

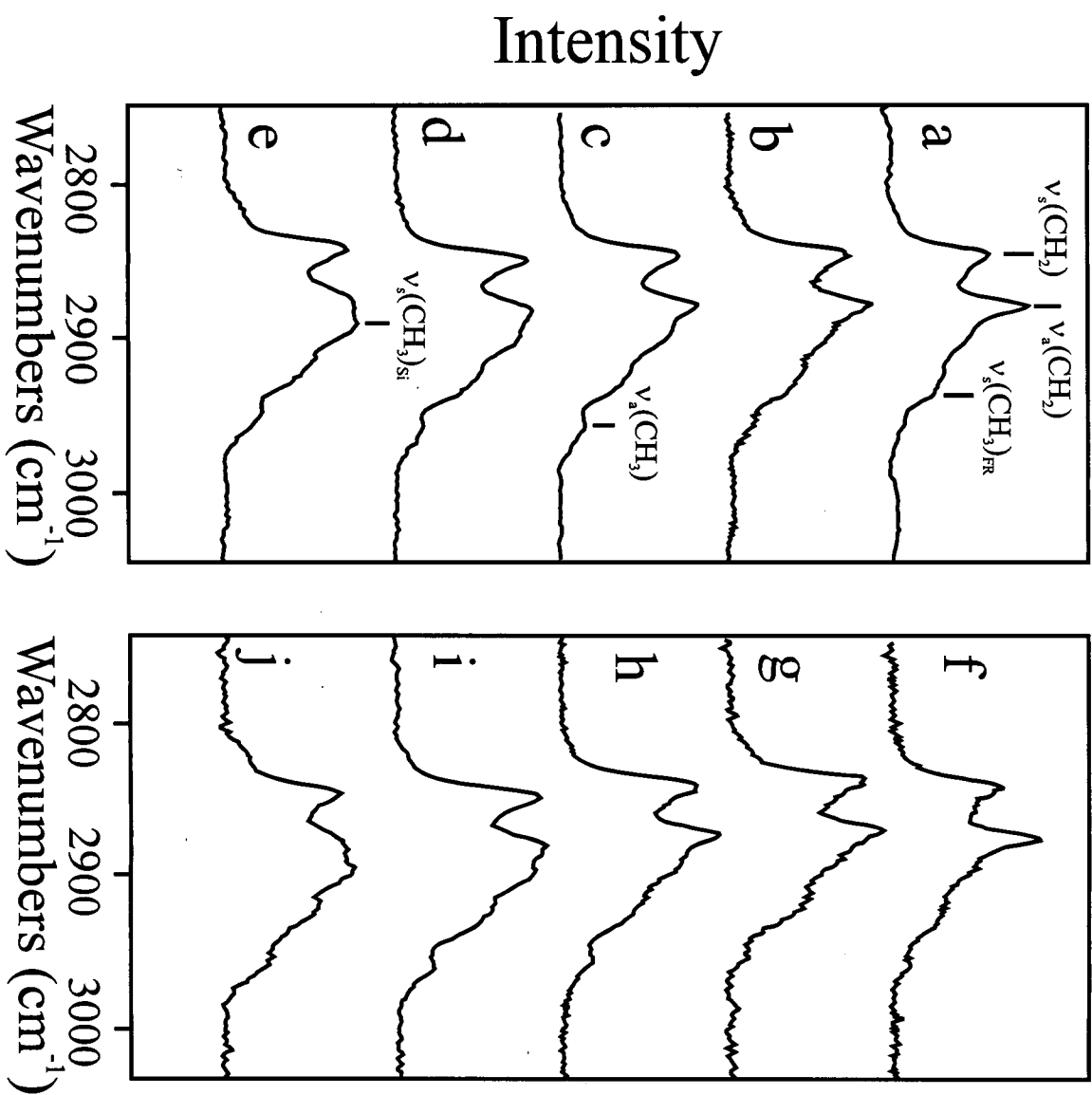


Figure S1: Raman spectra in acetonitrile of a) TFC18SF, b) TFC18SL, c) DFC18SF, d) DFC18SL, and e) MFC18 and in water of f) TFC18SF, g) TFC18SL, h) DFC18SF, i) DFC18SL, and j) MFC18..

