Electronic Supplementary Material (ESI) for ChemComm.

Supporting Information for

Electronically Enhanced Chiral Sum Frequency Generation Vibrational Spectroscopy Study of Lipid-bound Cytochrome c

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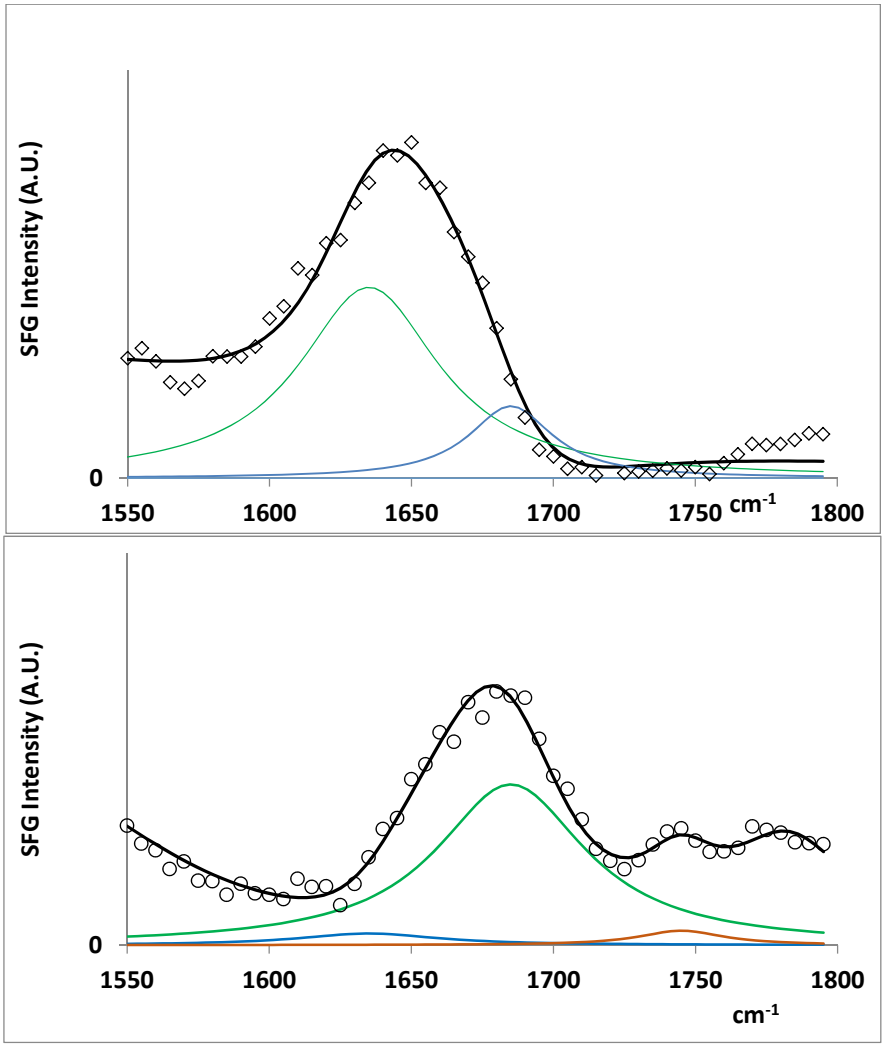

Figure S1: psp spectra of dDPPG/bovine CL-bound cyt c: top: at pH 7.2; bottom: at pH 5.5

ω_q (cm^{-1})	A_q/Γ_q (pH 7.2)	A_q/Γ_q (pH 5.5)	assignment
1635	20.5/30	5.16/30	B_2
1685	-7.6/18	20.5/32	B_1
1735	0	3.5/18	B_3

