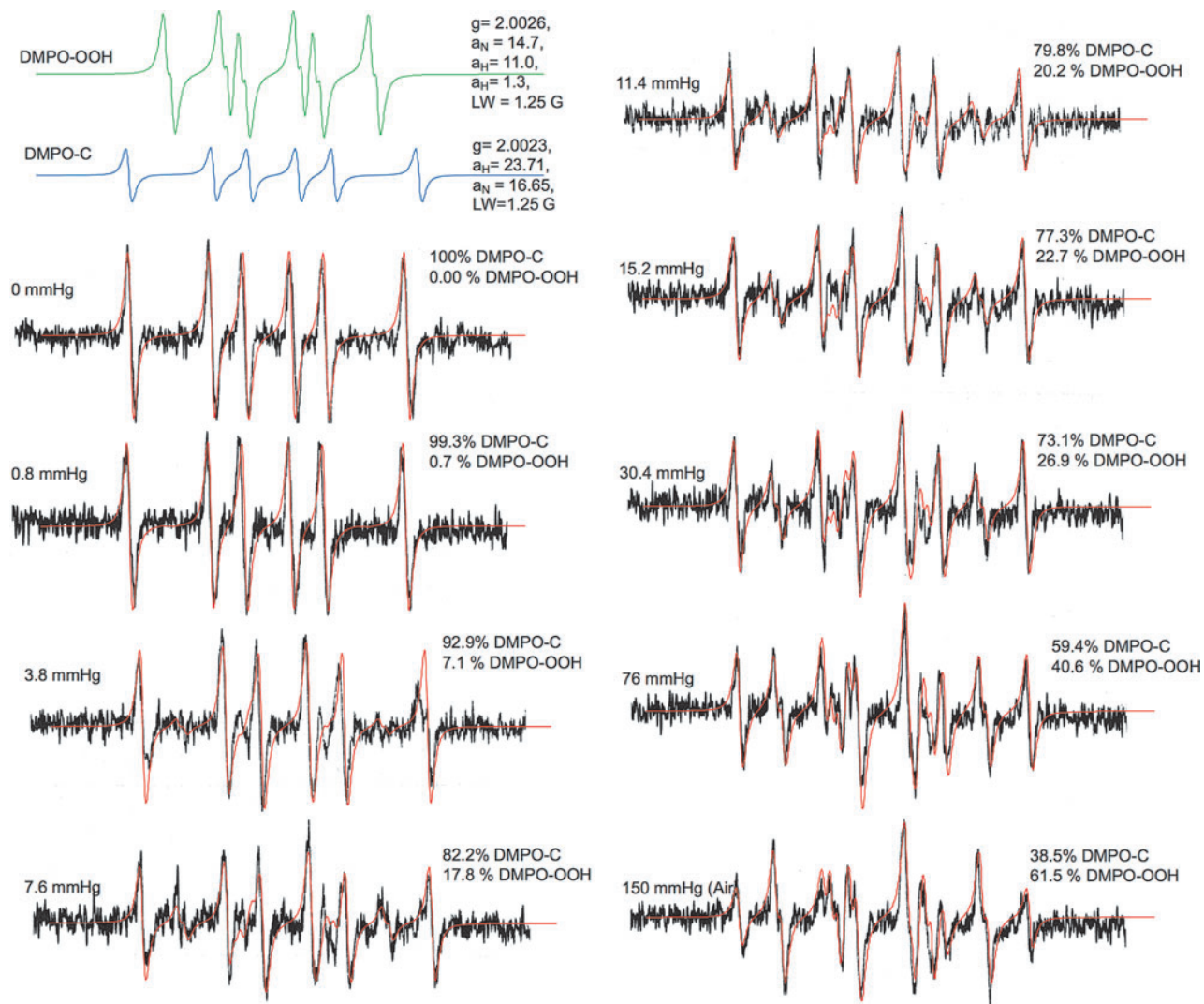


## Supplementary Data



**SUPPLEMENTARY FIG. S1. Simulation of EPR spectra.** The proportions of two species were calculated as follows: the first derivative spectra were integrated, and the area under the curve was calculated separately for DMPO-C and DMPO-OOH. These areas were not equal for both species, although they were scaled to same maximum, because species 1 has 6 lines and DMPO-OOH has 12 lines. The proportions =  $\text{height}(1) : \text{height}(2) / [\text{area}(2) / \text{area}(1)]$ ; these proportions were normalized to total by dividing with their sum. The matching between the observed spectrum (*black*) and simulation (*red*) was done using PowerPoint by manually scaling the bitmap (scan) with a line graph from MATLAB. Typically, the length of all observed spectra is 7.52". The simulation (*red*) was scaled to 7.66" for all cases except for bottom three spectra that were scaled to 7.54", 7.3", and 7.3". It is possible that hyperfine couplings of DMPO-C are 4% lower initially and increased gradually. DMPO, dimethylpyrroline N-oxide; EPR, electron paramagnetic resonance.