

## Supporting Information

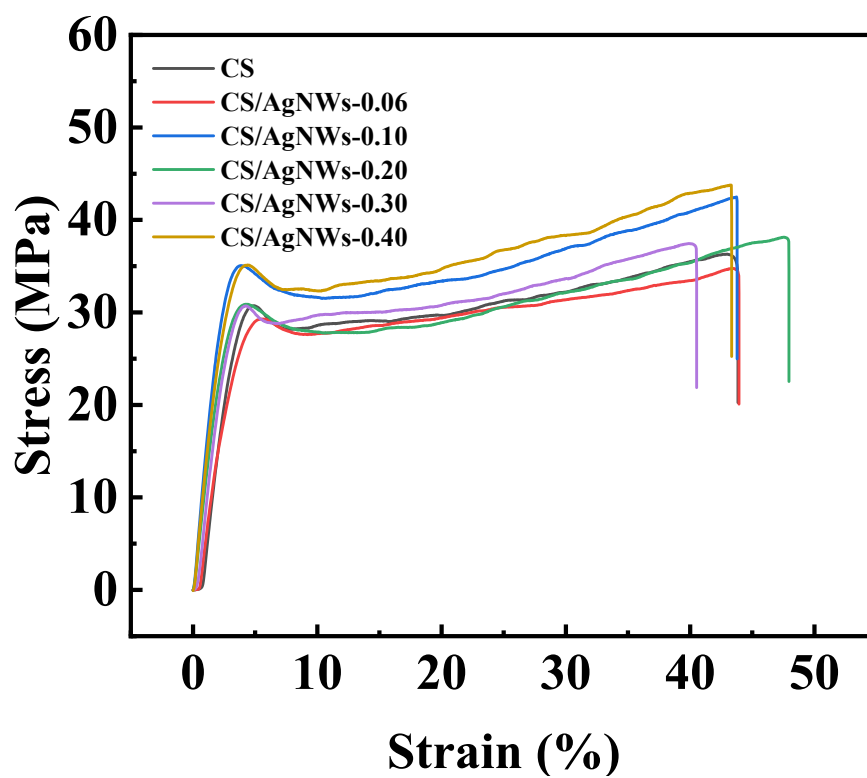


Fig. 1. Stress-strain curves of CS/AgNWs composite films with different AgNWs contents.

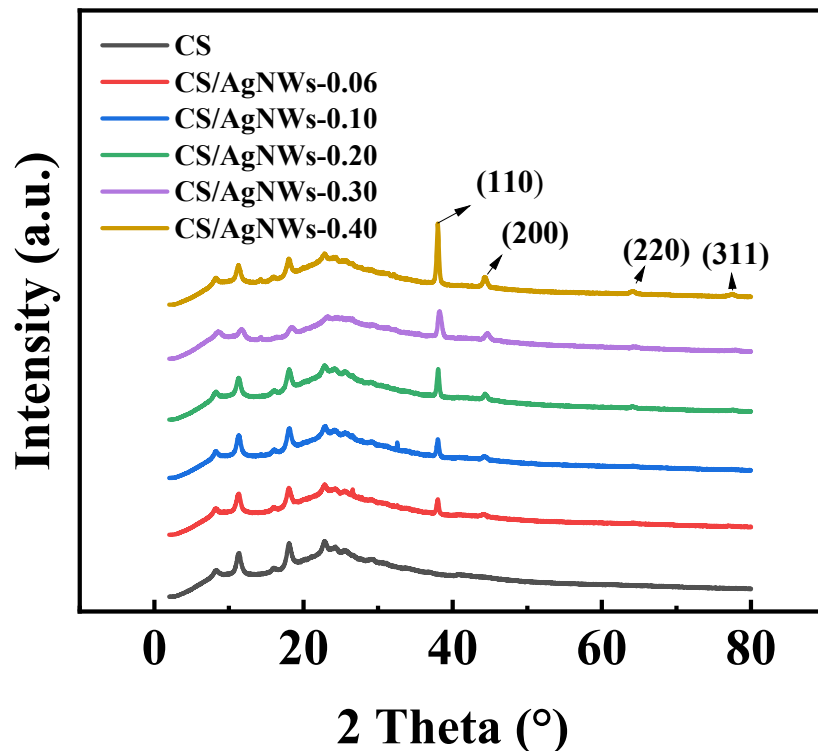


Fig. 2. XRD patterns of pure CS film and CS/AgNWs composite films with different AgNWs contents.

