Electronic Supplementary Material

Precipitation study of CO_2-loaded glycinate solution with the introduction of ethanol as an antisolvent

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Table S1. Data on species distribution in the phase induced mixtures.

$[CO_2]_0$ (mol L^{-1})	γ	δ_n	δ_p	δ_s	$n_{CO_2-containing}$ (mol)	$n_{KGLY/KGLYH^+}$ (mol)	$n_{HCO_3^-}$ (mol)	$n_{KGLY-COO^-}$ (mol)	$\Delta n_{CO_2-containing}$ (mol)	$\Delta n_{KGLY/KGLYH^+}$ (mol)	$\Delta n_{HCO_3^-}$ (mol)	$\Delta n_{KGLY-COO^-}$ (mol)	$\eta_{KGLY/KGLYH^+}$ %	$\eta_{HCO_3^-}$ %	$\eta_{KGLY-COO^-}$ %
0.33	0.8	5.36	4.56	—	0.11	0.91	0	0.11	0	0.090	0	0	9.9	0	0
0.33	1.6	5.36	4.00	—	0.11	0.91	0	0.11	0	0.152	0	0	16.8	0	0
0.33	2.3	5.36	3.52	—	0.11	0.91	0	0.11	0	0.206	0	0	22.7	0	0
0.33	2.5	5.36	3.45	—	0.11	0.91	0	0.11	0	0.214	0	0	23.6	0	0
0.33	3.0	5.36	3.27	—	0.11	0.91	0	0.11	0	0.233	0	0	25.7	0	0
0.78	0.8	2.38	1.89	—	0.27	0.75	0	0.27	0	0.130	0	0	17.3	0	0
0.78	1.6	2.38	1.65	—	0.27	0.75	0	0.27	0	0.194	0	0	25.8	0	0
0.78	2.3	2.38	1.53	—	0.27	0.75	0	0.27	0	0.226	0	0	30.0	0	0
0.78	2.5	2.38	1.47	—	0.27	0.75	0	0.27	0	0.242	0	0	32.2	0	0
0.78	3.0	2.38	1.35	—	0.27	0.75	0	0.27	0	0.273	0	0	36.3	0	0
1.48	0.8	1.61	0.84	—	0.50	0.49	0.09	0.40	0	0.385	0	0	79.1	0	0
1.48	1.6	1.61	0.78	—	0.50	0.49	0.09	0.40	0	0.414	0	0	85.1	0	0

1.48	2.3	1.61	0.67	—	0.50	0.49	0.09	0.40	0	0.469	0	0	96.4	0	0
1.48	2.5	1.61	0.68	—	0.50	0.49	0.09	0.40	0	0.467	0	0	95.6	0	0
1.48	3.0	1.61	0.68	—	0.50	0.49	0.09	0.40	0	0.465	0	0	95.6	0	0
1.81	0.8	1.19	0.79	0.16	0.62	0.65	0.24	0.37	0.045	0.279	0.045	0	42.9	18.8	0
1.81	1.6	1.19	0.69	0.27	0.62	0.65	0.24	0.37	0.167	0.613	0.094	0.073	94.3	39.2	19.7
1.81	2.3	1.19	0.68	0.59	0.62	0.65	0.24	0.37	0.307	0.521	0.215	0.092	80.2	89.6	24.9
1.81	2.5	1.19	0.67	0.49	0.62	0.65	0.24	0.37	0.234	0.475	0.118	0.116	73.1	49.2	31.4
1.81	3.0	1.19	0.67	0.49	0.62	0.65	0.24	0.37	0.234	0.475	0.118	0.116	73.1	49.2	31.4

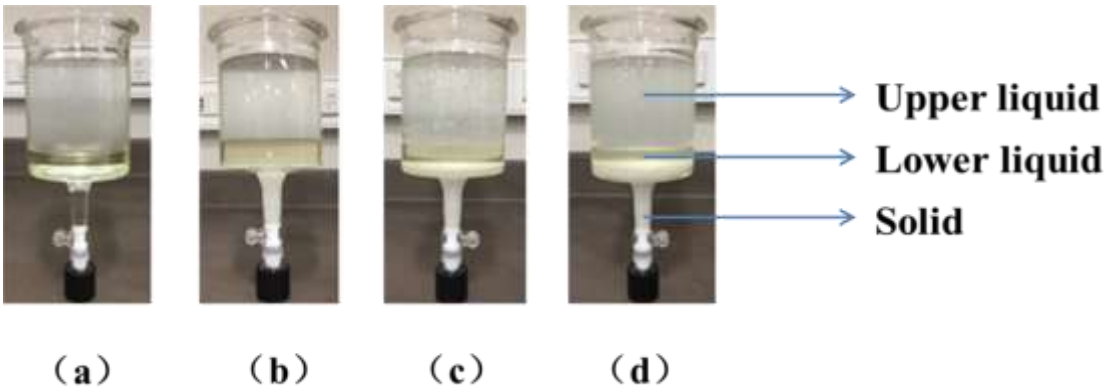

Figure S1. Phase changing phenomena at the ethanol volume fraction of 3.0 for CO_2-loaded KGLY solutions with different CO_2 loadings: (a) 0.33 mol L^{-1}; (b) 0.78 mol L^{-1}; (c) 1.48 mol L^{-1}; (d) 1.81 mol L^{-1}.