Electronic Supplementary Information

Toxicity Mechanism of Graphene Oxide and Graphene Quantum Dots in RBCs Revealed by Surface-Enhanced Infrared Absorption Spectroscopy

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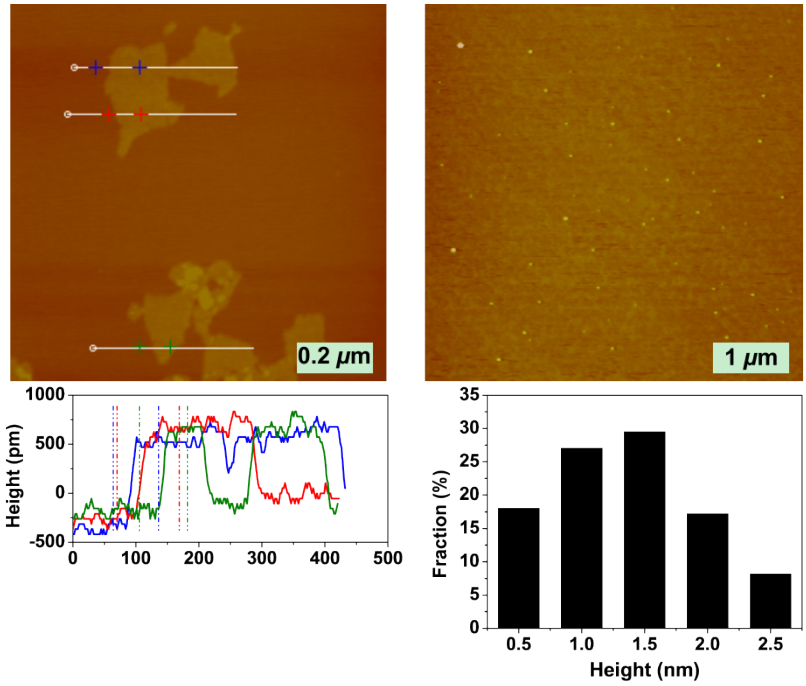

Figure S1. AFM images of GO (left) and N-GQDs (right), and the corresponding height distribution.

AFM image of GO was obtained on a MultiMode® 8 Scanning Probe Microscope (Veeco Instruments Inc., USA) under tapping mode at room temperature, and that of N-GQDs was recorded in the tapping mode with a Nanoscope IIIa scanning probe microscope from Digital Instruments under ambient conditions.

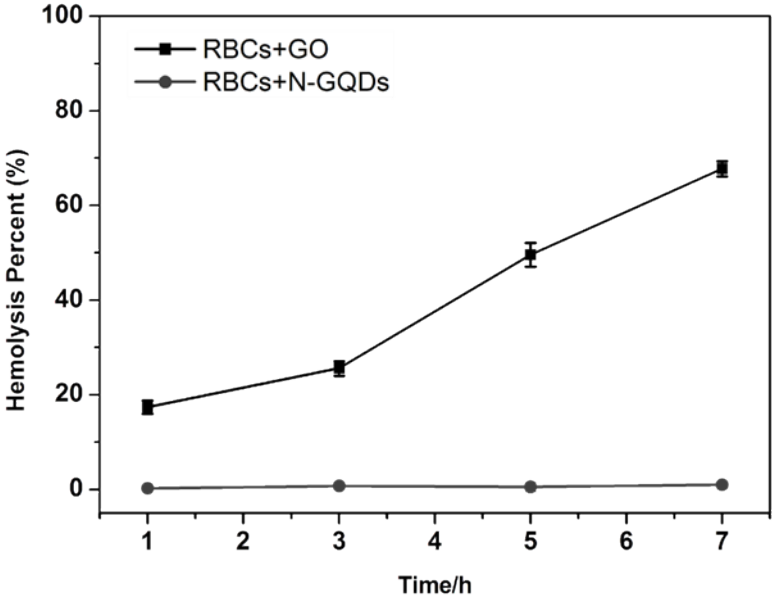

Figure S2. The hemolysis percent changes caused by GO and N-GQDs with the exposure time.

