Supplementary Information

Multifunctional Core-Shell Polymer-Inorganic Hybrid Nanofibers Prepared *via* Block Copolymer Self-Assembly

Sunita Sanwaria,¹ Sajan Singh,¹ Andriy Horechyy,² Petr Formanek,² Manfred Stamm,^{2,3} Rajiv Srivastava,¹ Bhanu Nandan,^{*1}

¹Department of Textile Technology, Indian Institute of Technology Delhi, Hauz Khas, New Delhi 110016, India

²Leibniz Institut für Polymerforschung Dresden e.V., Hohe Strasse 6, 01069 Dresden, Germany

³Technische Universität Dresden, Physical Chemistry of Polymer Materials, 01062 Dresden, Germany

* Corresponding authors: E-Mail: nandan@textile.iitd.ac.in



Figure 1S. (a) TEM image, (b) size distribution histogram PS-stabilized AgNP.



Figure 2S. (a) TEM image, (b) size distribution histogram citrate-stabilized AuNP.



Figure 3S. SEM image of Ag@PS-b-P4VP@Au nanofibers prepared via ex-situ approach. Pre-synthesized citrate-stabilized Au nanoparticles were deposited after onto P4VP shell of Ag@PS-b-P4VP nanofibers from their aqueous dispersion. The inset shows TEM image of Ag@PS-b-P4VP@Au nanofiber.



Figure 4S. UV-vis spectra of PS-stabilized Ag nanoparticles in chloroform and nanofibers with encapsulated Ag nanoparticles dispersed in methanol. The red shift in the plasmon peak position is, plausibly, due to the close packing of Ag nanoparticles in polymer nanofibers.