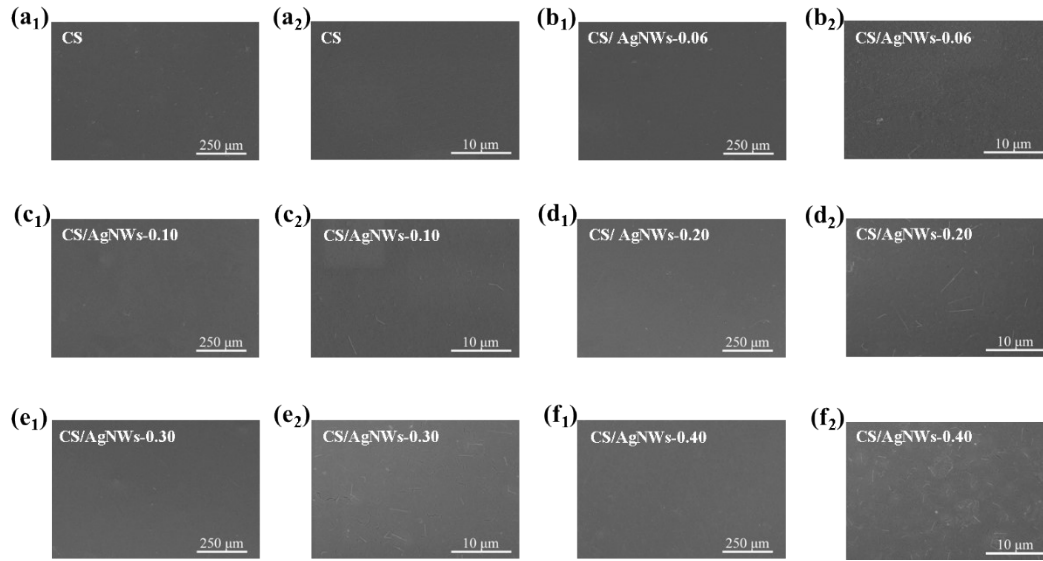


Fig. 3. SEM images of the surface morphology of CS and CS/AgNWs composite films with different AgNWs contents: (a<sub>1</sub>-a<sub>2</sub>) pure CS; (b<sub>1</sub>-b<sub>2</sub>) CS/AgNWs-0.06; (c<sub>1</sub>-c<sub>2</sub>) CS/AgNWs-0.10; (d<sub>1</sub>-d<sub>2</sub>) CS/AgNWs-0.20; (e<sub>1</sub>-e<sub>2</sub>) CS/AgNWs-0.30; (f<sub>1</sub>-f<sub>2</sub>) CS/AgNWs-0.40.

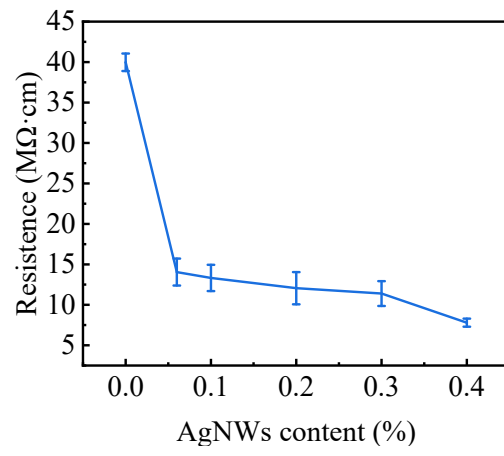


Fig. 4. Resistivity of pure CS film and CS/AgNWs composite films with different AgNWs contents

