

Supplementary information

Silver metal organic decomposition ink for ultrathin and highly efficient electromagnetic shielding film

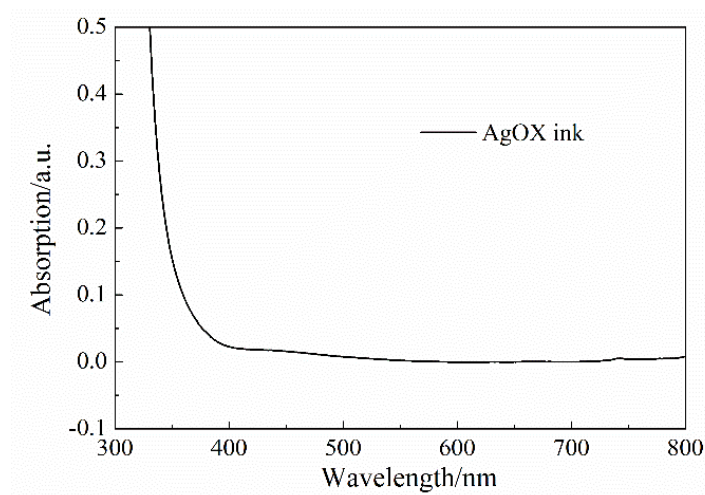


Fig. S1 UV-vis spectrum of the silver oxalate-1,2-diaminopropane ink.

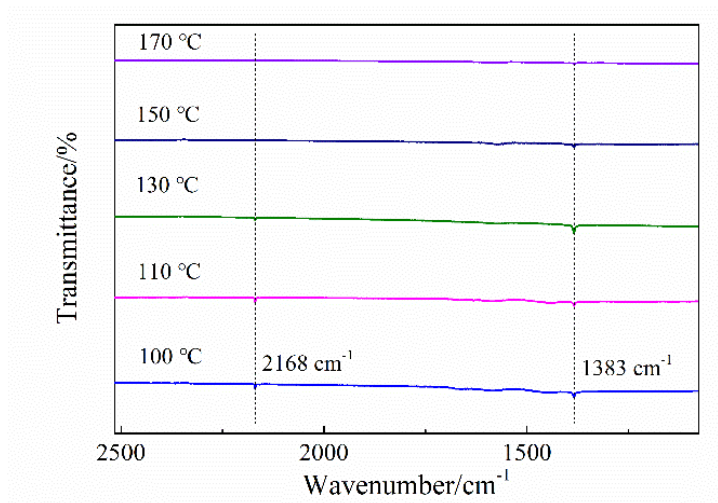


Fig. S2 Local expansion of FTIR spectrum of silver films with different temperatures

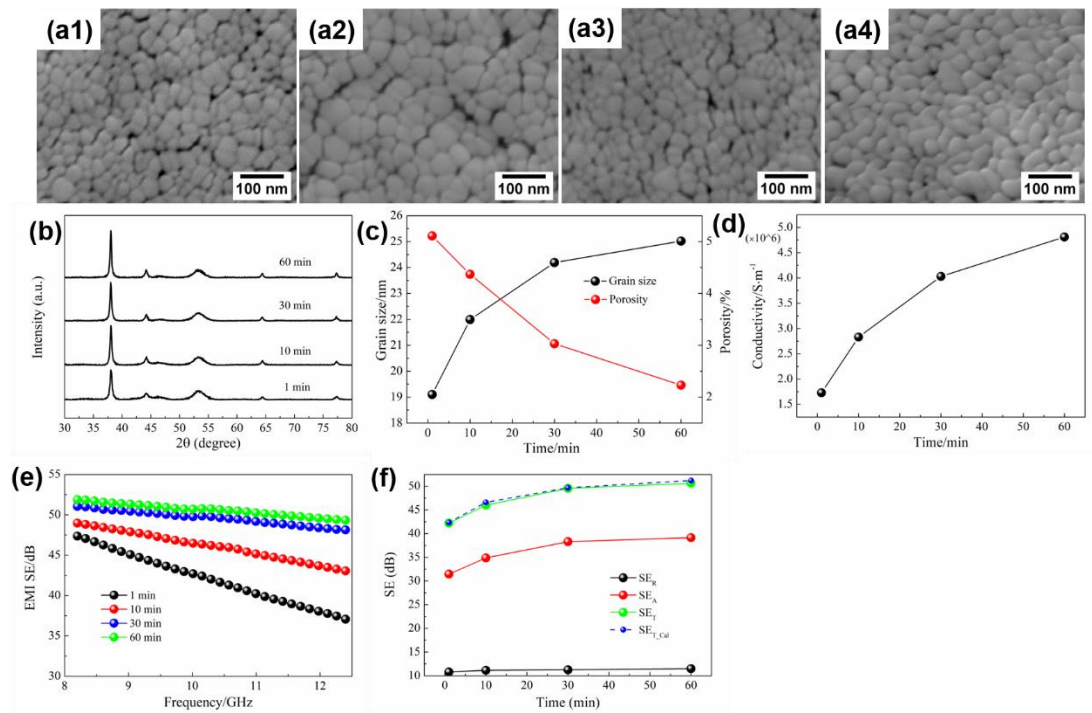


Fig. S3 Characterizations and property measurement of films thermal treated at 130 °C for different time. (a1~a4) SEM images. (a1) 1 min, (a2) 10 min, (a3) 30 min, (a4) 60 min.

(b) XRD patterns, (c) grain size and porosity, (d) conductivity, (e) EMI SE in the frequency of 8.2~12.4 GHz, (f) the comparison of SE_R, SE_A, SE_T, SE_{T_Cal} at 10.3 GHz.