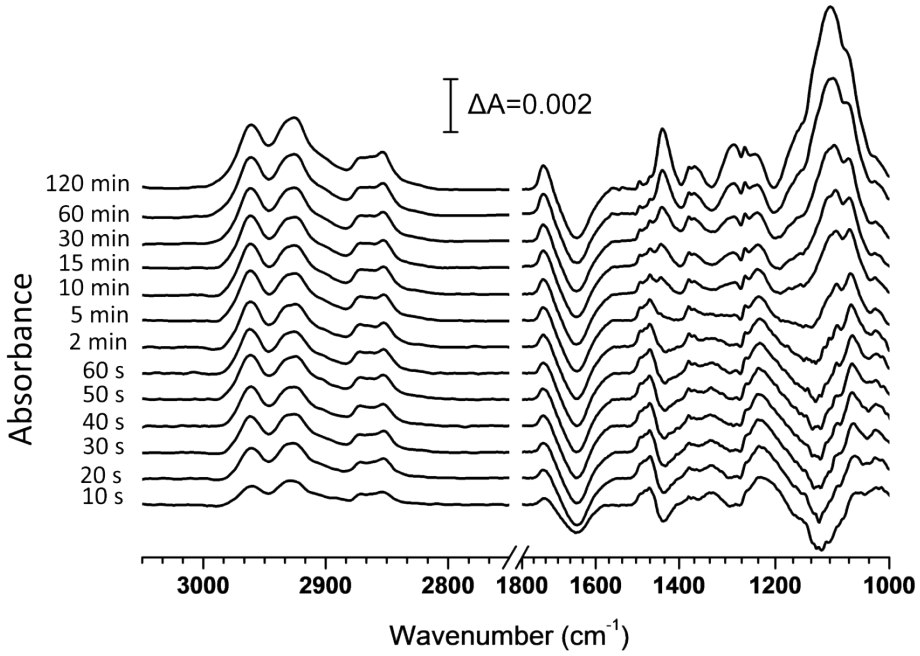

Figure S3. SEIRA spectra of vesicles containing the lipids of the outer leaflet adsorbed on the DT-modified Au surface at different times.

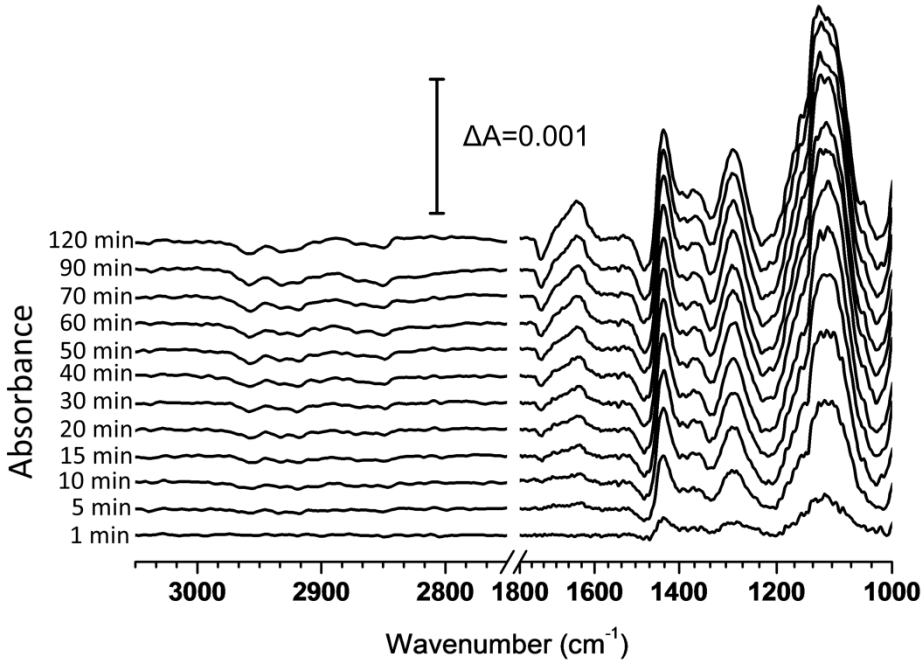

Figure S4. Time-dependent SEIRA spectra after addition of GO (50 μg mL^{-1}) to the PC-SM/DT/Au surface with the PC-SM/DT/Au surface as reference.

