## **Supporting Information**

## Segmental dynamics and physical aging of polystyrene/silver nanocomposites

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Fig. S1 (a) TEM image and (b) diameter distribution of silver nanoparticles.

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**Fig. S2** Dielectric loss as a function of frequency for (a) PS/Ag-3% and (b) PS/Ag-10% nanocomposites at various temperatures.



**Fig. S3** FTIR spectra of pure PS and PS/Ag nanocomposites with 3 and 10 wt% Ag nanoparticles.



Fig. S4 Shape parameters of the  $\alpha$ -relaxation at 393 K for PS/Ag nanocomposites with various Ag nanoparticle loading.