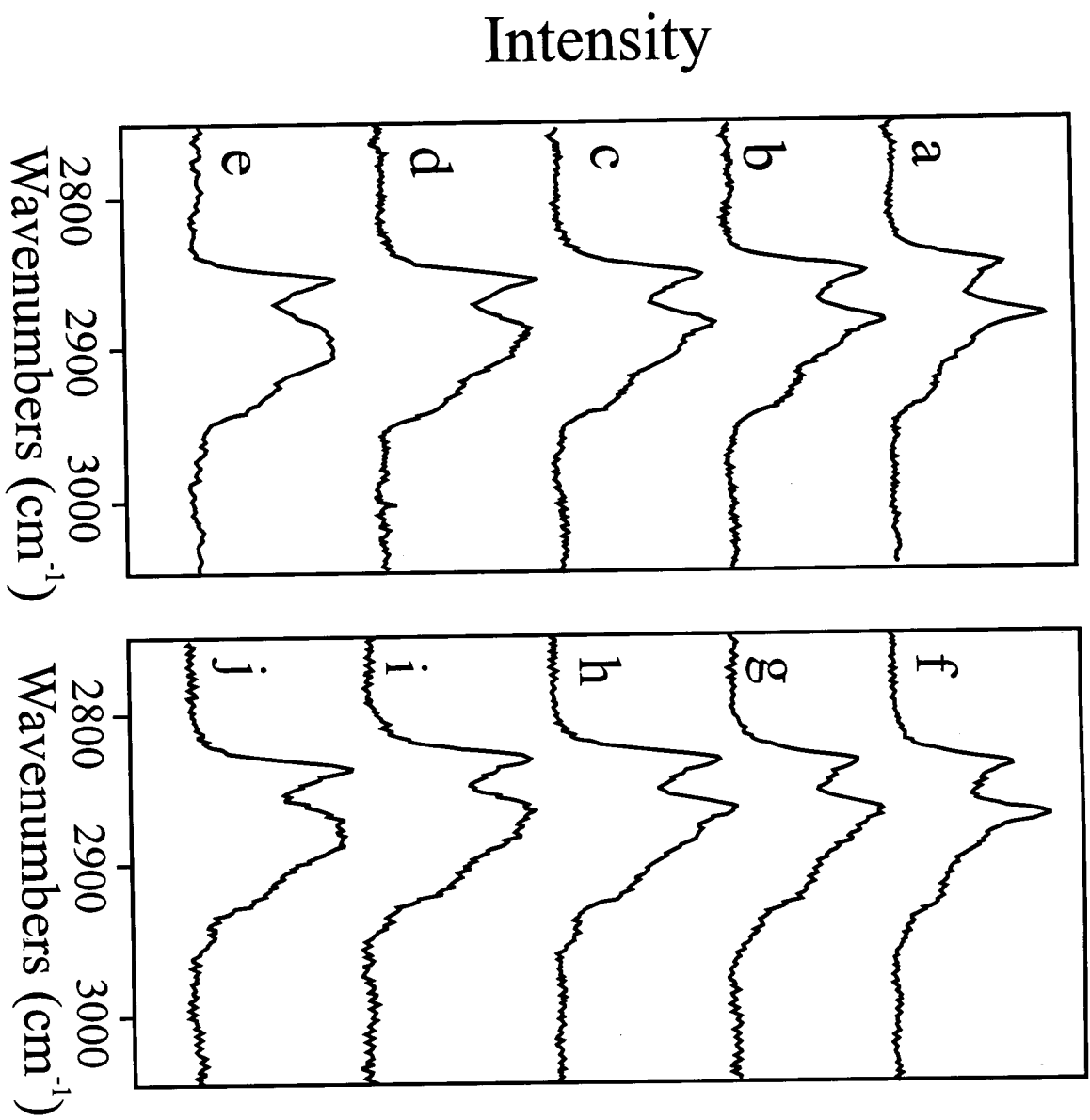


Figure S2: Raman spectra in THF of a) TFC18SF, b) TFC18SL, c) DFC18SF, d) DFC18SL, and e) MFC18 and in acetone of f) TFC18SF, g) TFC18SL, h) DFC18SF, i) DFC18SL, and j) MFC18.

