

## Electronic Supplementary Information (ESI)

### In-situ Dose dependent Gamma ray Irradiated Synthesis of PMMA-Ag nanocomposites films for multifunctional applications

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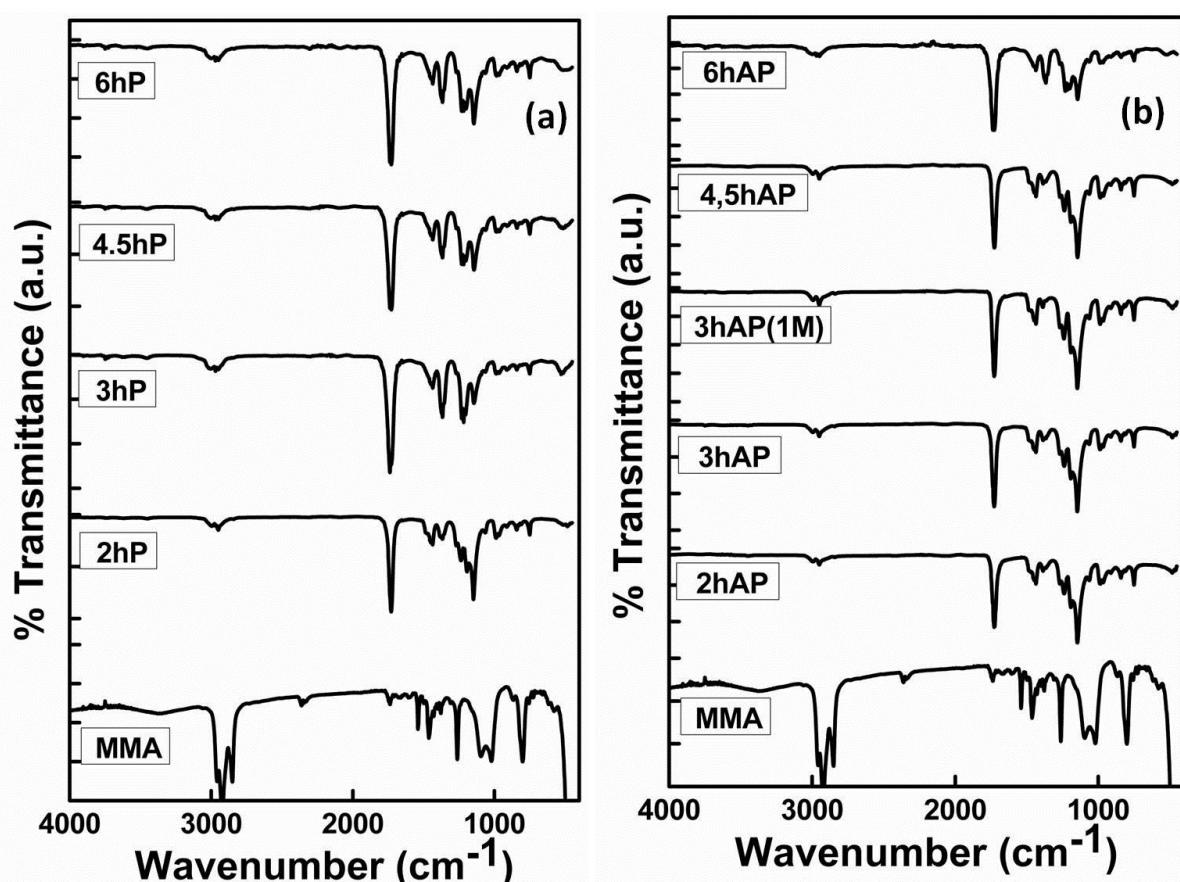
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**Figure S1.** FT-IR spectra of (a) MMA and PMMA and (b) MMA and PMMA-Ag composites

**Table S1.** Comparative assessment of the detection limit of SERS film substrates with the previous reports

Sample name	Probe molecule	Detection limit	Reference
Ag NPs-PMMA	4-mercaptopbenzoic acid	<b>10<sup>-9</sup> M</b>	Present work
Ag NRs-PDMS	Thiram	<b>10<sup>-6</sup> M</b>	<sup>1</sup>
PMMA/Ag/graphene	R6G	<b>10<sup>-8</sup> M</b>	<sup>2</sup>
PMMA/Ag NPs/graphene	Thiram	<b>10<sup>-6</sup> M</b>	<sup>3</sup>
Ag NP-coated poly(styrene-co-acrylic acid)	Melamine	<b>10<sup>-7</sup> M</b>	<sup>4</sup>
Au NRs-PMMA	Methylene blue	<b>10<sup>-8</sup> M</b>	<sup>5</sup>

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