Electronic Supporting Information

Conformational Transitions in Redissolved Silk Fibroin Films and Application for Printable Self-Powered Multistate Resistive Memory Biomaterials

Valeria Libera,^a Rocco Malaspina,^a Silvia Bittolo Bon,^a Martina Alunni Cardinali,^b Irene Chiesa,^c Carmelo De Maria,^c Alessandro Paciaroni,^a Caterina Petrillo,^a Lucia Comez,^d Paola Sassi,^b Luca Valentini^{*a}

- ^a Dipartimento di Fisica e Geologia, Università degli Studi di Perugia, Via A. Pascoli, 06123, Perugia, Italy
- ^b Department of Chemistry, Biology and Biotechnology, University of Perugia Via Elce di Sotto 8, 06123, Perugia Italy
- ^c Department of Ingegneria dell'Informazione and Research Center E. Piaggio, University of Pisa, Largo Lucio Lazzarino 1, Pisa, 56122, Italy
- d CNR-IOM Istituto Officina dei Materiali, National Research Council of
 Italy, Via Alessandro Pascoli, 06123 Perugia, Italy
- ^e Civil and Environmental Engineering Department and INSTM Research Unit, University of Perugia, Strada di Pentima 8, 05100, Terni, Italy

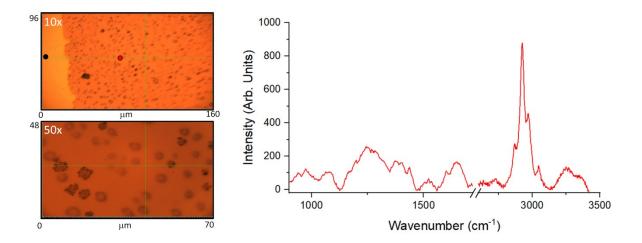


Fig. S1. Optical images (left) of the holey structures fabricated via extrusion-based 3D printing of SF solution in PBS on ITO after the analysis presented in Figure 5. The Raman spectrum displayed on the right was obtained from the location marked by the intersection of the green lines.

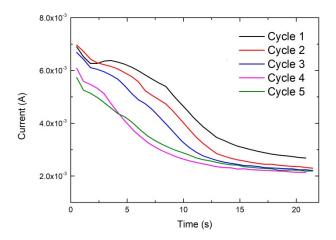


Fig. S2. Current fluctuation versus time recorded from cycle 1 to cycle 5 of Fig. 5b.