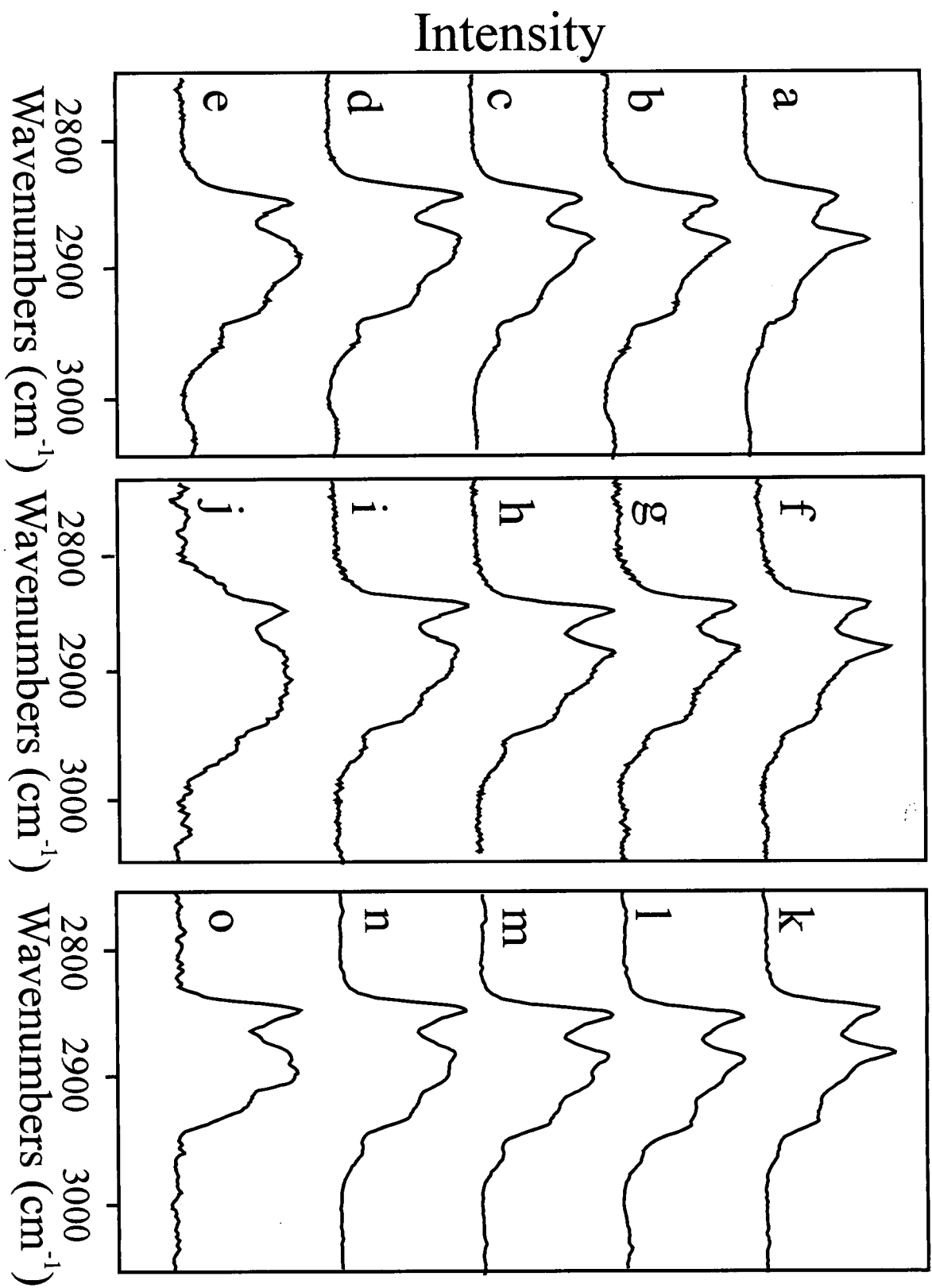


Figure S3: Raman spectra in hexane of a) TFC18SF, b) TFC18SL, c) DFC18SF, d) DFC18SL, and e) MFC18, in benzene of f) TFC18SF, g) TFC18SL, h) DFC18SF, i) DFC18SL, and j) MFC18, and in toluene of k) TFC18SF, l) TFC18SL, m) DFC18SF, n) DFC18SL, and o) MFC18.

