Quorum sensing inhibiting dihydropyrrol-2-ones embedded polymer/graphene oxide nanocomposite waterborne antimicrobial coatings

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Supporting Information

Table S1. Characterisation of synthesised polymers using the two polymerisation methods

P(St-*stat*-*n*BA) synthesis method	**Monomer conversion**	**Intensity average particle size DLS (PDI)**	**M_n (g/mol)**	**M_w (g/mol)**	**$Đ$**
Soap-free emulsion polymerisation	97%	519 nm (0.058)	10.27 x 10^5	34.22 x 10^5	3.33
Miniemulsion polymerisation	95%	337 nm (0.33)	2.4 x 10^4	7.18 x 10^4	2.98

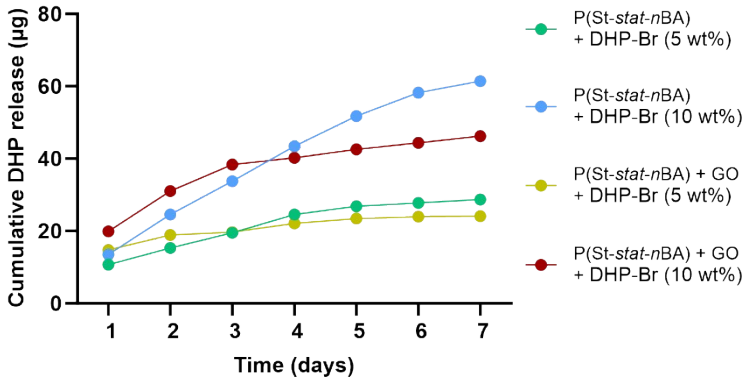

Figure S1. Release study showing the release profile of DHP-Br from different physical mixing coatings.

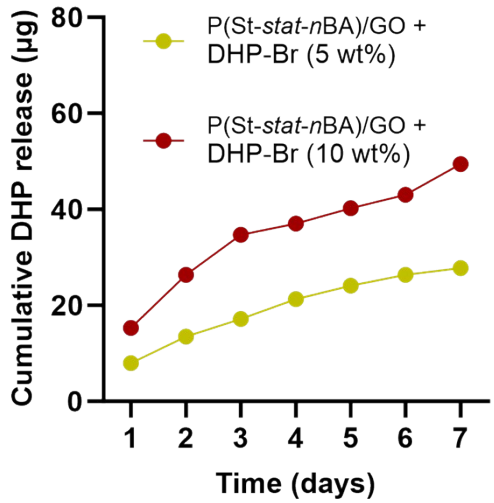

Figure S2. Release study showing the release profile of DHP-Br from different miniemulsion coatings.

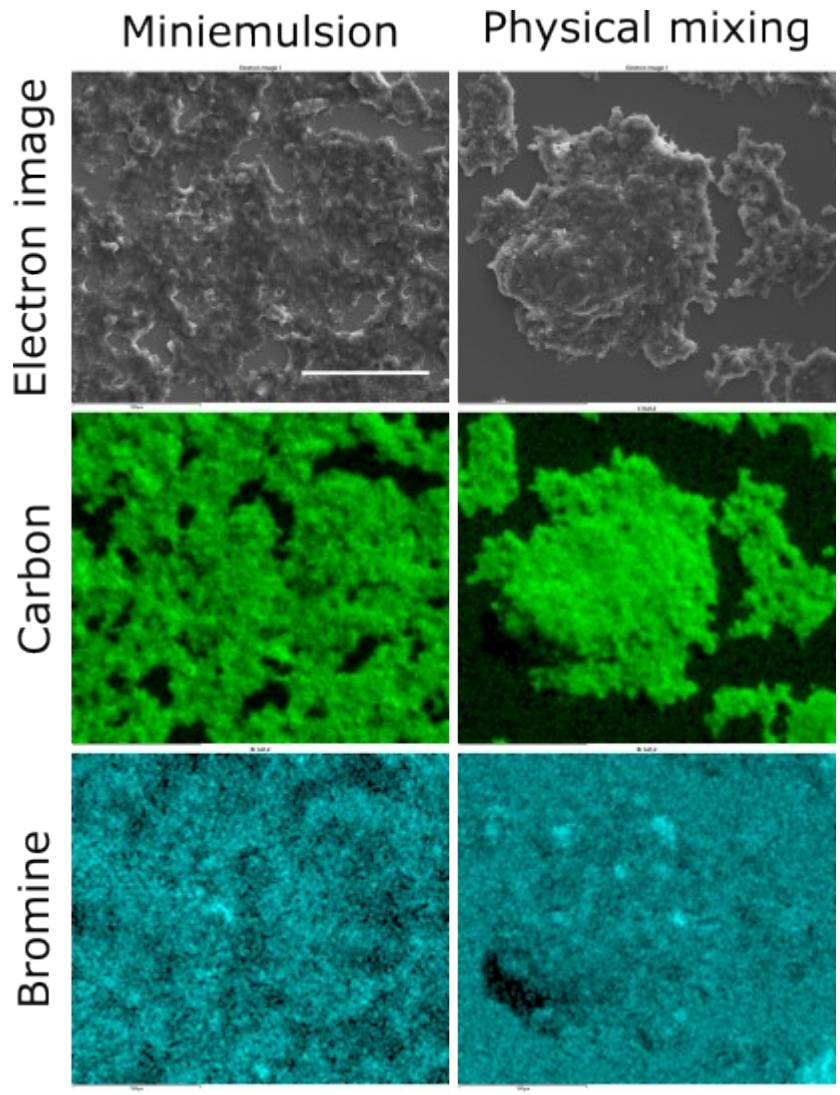

Figure S3. EDS mapping on SEM of P(St-*stat*-*n*BA)/GO/DHP-Br (5 wt%) prepared using the two methods (miniemulsion and physical mixing) showing the presence and distribution of carbon and bromine (from DHP-Br) and the corresponding electron image. Scale bar = 100 µm.

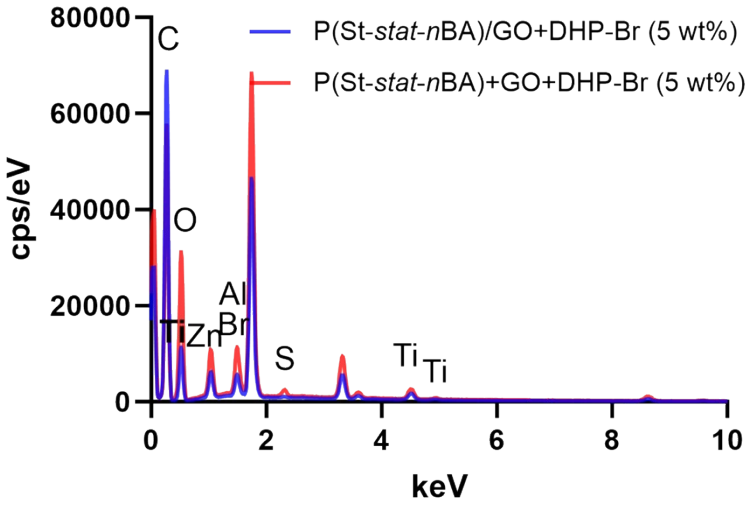

Figure S4. SEM-EDS spectra of the mapped images of miniemulsion P(St-*stat*-*n*BA)/GO+DHP-Br (5 wt%) and physical mixed P(St-*stat*-*n*BA)+GO+DHP-Br (5 wt%) coatings showing the presence of carbon and bromine (from DHP-Br).