Electronic Supporting Information

Synergistic Photothermal Antimicrobial Therapy using Graphene Oxide/Polymer Composite Layer-by-Layer Thin Films

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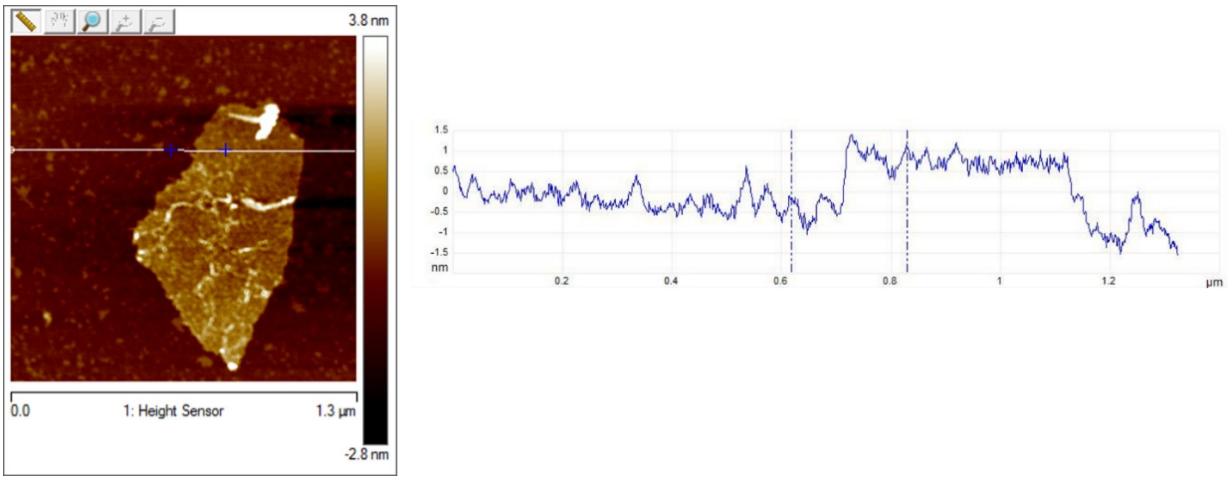


Figure S1. AFM image of exfoliated graphene oxide along with line profile thickness measurement.

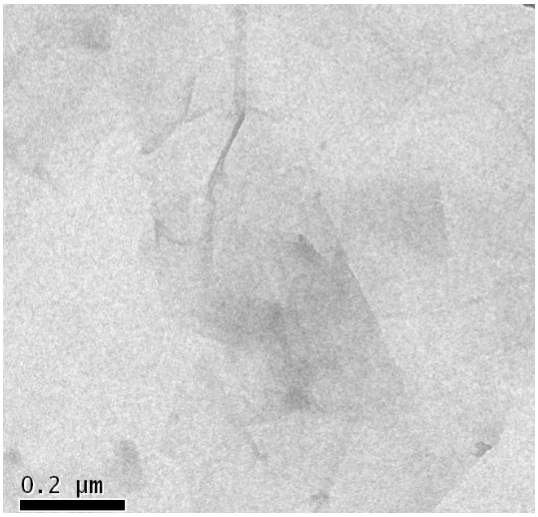
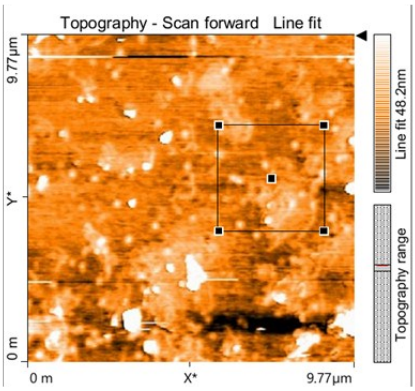


Figure S2. TEM images of exfoliated graphene oxide sheets.