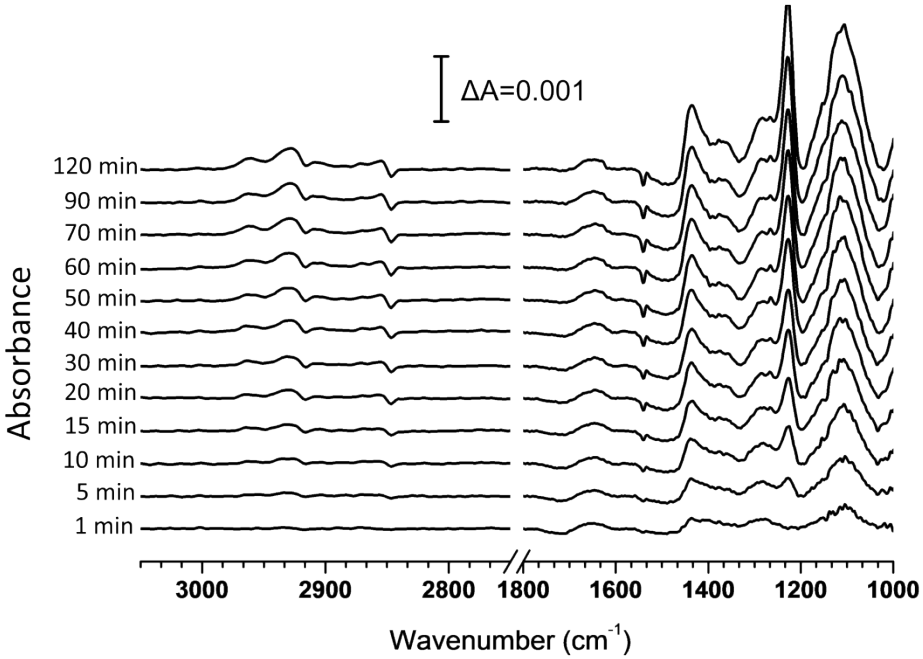

Figure S5. Time-dependent SEIRA spectra after addition of GQDs (50 μg mL^{-1}) to the PC-SM/DT/Au surface with the PC-SM/DT/Au surface as reference.

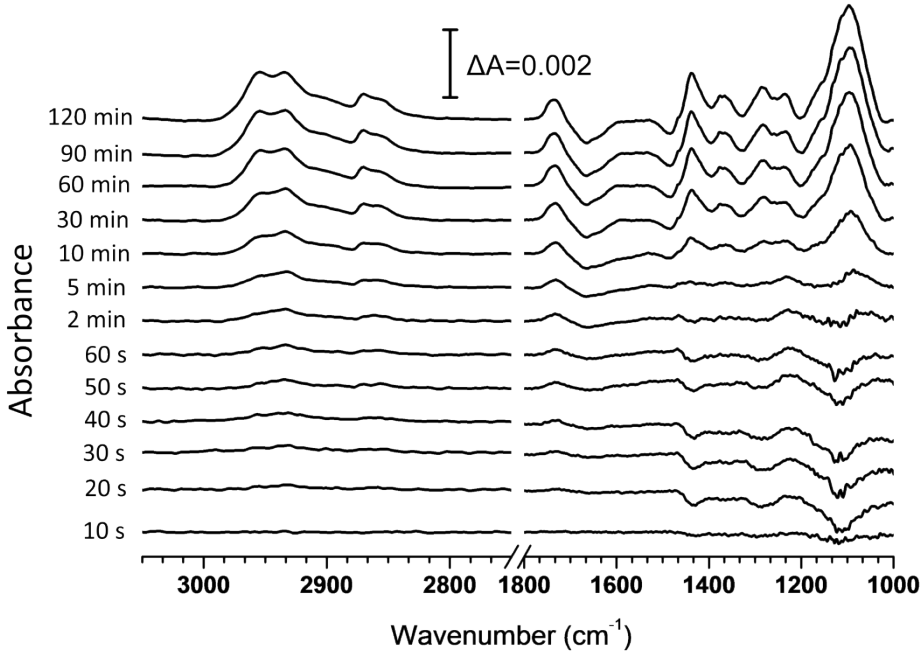

Figure S6. SEIRA spectra of vesicles containing the lipids of the inner leaflet adsorbed on the DT-modified Au surface at different times.

