Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics

Supporting Information for

Structure and Stability Studies of Mixed Monolayers of Saturated and Unsaturated Phospholipids under Low-level Ozone

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Figure S1 shows the SFG spectra of DPPC-d_{75} monolayer prepared in N_2 with *ssp*- (black) and *sps*- (red) polarization combinations. As the assignments shown in the figure, three intense peaks attributed to CD_3 groups are observed in the *ssp*-polarized spectrum, and only one peak attributed to CD_3,as is observed in the *sps*-polarized spectrum. It indicates the DPPC-d_{75} monolayer maintains an ordered structure with *all-trans* conformation.

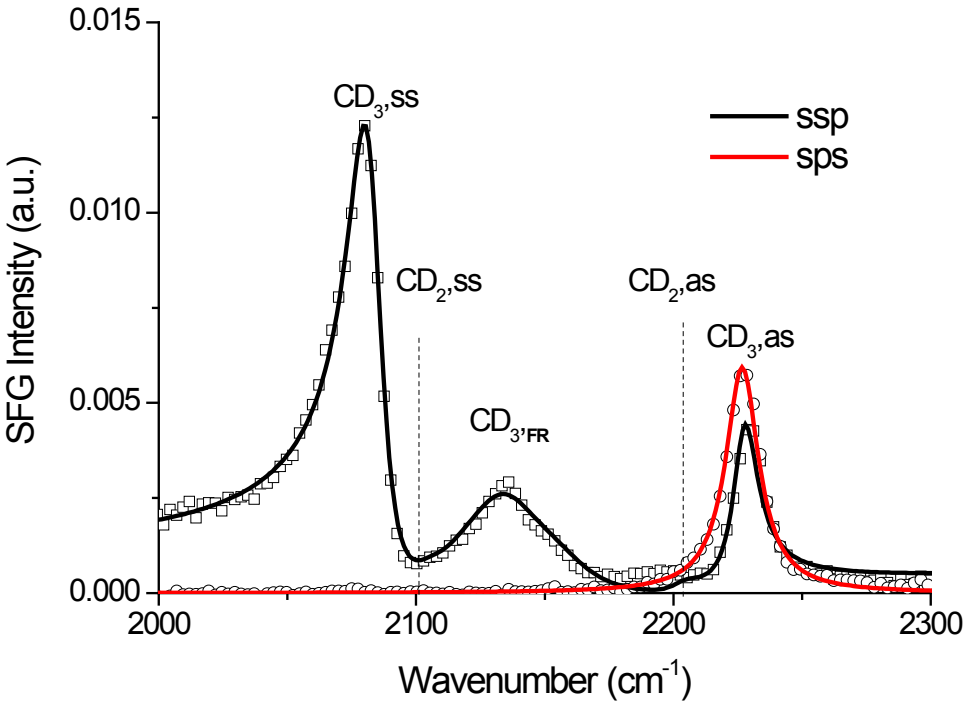

Figure S1 DPPC-d_{75} in N_2 with *ssp*- and *sps*-polarization combinations. Open symbols are SFG results and solid traces are fitting results. See manuscript for details.

Figure S2 shows the SFG spectra of DOPC monolayer prepared in N_2 with *ssp*- (black) and *sps*- (red) polarization combinations. As the assignments shown in the figure, intense SFG peaks attributed to methylene and methyl groups are clearly observed. Only *ssp*-polarized SFG spectrum given a clear peak for the C-H stretching mode of the vinyl group from DOPC molecule. The existence of strong SFG peaks for the methylene group indicates that the DOPC monolayer is quite disordered with many *gauche* defects in the DOPC alkyl chains.

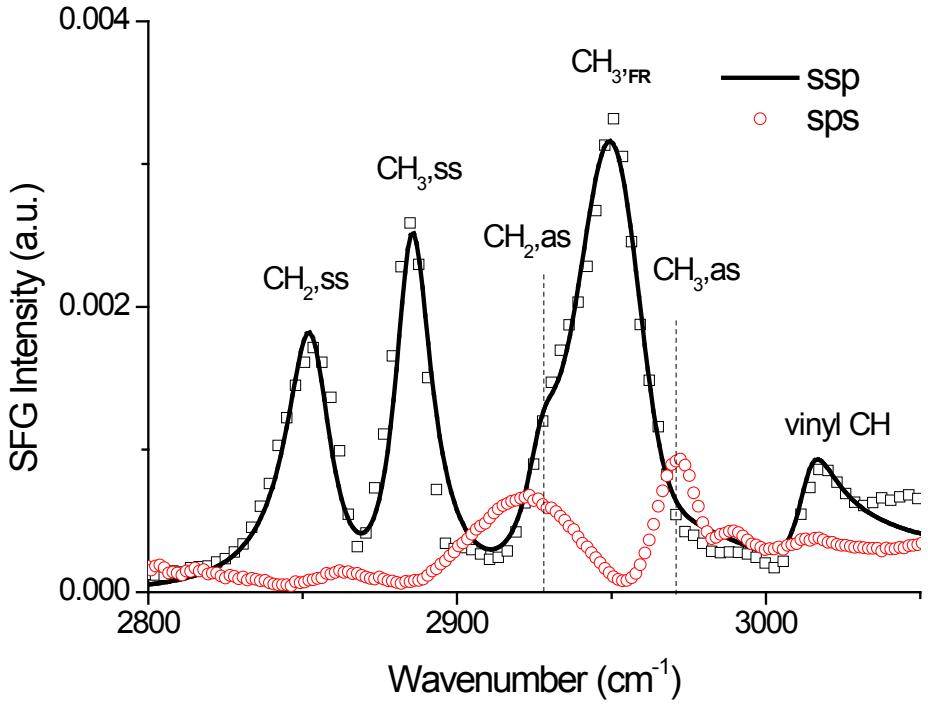

Figure S2 DOPC monolayer prepared in N_2 with *ssp*- and *sps*-polarization combinations. Open symbols are SFG results and solid traces are fitting results. See manuscript for details.