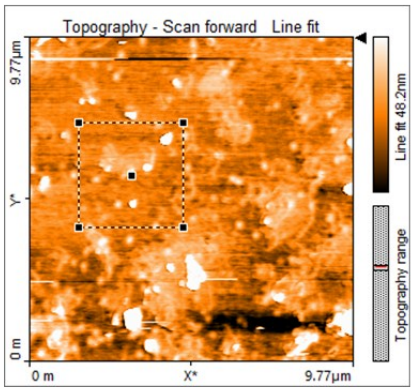
A



-- Area Roughness --

Area	= 10.51pm^2
Sa	= 5.6064nm
Sq	= 6.7569nm
Sy	= 51.591nm
Sp	= 26.16nm
Sv	= -25.432nm
Sm	= -821.13pm

B

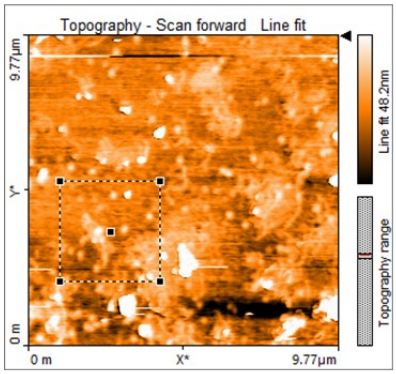


Parameter:

-- Area Roughness --

Area	= 10.51pm^2
Sa	= 4.6579nm
Sq	= 8.1158nm
Sy	= 92.262nm
Sp	= 74.695nm
Sv	= -17.567nm
Sm	= 132.09pm

C

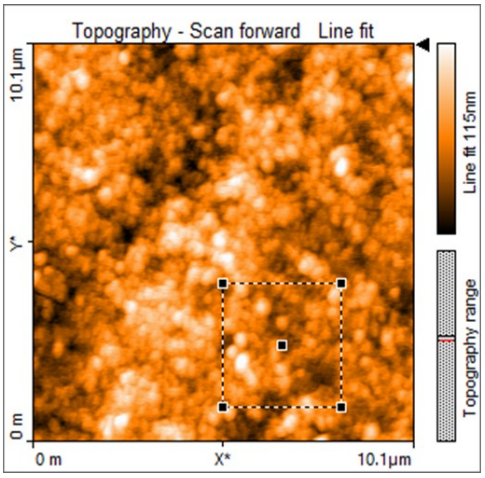


-- Area Roughness --

Area	= 10.51pm^2
Sa	= 5.4244nm
Sq	= 7.2325nm
Sy	= 71.575nm
Sp	= 47.397nm
Sv	= -24.178nm
Sm	= -512.94pm

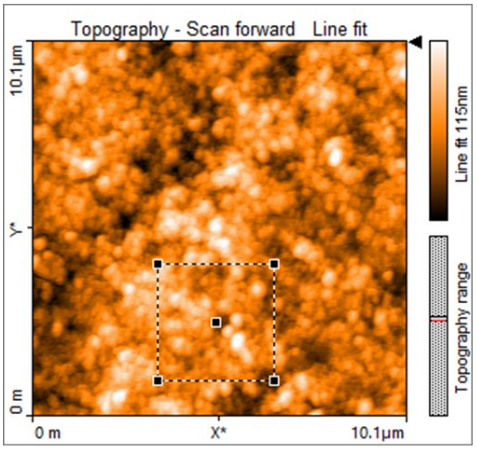
Figure S3: Surface roughness: (A-C) AFM images of the GO/PAH films (20 layers), and the surface roughness values were shown in the left side, root mean square (RMS) value (S_q) was compared for all three films. for the area of ~3.19*3.19 µm. Average surface roughness is (S_q) 7.36 nm.

A



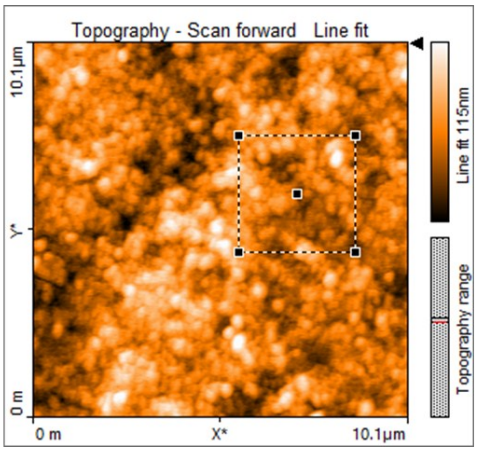
-- Area Roughness --	
Area	= 10.42pm^2
Sa	= 14.245nm
Sq	= 18.35nm
Sy	= 121.52nm
Sp	= 79.157nm
Sv	= -42.361nm
Sm	= -270.62pm