Table 1: Fitting parameters for dDPPG/bovine CL-bound cytc at pH 7.2 and pH 5.5

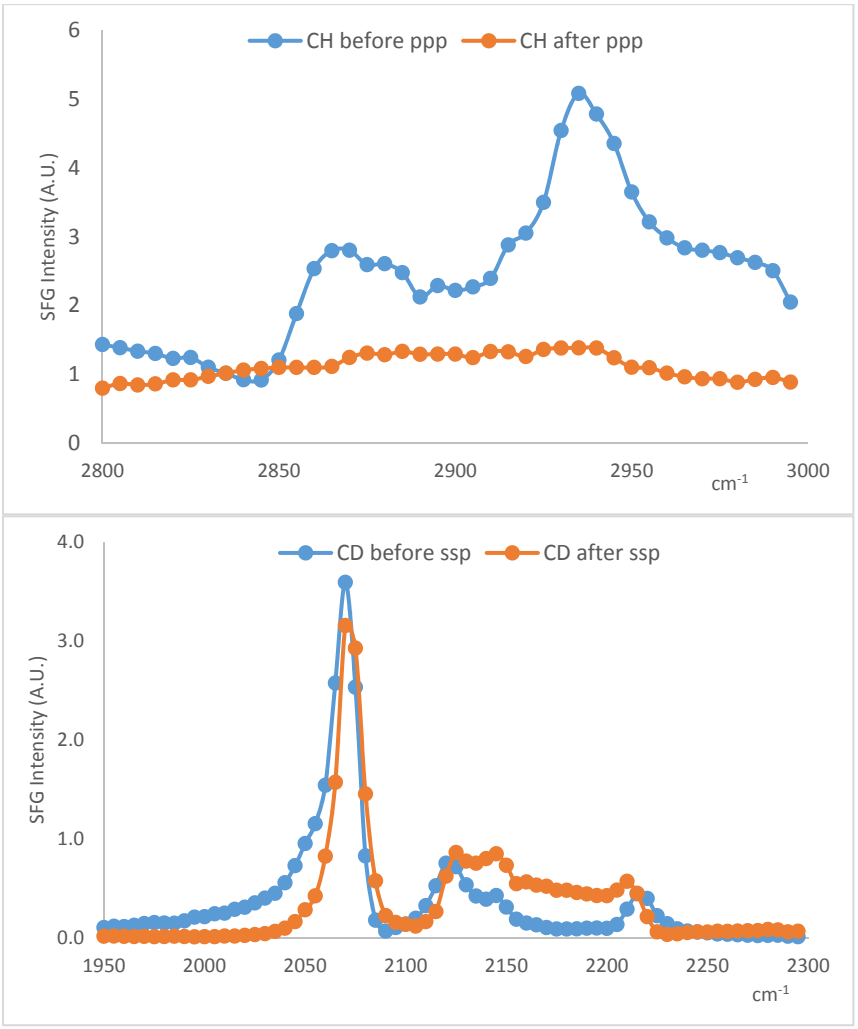

Figure S2: SFG spectra of dDPPG/bovine CL before and after interaction with cyt c: CL proximal layer (top); distal dDPPG layer (bottom)

The control experiment using the 355 nm beam produced by the third harmonic frequency unit from the fundamental 1064 nm. When the visible beam was tuned to 355 nm, the achiral signal detected in ssp was still strong, but the chiral signals detected in psp and spp were negligible as shown in Figure S3.

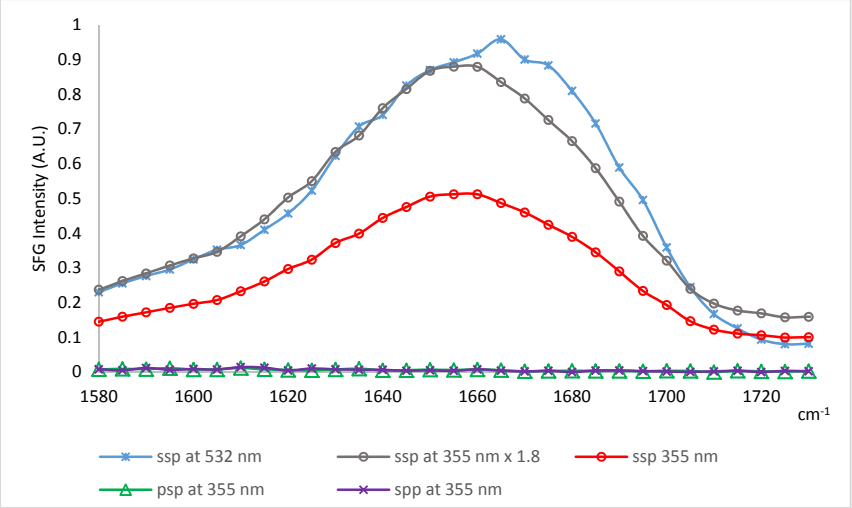

Figure S3: achiral (ssp) and chiral (spp and psp) SFG amide I spectra of cyt c when the electronic enhancement was turned on (vis=532 nm) and off (vis=355)