

Supplementary Information:

# Lipid peroxidation in diamond supported bilayers

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## 1. Relaxometry curves

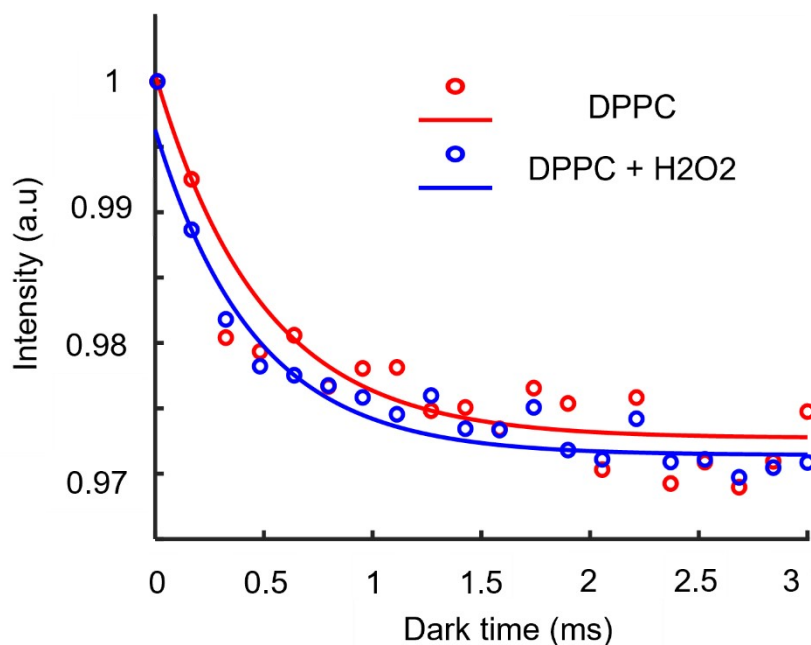


Figure S1: Relaxometry curves for the DPPC measurements (Data in dots, exponential fit in the continuous line).

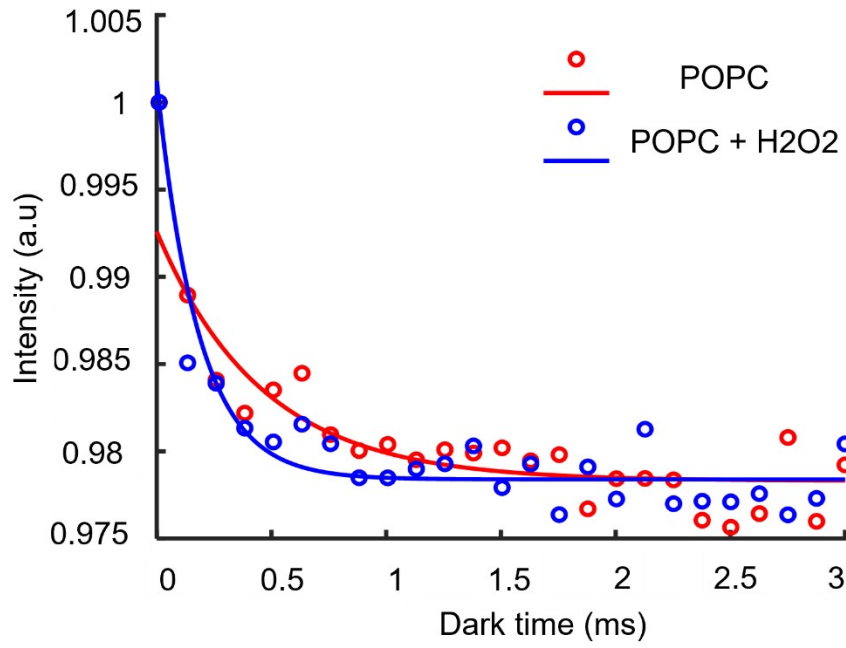


Figure S2: Relaxometry curves for the POPC measurements (Data in dots, exponential fit in the continuous line).

