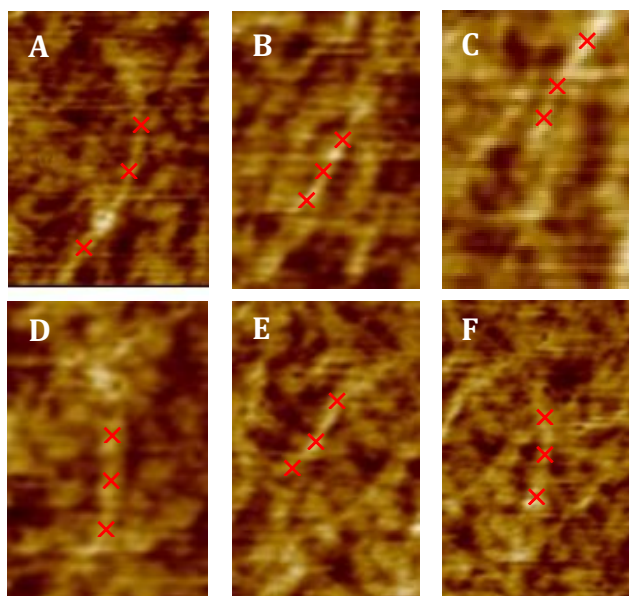


Figure S3: (A-F) Magnified views of the individual collagen fibers, along with the points of I-V data collection (red crosses) at different positions along the long axes of the fibers.

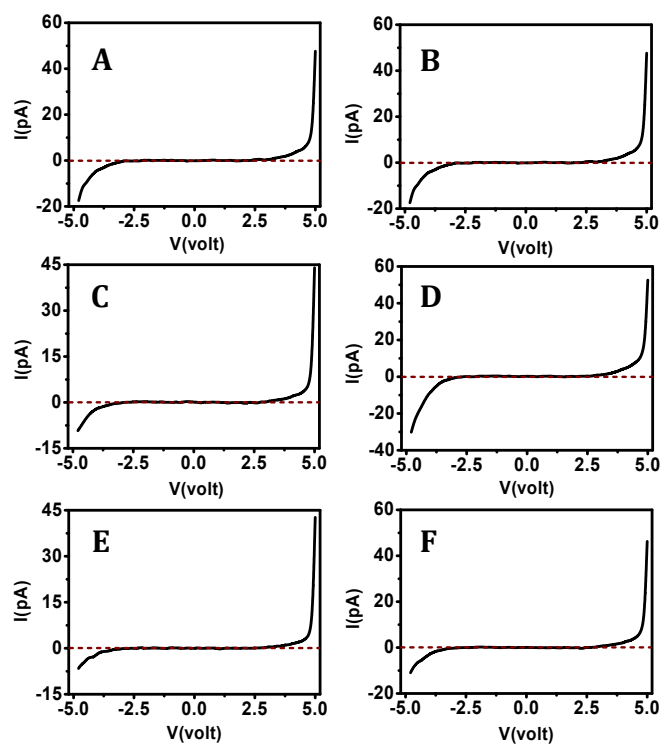


Figure S4: (A-F) Averaged I-V curves of six different collagen fibers at ± 5 V sweep range, 70 nN force load using CSAFS.

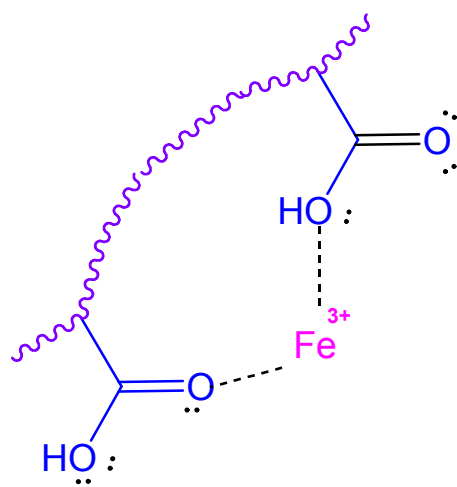


Figure S5: Chelating interaction of Fe^{3+} with carboxylic acid groups of acidic amino acid residues of collagen fibril.