Supplementary Information

for

Synergistic influence of polyoxometalate surface corona towards enhancing the antibacterial performance of tyrosine-capped Ag nanoparticles

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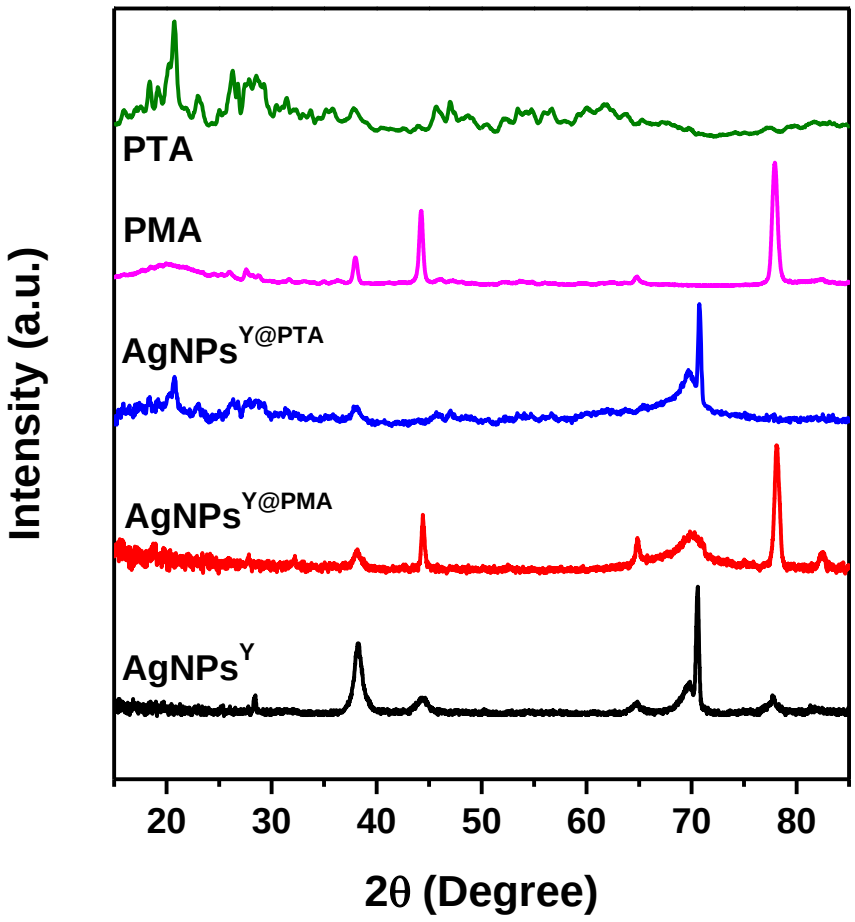

Figure S1. XRD patterns arising from $AgNPs^{Y}$, $AgNPs^{Y@PTA}$, $AgNPs^{Y@PMA}$, pristine PTA and pristine PMA. The peak at 70.7° corresponds to Si peak arising from Si wafers (substrate), on which XRD patterns were acquired. The XRD patterns of $AgNPs^{Y@PTA}$ and $AgNPs^{Y@PMA}$ show signal arising from face centered cubic Ag in both the cases, and from PTA and PMA, in the respective cases.

