Supporting Information

Investigation of Antibacterial 1,8-Cineole-Derived Thin Films Formed via Plasma Enhanced Chemical Vapor Deposition

Michelle N. Mann¹ and Ellen R. Fisher^{1*}

¹Department of Chemistry, Colorado State University, Fort Collins, Colorado 80523-1872,

United States

*Author to whom correspondence should be addressed: Ellen.Fisher@colostate.edu

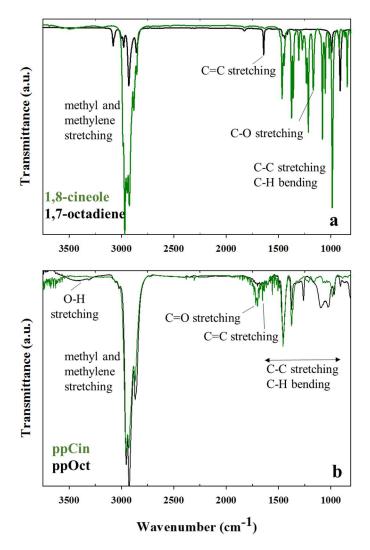


Figure S1. Representative FTIR spectra for (a) cineole and octadiene monomers (b) ppCin and ppOct films. Note peak intensities should not be compared between samples as neither monomer nor film thickness was controlled.

	Pressure (mTorr)	Power (W)	fresh	l dav	1 week	2 weeks	1 month	2 months
	15	50	54.3 ± 4.1°	58.6 ± 1.2°	$59.7\pm2.0^{\circ}$	61.0 ± 3.3	62.1 ± 2.2	$63.9 \pm 1.5^{\circ}$
	30	30	74.4 ± 1.5°	$73.8 \pm 0.6^{\circ}$	73.0 ± 1.3°	71.9 ± 1.6°	78.2 ± 1.6°	75.7 ± 1.9°
ppCin	30	50	68.0 ± 1.5°	$72.9 \pm 1.0^{\circ}$	75.1 ± 0.6°	71.8 ± 2.6°	78.1 ± 1.5°	76.1 ± 0.6°
	100	25	86.3 ± 1.4°	84.0 ± 1.4°	82.3 ± 1.7°	82.4 ± 1.0°	82.4 ± 1.1°	80.6 ± 0.6°
	100	50	86.5 ± 1.7°	$86.5 \pm 0.9^{\circ}$	82.4 ± 1.1°	80.7 ± 1.2°	$80.9 \pm 0.2^{\circ}$	83.0 ± 1.0°
	100	100	85.6 ± 1.1°	85.1 ± 1.2°	81.3 ± 0.5°	79.8 ± 1.0°	81.3 ± 0.8°	81.7 ± 1.7°
Treated ^b ppCin	15	50	20.4 ± 1.2°	34.5 ± 0.9°	42.1 ± 0.6°	43.1 ± 0.6°	44.5 ± 0.7°	44.1 ± 1.0°
ppOct	100	25	93.7 ± 1.4°	90.3 ± 0.8°	85.2 ± 0.6°	85.0 ± 1.0°	83.1 ± 1.4°	82.1 ± 1.5°

Table S1. WCA of Plasma-Polymerized Films Over 2 Month Aging Period^a

^a all depositions completed on glass placed 10 cm downstream from coil region for 5 min except for ppOct (10 min). Values represent the average and standard deviation of $n \ge 9$

 b H₂O_(v) plasma operating at 50 mTorr and 20 W for 2 min