

Supporting Information

## **Synthesis of biologically-derived polypyrogallol nanofiber for antibacterial application**

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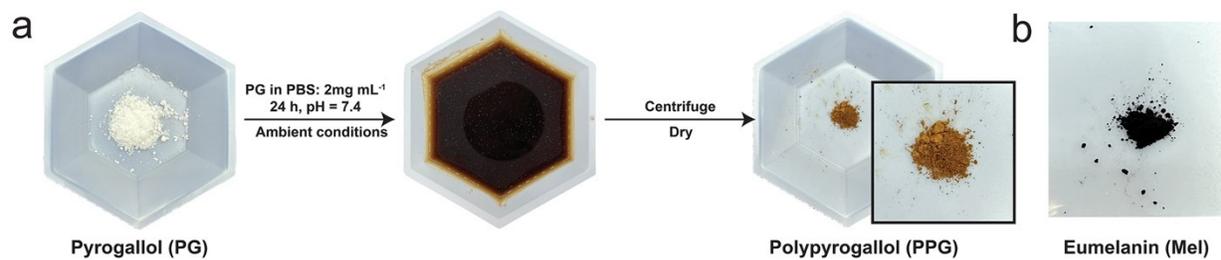
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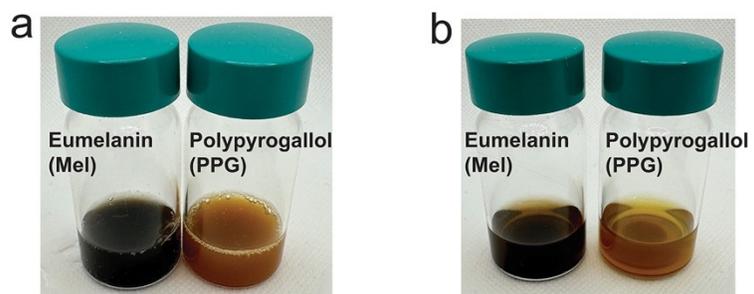
**Table S1.** Peak assignments of FT-IR spectra for PG and PPG

Wavenumber (cm <sup>-1</sup> ) <sup>a</sup>		Assignments
PG	PPG	
3365, 3223	3446, 3300	Phenolic O–H stretching
	1590, 1562	aromatic skeletal vibration of polymer chain
1615, 1519, 1482, 1361	1410, 1378, 1349	C–C/C=C stretching
1286, 1239	1239	Phenolic C–O stretching
	1278, 1038	Phenyl ether C–O–C stretching
	1012	Vinyl ether stretching
846, 828	838	Bending vibration of C–H

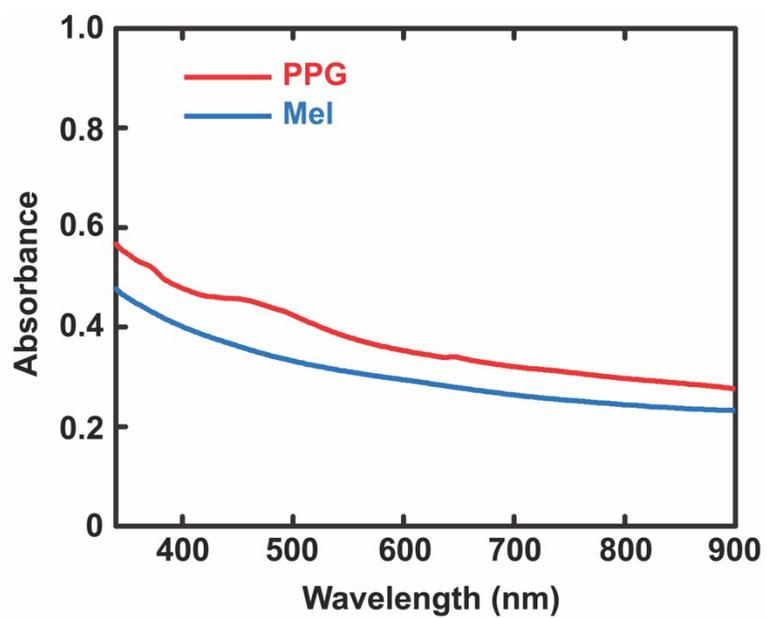
<sup>a</sup>Estimated uncertainty = ± 1cm<sup>-1</sup>.



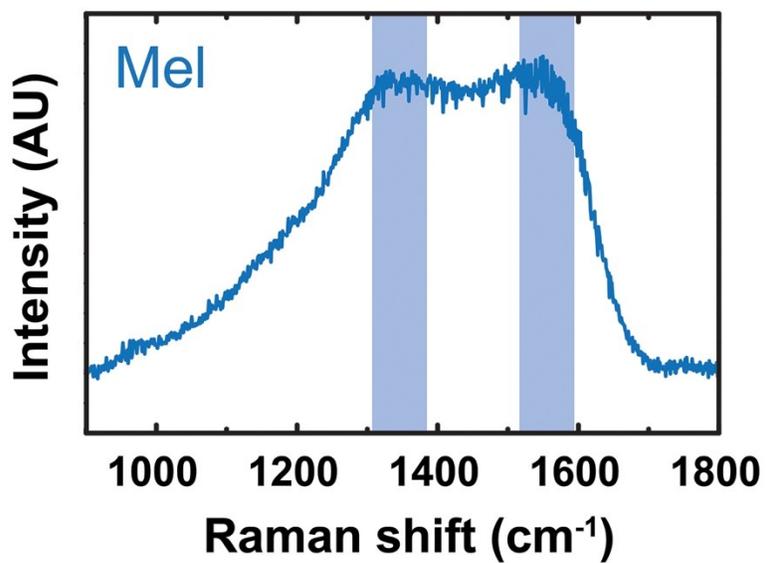
**Figure S1.** (a) Synthesis of poly(pyrogallol) nanofiber. (b) Optical image of eumelanin pigments.



**Figure S2.** Time course aggregation observation of eumelanin (Mel) and PPG during (a) 1 minute and (b) 48 hours.



*Figure S3. UV-vis-NIR absorption spectra of PPG and Mel dispersed in water.*



**Figure S4.** Raman spectra of Mel. Two broad peaks at about 1380 and 1580 cm<sup>-1</sup> indicate that Mel exhibits semi-crystalline structure similar to that of disordered graphite.