B



-- Area Roughness --	
Area	= 12.28pm^2
Sa	= 14.499nm
Sq	= 18.714nm
Sy	= 121.52nm
Sp	= 79.157nm
Sv	= -42.361nm
Sm	= 1.209nm

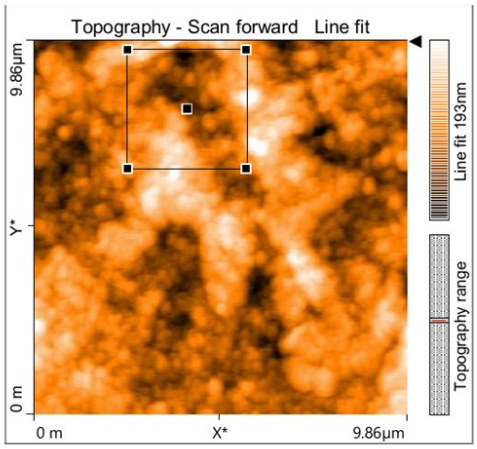
C



-- Area Roughness --	
Area	= 10.42pm^2
Sa	= 14.725nm
Sq	= 18.291nm
Sy	= 115.02nm
Sp	= 76.379nm
Sv	= -38.642nm
Sm	= 1064.6pm

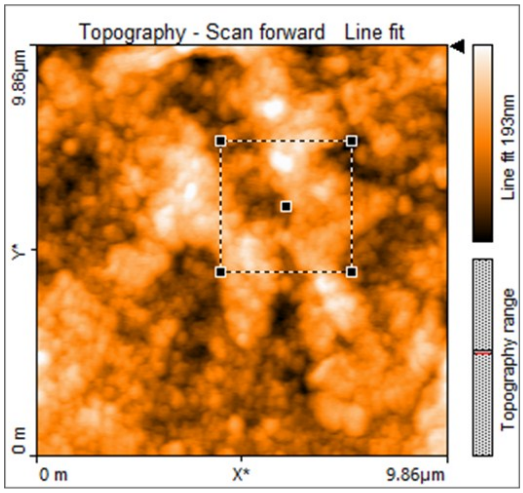
Figure S4: Surface roughness: (A-C) AFM images of the GO/PAH films (40 layers), and the surface roughness values were shown in the left side, root mean square (RMS) value (S_q) was compared for all three films. for the area of ~3.19*3.19 µm. Average surface roughness is (S_q) 18.45 nm.

A



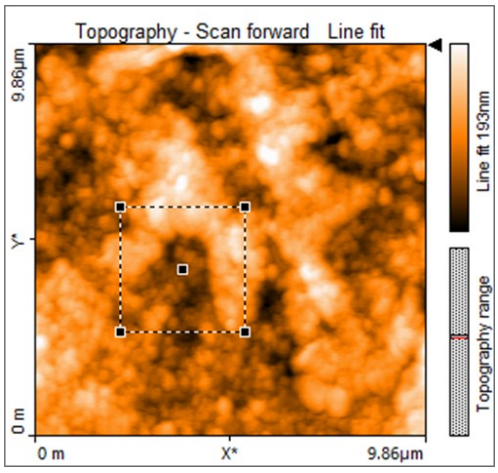
-- Area Roughness --	
Area	= 10.47pm^2
Sa	= 31.199nm
Sq	= 38.767nm
Sy	= 221.81nm
Sp	= 120.9nm
Sv	= -100.91nm
Sm	= 4.0838nm

B



-- Area Roughness --	
Area	= 10.47pm^2
Sa	= 32.185nm
Sq	= 39.592nm
Sy	= 210.62nm
Sp	= 119.9nm
Sv	= -90.723nm
Sm	= 15.876nm

C



-- Area Roughness --	
Area	= 10.47pm^2
Sa	= 34.073nm
Sq	= 39.396nm
Sy	= 185.3nm
Sp	= 92.828nm
Sv	= -92.47nm
Sm	= -3047.3pm

Figure S5: Surface roughness: (A-C) AFM images of the GO/PAH films (80 layers), and the surface roughness values were shown in the left side, root mean square (RMS) value (S_q) was compared for all three films. for the area of ~3.19*3.19 µm. Average surface roughness is (S_q) 39.24 nm.