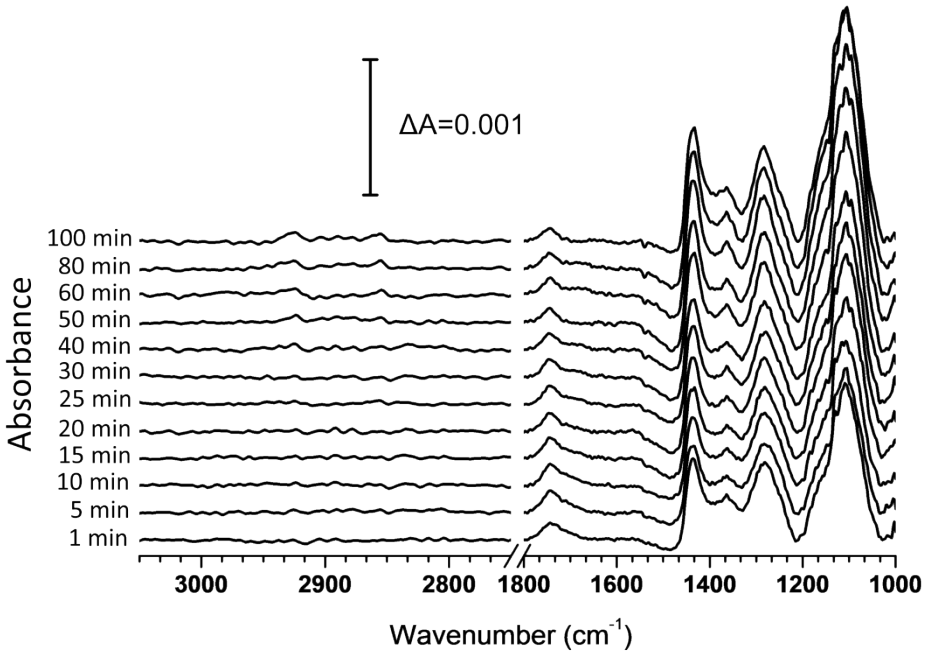

Figure S7. Time-dependent SEIRA spectra after addition of GO (50 μg mL^{-1}) to the PE-PS/DT/Au surface with the PE-PS/DT/Au surface as reference.

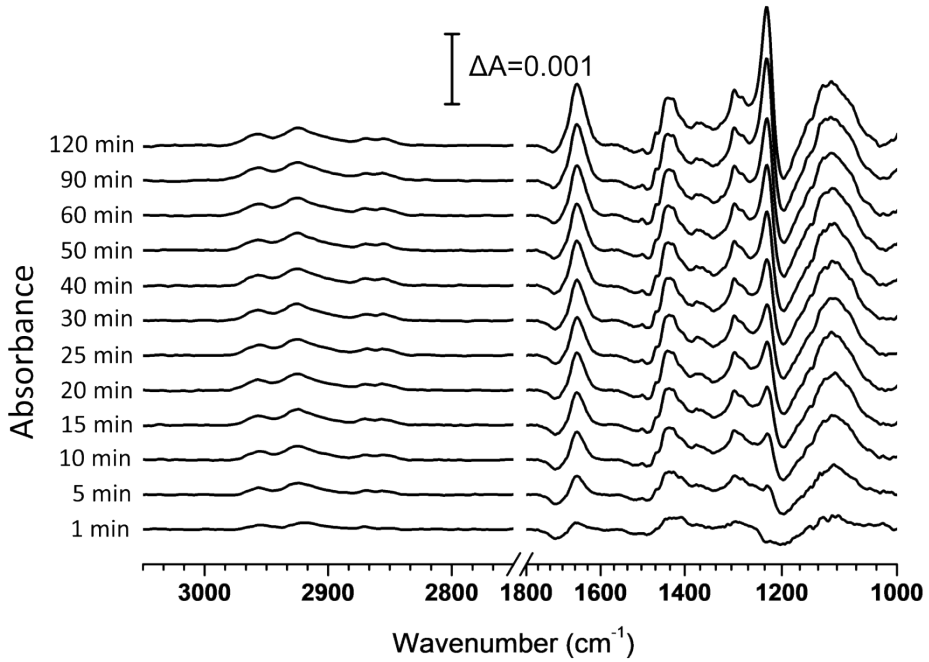

Figure S8. Time-dependent SEIRA spectra after addition of GQDs (50 μg mL^{-1}) to the PE-PS/DT/Au surface with the PE-PS/DT/Au surface as reference.