Supporting Information

“Selective hydrogenation of acetophenone with supported Pd and Rh catalysts in water, organic solvents, and CO₂-dissolved expanded liquids” by Shin-ichiro Fujita, Yuichi Onodera, Hiroshi Yoshida, Masahiko Arai

Molecular interactions of CO₂ with organic substrates are important in discussing the positive and negative effects of CO₂ pressurization in synthetic reactions.¹ For the present reaction systems of acetophenone (AP) in water and organic solvents, AP - CO₂ interactions were examined by in situ high pressure FTIR-ATR measurements.¹ The wavenumber of absorption band assignable to the carbonyl group of AP was not found to change by the presence of CO₂ and so AP - CO₂ interactions were insignificant in the solvents examined.

Fig. S1. FTIR-ATR spectra of neat AP and AP in solvents (1: water, 2: methanol, 3: ethanol, 4: diethyl ether, 5: n-hexane) in the absence (broken lines) and presence (solid lines) of 1 MPa CO₂ at ambient temperature. AP:solvent = 2: 5 (volume)