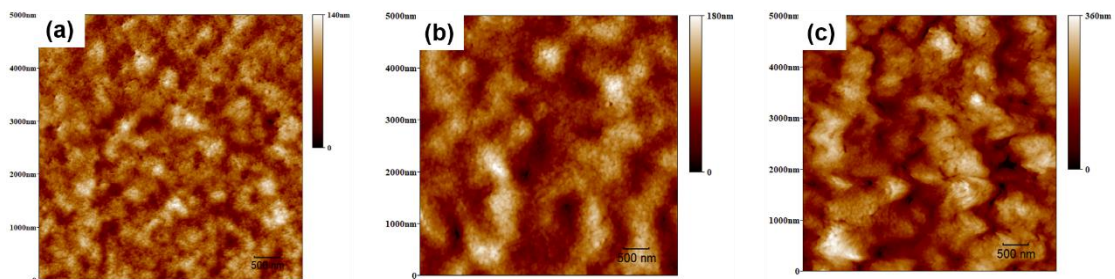


Fig. S4 AFM images of 0.25 M films with different layers. (a) 1 layer, (b) 3 layers, (c) 6 layers.

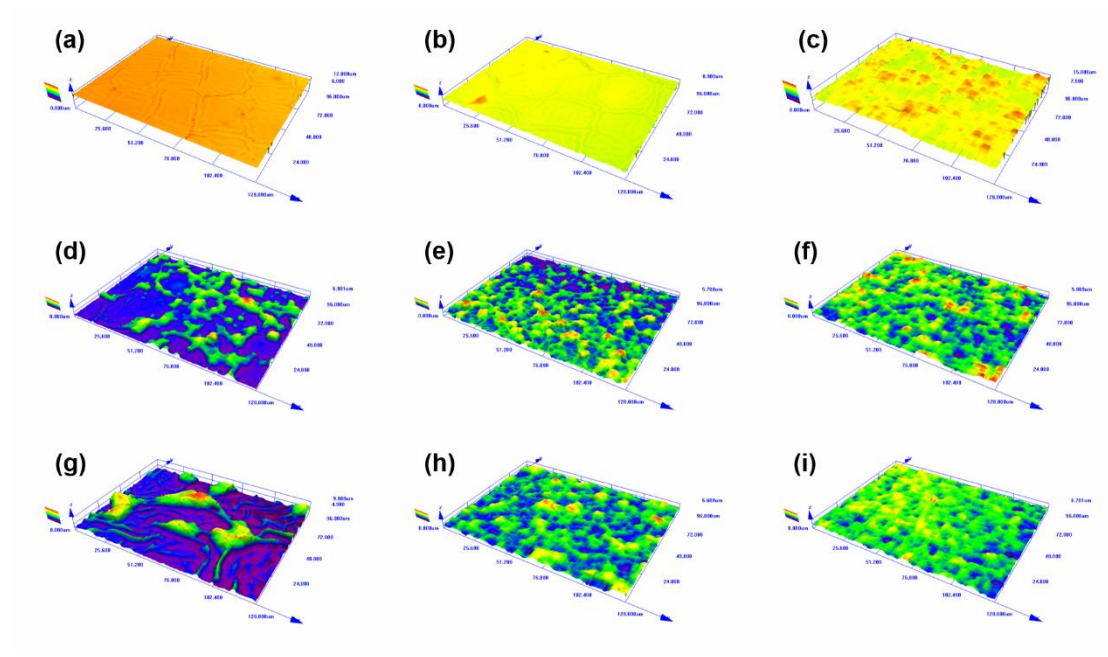


Fig. S5 Laser confocal micrographs of films with different concentrations and layers.

(a~c) 0.5 M films with 1 layer (a), 3 layers (b), 6 layers (c).

(d~f) 1 M films with 1 layer (d), 3 layers (e), 6 layers (f).

(g~i) 2 M films with 1 layer (g), 3 layers (h), 6 layers (i).

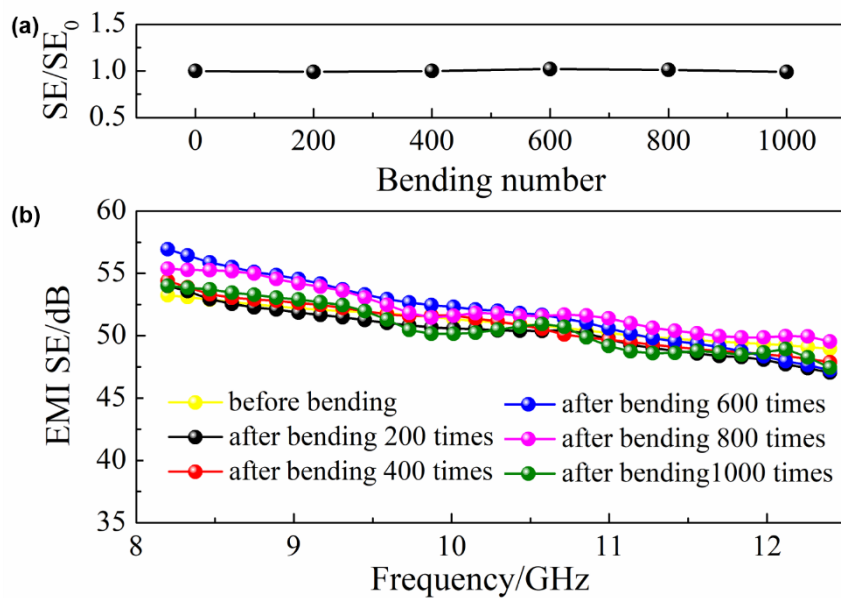


Fig. S6 (a) Variations in SE at 10.3 GHz of Ag films as a function of the bending number with a radius of curvature of 2.5 mm. (b) EMI SE of Ag films before and after bending different times.