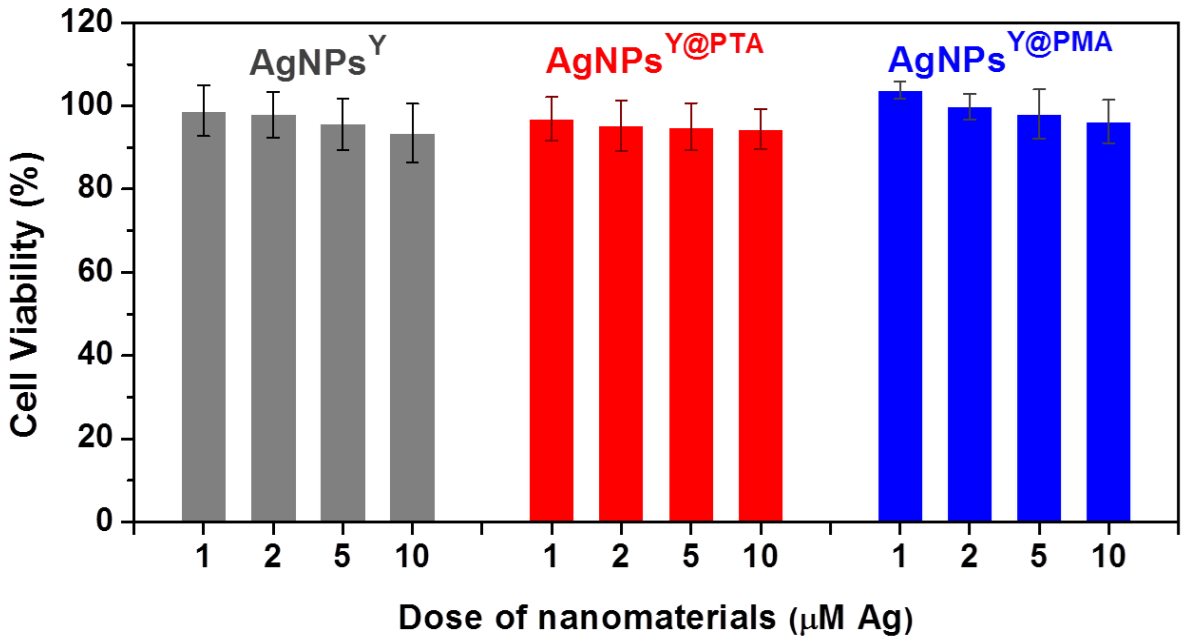

Figure S2. Cytotoxicity profile of $AgNPs^{Y}$, $AgNPs^{Y@PTA}$ and $AgNPs^{Y@PMA}$ against human PC3 epithelial cells.

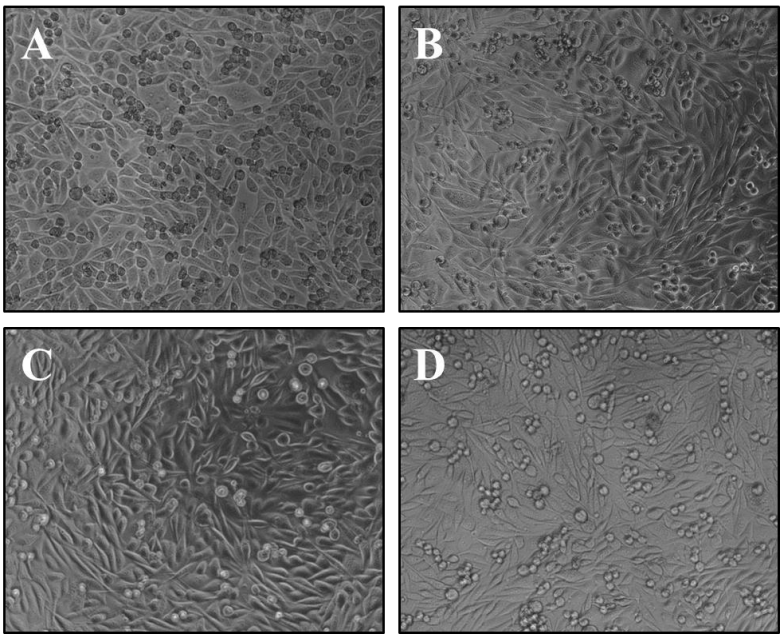

Figure S3. Phase contrast micrographs of human PC3 epithelial cells (A) before and (B-D) after treatment with (B) $AgNPs^{Y}$, (C) $AgNPs^{Y@PTA}$ and (D) $AgNPs^{Y@PMA}$.

Table S1. FTIR vibrational modes arising from PTA, PMA, $AgNPs^{Y}$, $AgNPs^{Y@PTA}$, and $AgNPs^{Y@PMA}$.

Sample Name	**FTIR Signatures (cm^{-1})**		
	P-O	**W=O**	**W-O-W**
PTA	1075	972	874
$AgNPs^{Y@PTA}$	1097	971	860
	P-O	**Mo=O**	**Mo-O-Mo**
PMA	1058	950	864
$AgNPs^{Y@PMA}$	1085	958	857

Table S2. Relative concentrations of Ag and PTA or PMA present on the surface of modified AgNPs, as used for antibacterial studies

Sample Name	Ag and POM concentrations (μM) used for antibacterial studies							
	Ag	PTA/ PMA	Ag	PTA/ PMA	Ag	PTA/ PMA	Ag	PTA/ PMA
$AgNPs^{Y}$	1	0	2	0	5	0	10	0
$AgNPs^{Y@PTA}$	1	0.198	2	0.396	5	0.990	10	1.98
$AgNPs^{Y@PMA}$	1	0.042	2	0.084	5	0.210	10	0.42