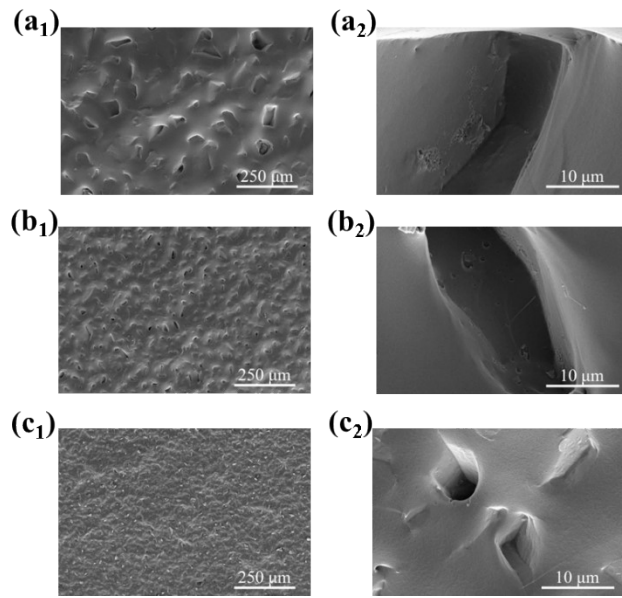


Fig. 5. SEM images of the surface morphology of CS/AgNWs-0.20 composite films processed with sandpaper of different mesh number: (a<sub>1</sub>-a<sub>2</sub>) CS/AgNWs-0.20-220#; (b<sub>1</sub>-b<sub>2</sub>) CS/AgNWs-0.20-800#; (c<sub>1</sub>-c<sub>2</sub>) CS/AgNWs-0.20-2000#.

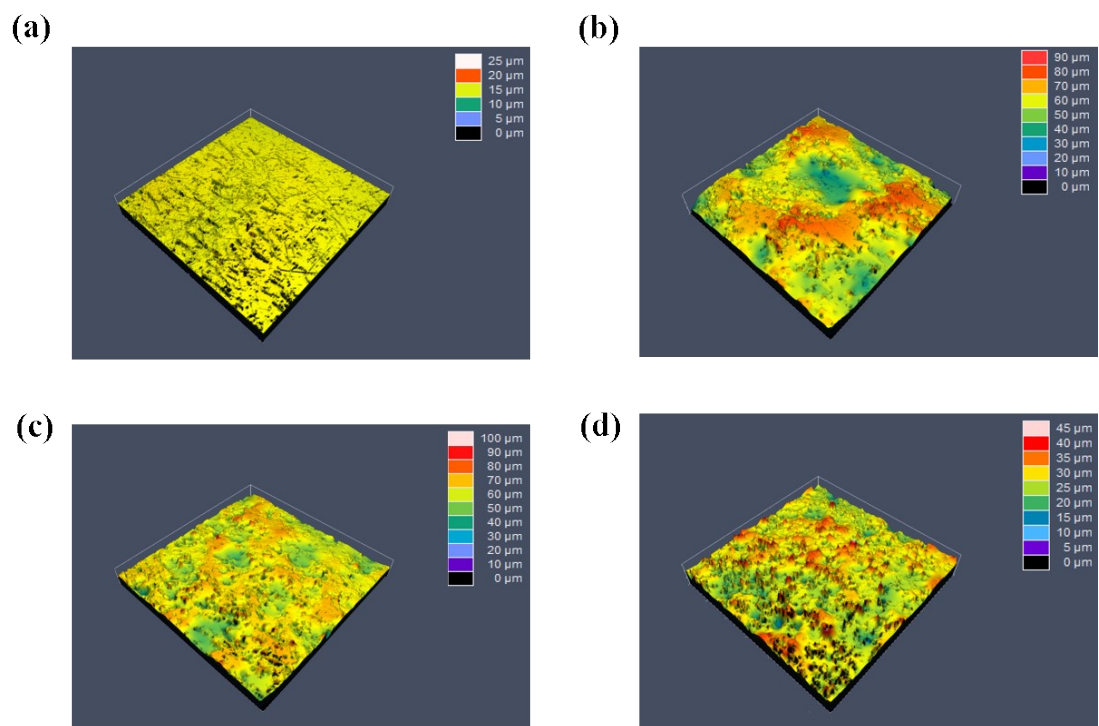


Fig. 6. CLSM images of the surface morphology of CS/AgNWs-0.20 composite films processed with sandpaper of different mesh number: (a) CS/AgNWs-0.20; (b) CS/AgNWs-0.20-220#; (c) CS/AgNWs-0.20-800#; (d) CS/AgNWs-0.20-2000#.