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Supplementary Information

Polymer Nanocomposites using Click Chemistry: Novel Materials for Hydrogen Peroxide Vapor Sensors

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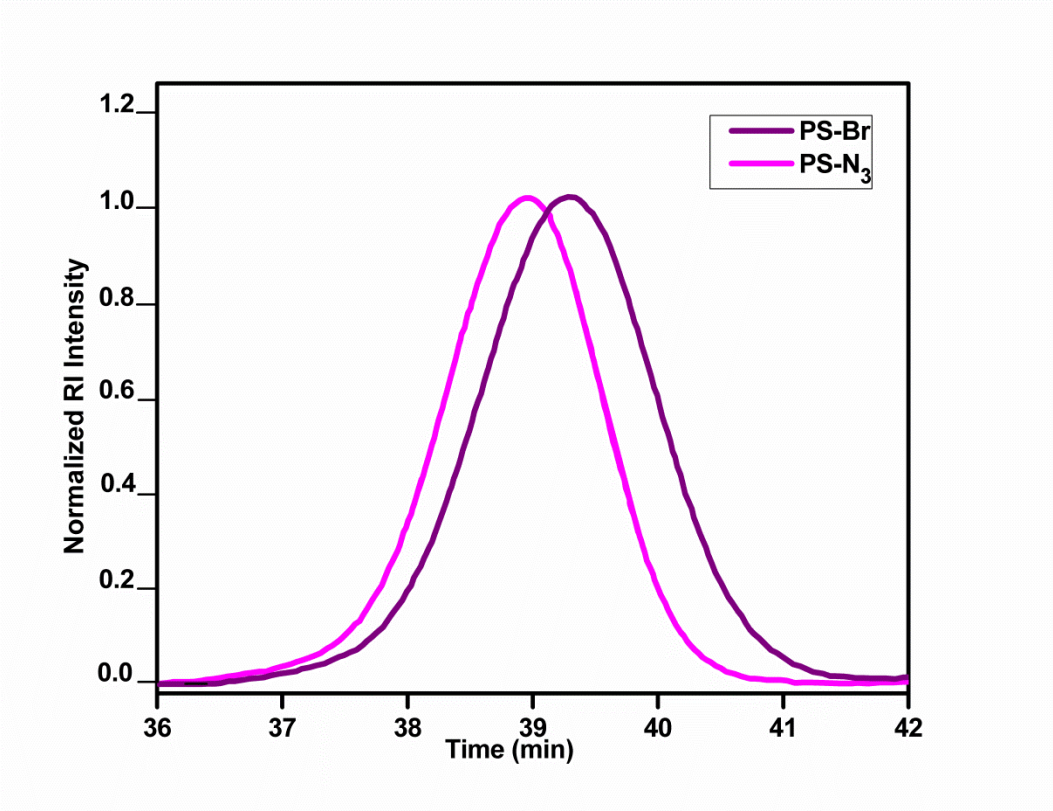

Fig. ES 1: GPC curves of PS-Br (Violet) and PS-N3 (Pink). THF was used as the eluent and PS standards were used for the calibration.

Sample	Retention time (min)	M_n	PDI
PS-Br	39.31	2360	1.07
PS-N_3	38.95	2770	1.06

Table ES 2: Tabular representation of GPC data for PS-Br and PS- N_3

GPC shows clear shift of PS-Br to PS-N_3 illustrating towards higher molecular weight and low PDI indicating the presence of well controlled process. Recent ATRP techniques have developed rapidly for facile preparation of a variety of polymeric materials with predetermined Mn, low PDI, and high degrees of chain-end functionalization. Atom transfer radical polymerization can be performed at ambient temperature is less prone to side reactions and chain transfer, resulting in better control over molecular weight and polydispersion index (PDI) thus enabling the facile synthesis of a wide variety of hybrid materials. However, the PDI values are still relatively low for highly branched, multi-chain polymeric structures.