Supporting Information:

Antibacterial and anti-inflammatory ultrahigh molecular weight polyethylene/tea polyphenol blends for artificial joint applications

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Author Contributions

[1] Y.R. and F.W. contributed equally to this work.

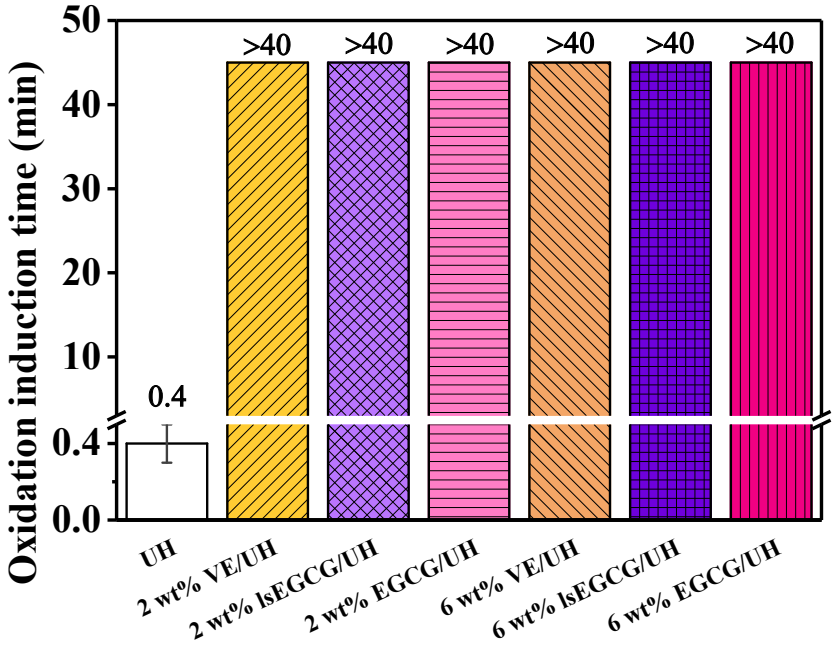

Fig. S1. OIT assessment of neat UHMWPE and HP/UHMWPE blends. UH represents UHMWPE.

Table S1. Melting points (T_m) and crystallinity (X_c) of UHMWPE blends with different HP concentration.

Materials	HP concentration	T_m (°C)	X_c (%)
Neat UHMWPE	0 wt%	139.4 ± 0.1	61.8 ± 1.2
VE/UHMWPE	2 wt%	136.2 ± 0.2	59.5 ±1.4
	6 wt%	135.5 ± 0.7	58.0 ± 0.1
*ls*EGCG/UHMWPE	2 wt%	137.0 ± 0.8	59.9 ± 2.3
	6 wt%	136.0 ± 0.2	61.8 ± 0.9
EGCG/UHMWPE	2 wt%	135.4 ± 0.2	57.8 ± 0.5
	6 wt%	136.5 ± 0.4	57.1 ± 0.4

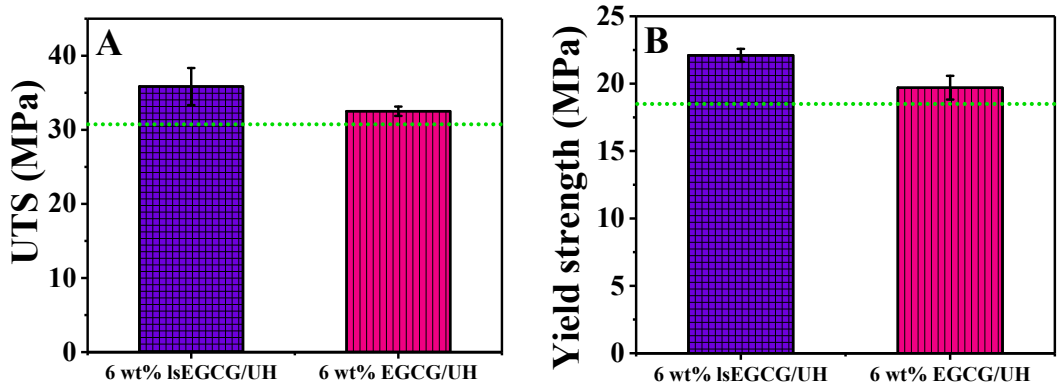

Fig. S2. Ultimate tensile strength (UTS) and yield strength of 6 wt% tea polyphenol/UHMWPE blends. The minimum value of clinically used UHMWPE is marked by the green dashed line.

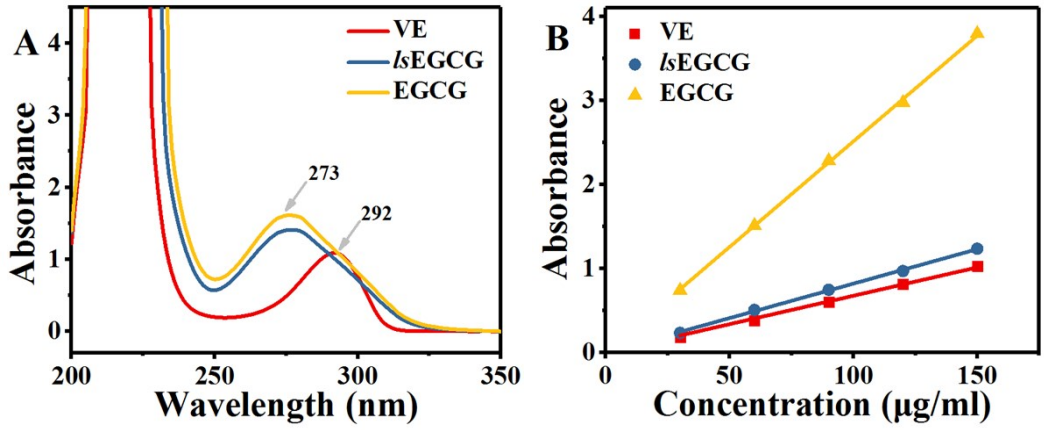

Fig. S3. UV spectra of hindered phenols (A) and standard curves as a function of concentration (B).