

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: 3D extrusion printing of tough pyramid hydrogel with the THVMD strategy

File Name: Supplementary Movie 2

Description: Operating the integrated device by a tough hydrogel-based touching sensor

File Name: Supplementary Movie 3

Description: Stretching, bending, and twisting the as-prepared flexible electroluminescent unit