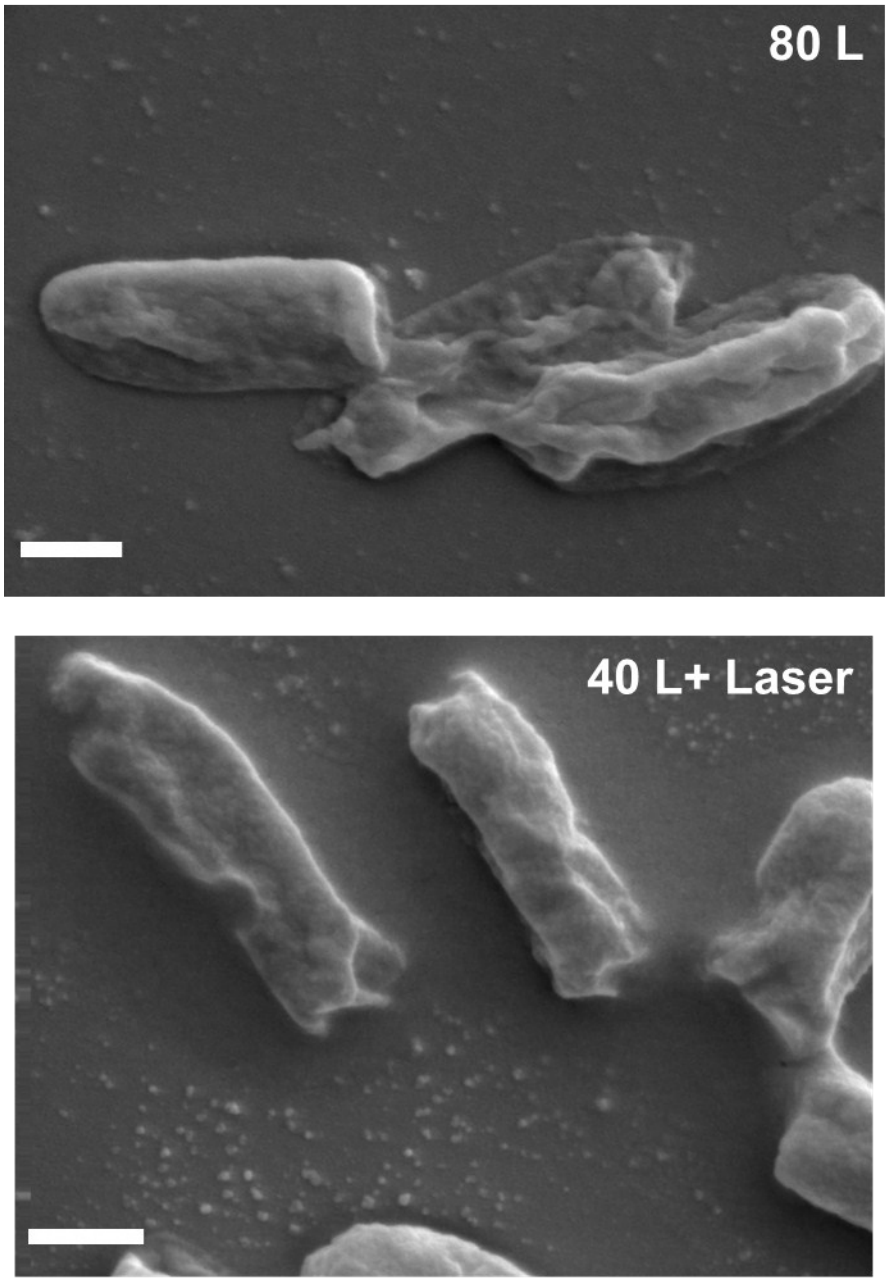


Figure S6: SEM images of 40 layers treated cells (top) and 80 layers + laser treated cells (below) respectively, where scale bar represents 500 nm.