

Description of Additional Supplementary Files:

Supplementary Movie 1: Wireless powering and communication enabled by metamaterial textile.

Supplementary Movie 2: Wireless signal enhancement by metamaterial textile.

Supplementary Movie 3: Battery-free wireless sensory glove enabled by metamaterial textiles.

Supplementary Movie 4: Human-robot collaboration by battery-free WBSN.

Supplementary Movie 5: Unencumbered and intuitive VR interaction by battery-free WBSN.

Supplementary Movie 6: Untethered full body motion digital twin by battery-free WBSN.

Supplementary Movie 7: Washing protocol.