Supplementary Material

S1. Photothermal Conversion efficiency of NRC03-DA/nRGO

Quartz cuvettes containing NRC03-DA/nRGO suspensions were illuminated under NIR 808 nm with the power density of 1.5W/cm2. The real time temperature was measured by a thermal couple and recorded by computer. The photothermal convert efficiency was calculated according to the following equations:

$$\eta = \frac{hS(T_{max} - T_{surr}) - Q_{dis}}{I(1 - 10^{-A_{808}})}$$

Where S is the surface area of the container, Tmax is the equilibrium temperature, and Tsur is the surrounding temperature. The Qdis represents the baseline energy input by the system, which was calculated by changing the aqueous solution of NRC03-DA/nRGO to pure water. I is the Intensity of the laser input. A808 is the absorbance of NRC03-DA/nRGO at the wavelength of 808nm.

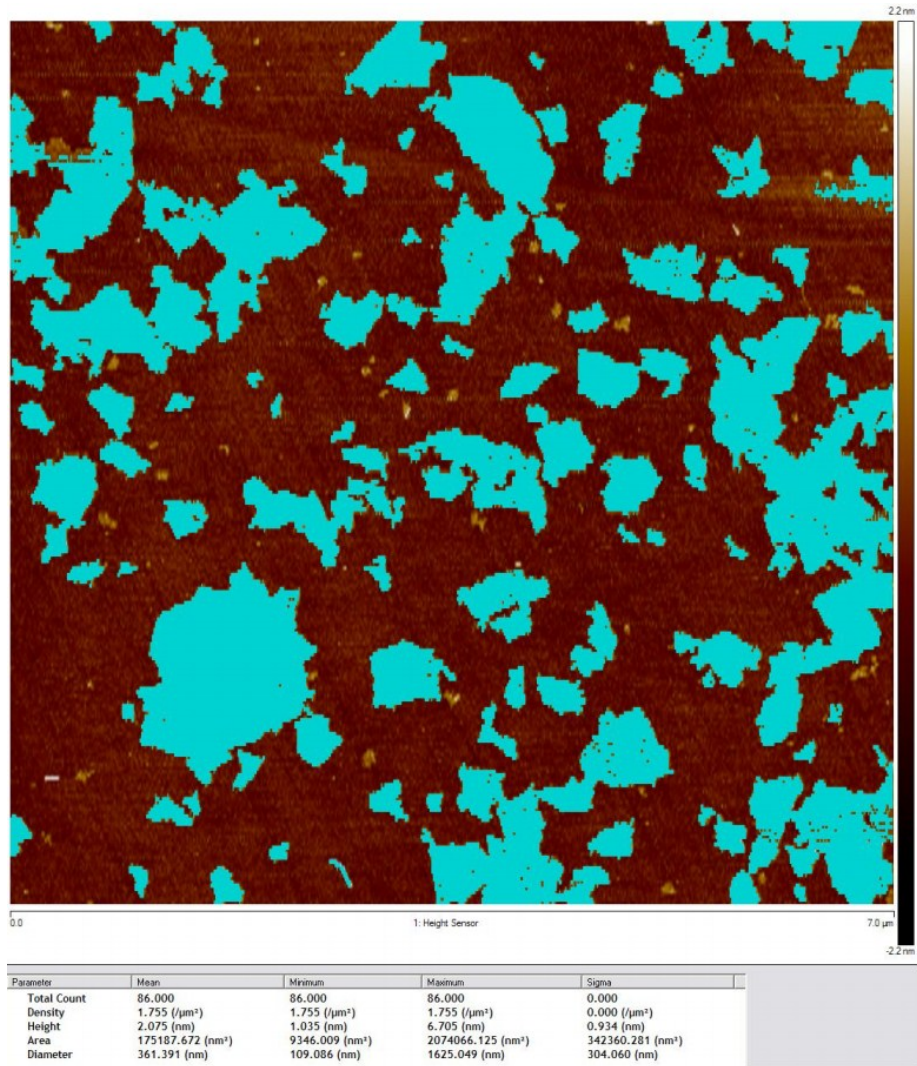| Parameter	Mean	Minimum	Maximum	Sigma
Total Count	86.000	86.000	86.000	0.000
Density	1.755 (/μm²)	1.755 (/μm²)	1.755 (/μm²)	0.000 (/μm²)
Height	2.075 (nm)	1.035 (nm)	6.705 (nm)	0.934 (nm)
Area	175187.672 (nm³)	9346.009 (nm³)	2074066.125 (nm³)	342360.281 (nm³)
Diameter	361.391 (nm)	109.086 (nm)	1625.049 (nm)	304.060 (nm)

Fig. S1. Tapping-mode AFM image of nGO. The average size of nGO was obtained by counting from the AFM images.