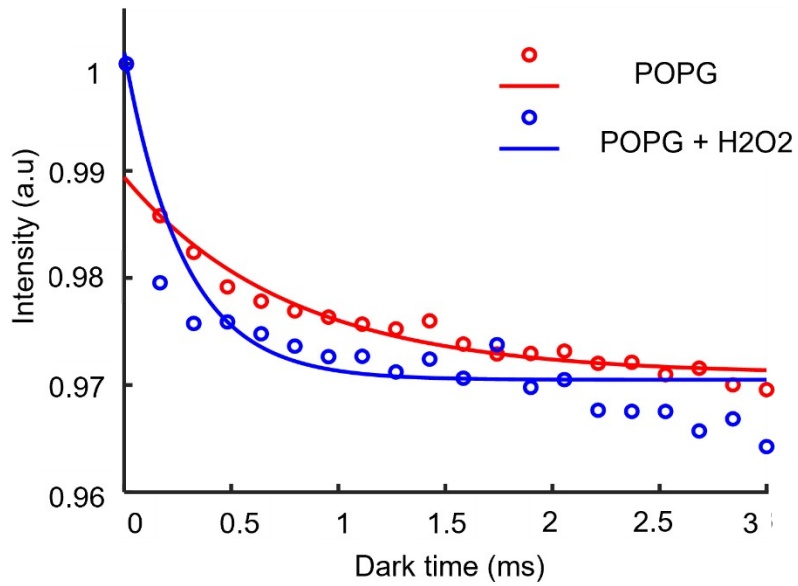


Figure S3: Relaxometry curves for the POPG measurements (Data in dots, exponential fit in the continuous line).

## 2. Particle size

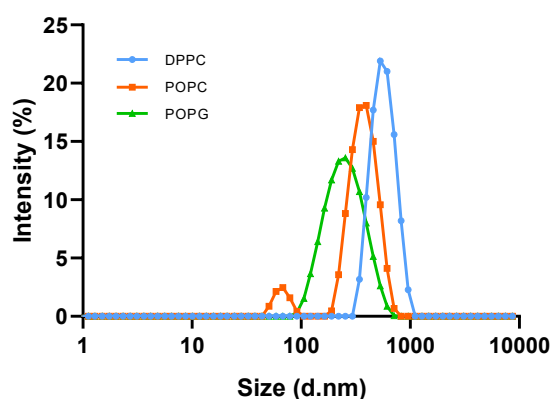


Figure S4. Size distribution of lipid particles measured by DLS

	Z-average /nm	PDI
DPPC	607.8	0.248
POPC	371.8	0.400
POPG	223.7	0.214

## 3. Surface coverage for the different membrane types

Surface coverage: Fluorescently labelled liposomes were imaged using confocal microscopy (see main manuscript). The image analysis was done using FIJI. 4 areas of 40\*40  $\mu\text{m}^2$  were selected randomly. A threshold of 124 was selected to differentiate liposomes from uncovered area.

Percentage of Surface coverage = covered area of liposomes / 40\*40  $\mu\text{m}^2$  100%

Statistics: using T-test of Mann-Whitney for two groups by GraphPad Prism 8.0.1

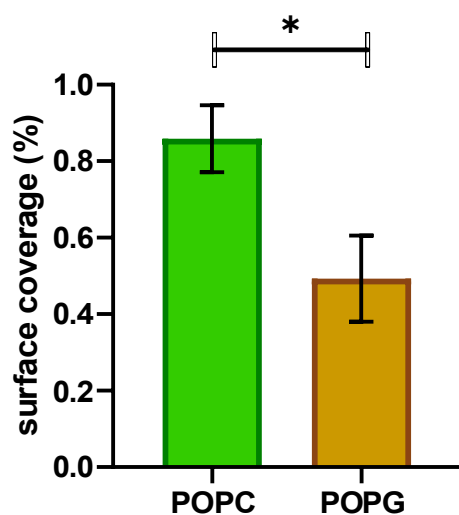


Figure S5. Surface coverage for different lipid membranes of the diamond surface. (n=4)