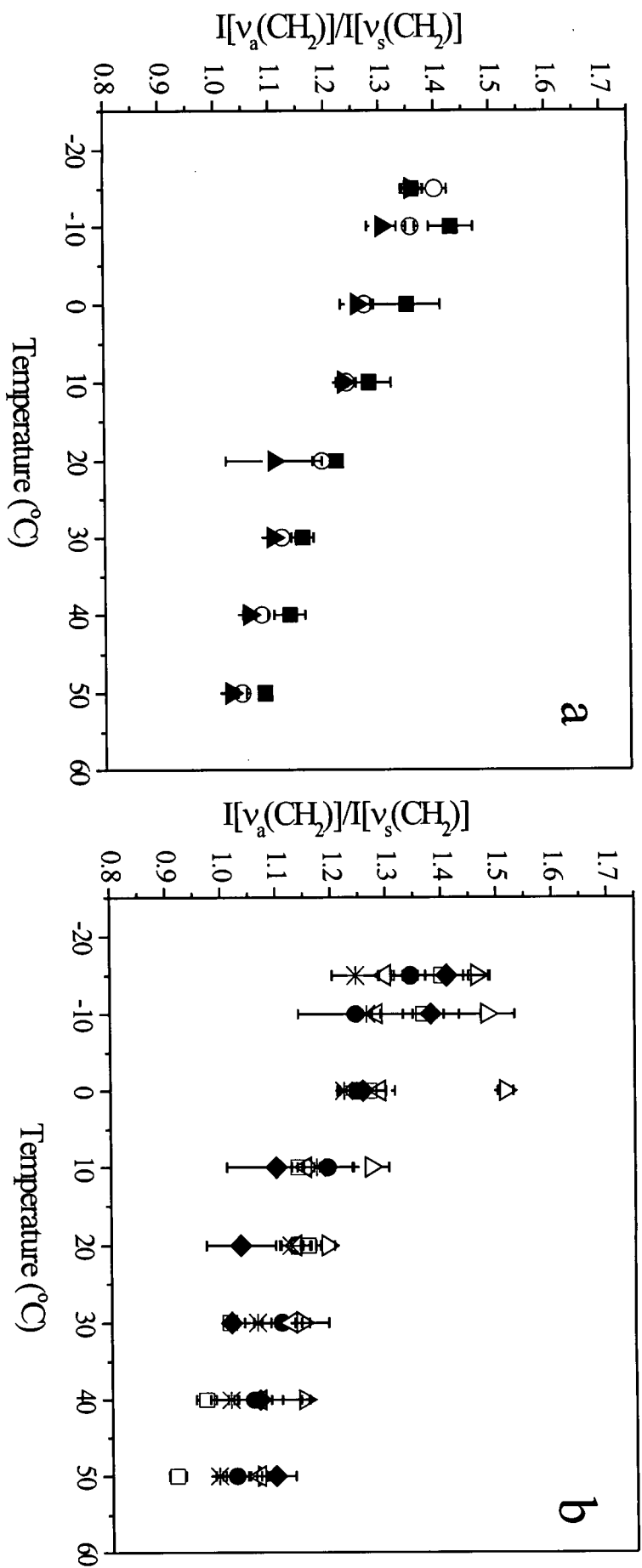


Figure S4: $I[v_a(\text{CH}_2)]/I[v_s(\text{CH}_2)]$ as a function of temperature for TFC18SL in a) methanol (■), water (▲), acetonitrile (○), and b) toluene (△), benzene (◇), hexane (●), CHCl₃ (◆), acetone (▽), and THF (*).

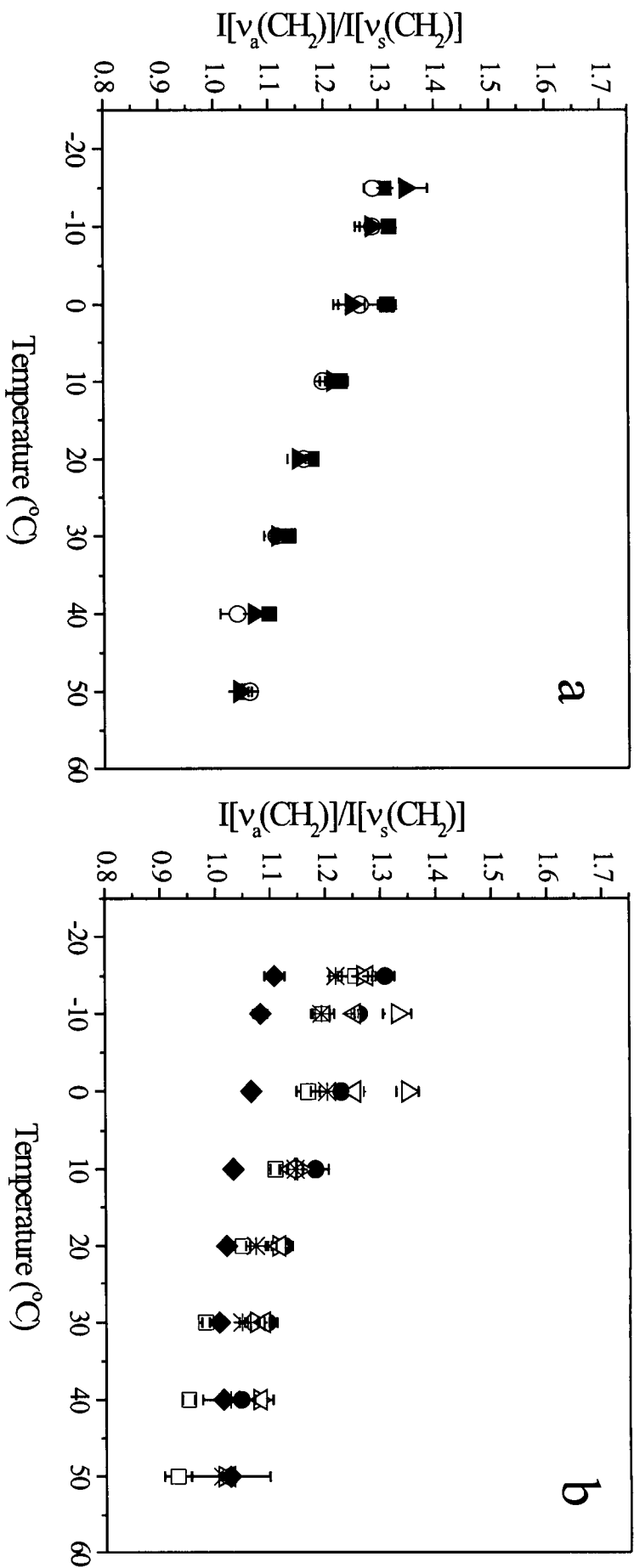


Figure S5: $I[v_a(\text{CH}_2)]/I[v_s(\text{CH}_2)]$ as a function of temperature for DFC18SF in a) methanol (■), water (▲), acetonitrile (○) and b) toluene (□), benzene (Δ), hexane (●), CHCl_3 (◆), acetone (▽), and THF (*).

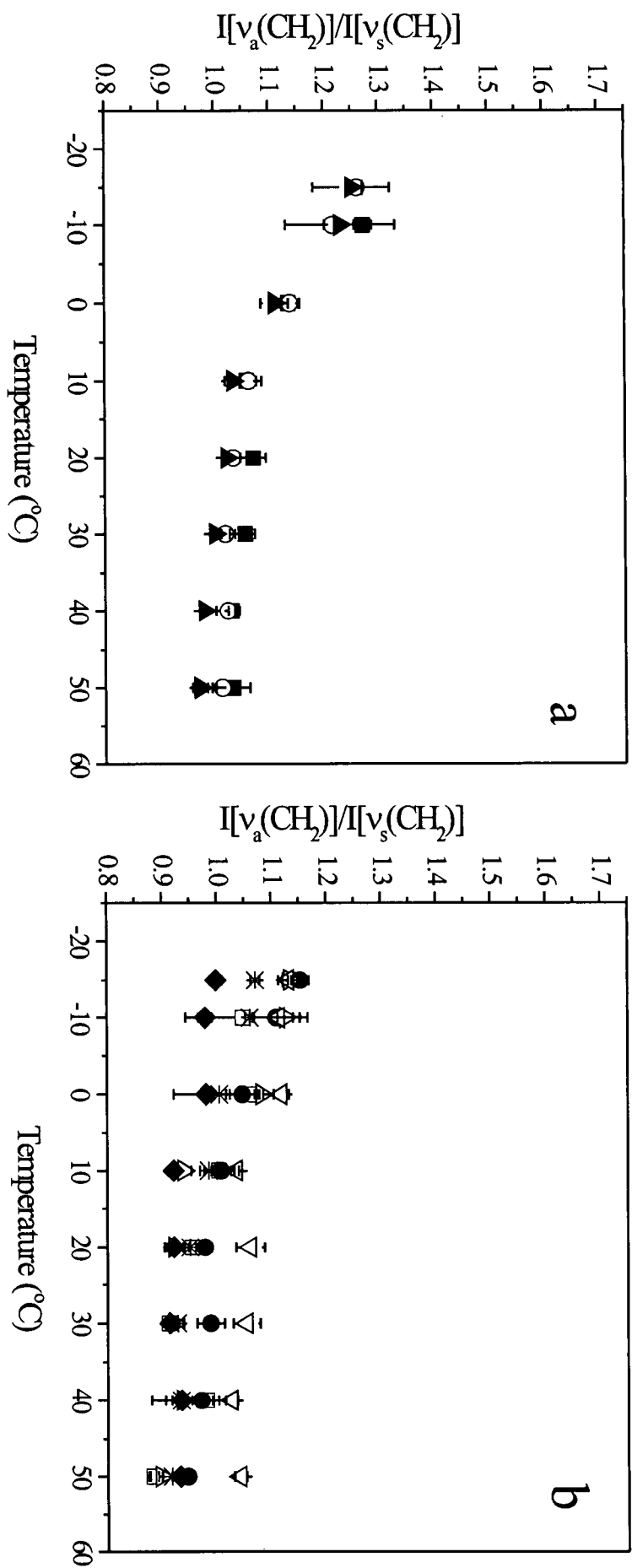


Figure S6: $I[v_a(\text{CH}_2)]/I[v_s(\text{CH}_2)]$ as a function of temperature for DFC18SL in a) methanol (●), water (■), acetonitrile (○) and b) toluene (□), benzene (Δ), hexane (○), CHCl_3 (◆), acetone (▽), and THF (*).