

Supporting Information

Table S1. LLE data for the binary system
DMF/decane measured by the analytic method
within this work

T (K)	decane-rich phase	DMF-rich phase
	w_{decane} (g/g)	w_{decane} (g/g)
283.15	0.980	0.041
288.15	0.976	0.044
288.15	0.975	0.044
291.85	0.973	0.048
298.15	0.962	0.055
298.15	0.961	0.057
298.15	0.961	0.056
300.10	0.954	0.058
320.00	0.936	0.098
328.30	0.913	0.113
328.43	0.915	0.115
333.15	0.898	0.135
334.97	0.890	0.142
343.15	0.851	0.188
347.65	0.805	0.215

Table S2. LLE data for the binary system DMF/decane measured by the cloud-point method within this work

T (K)	w _{decane} (g/g)
299.15	0.058
310.65	0.082
319.15	0.100
328.85	0.130
353.00	0.287
355.86	0.329
356.08	0.683
356.95	0.661
357.10	0.657
357.78	0.490

Table S3. LLE data for the binary system DMF/1-dodecene measured by the analytic method within this work

T (K)	1-dodecene-rich phase	DMF-rich phase
	w _{1-dodecene} (g/g)	w _{1-dodecene} (g/g)
288.15	0.944	0.075
298.15	0.928	0.103
308.15	0.904	0.133
323.15	0.811	0.203
323.15	0.810	0.203
333.15	0.698	0.355

Table S4. LLE data for ternary system
DMF/decane/1-dodecene measured by the
analytic method within this work

T (K)	decane-rich phase		DMF-rich phase	
	w _{decane} (g/g)	w _{DMF} (g/g)	w _{decane} (g/g)	w _{DMF} (g/g)
298.15	0.962	0.038	0.055	0.945
	0.961	0.039	0.057	0.943
	0.953	0.047	0.054	0.946
	0.774	0.037	0.048	0.938
	0.539	0.044	0.042	0.921
	0.421	0.050	0.033	0.918
	0.344	0.052	0.031	0.907
	0.254	0.055	0.021	0.912
	0.180	0.059	0.015	0.912
	0.000	0.072	0.000	0.897
333.15	0.898	0.102	0.135	0.865
	0.619	0.132	0.122	0.824
	0.528	0.142	0.117	0.791
	0.439	0.158	0.108	0.770
	0.381	0.166	0.101	0.749
	0.260	0.193	0.087	0.717
	0.192	0.212	0.070	0.700
	0.143	0.226	0.056	0.687
	0.000	0.303	0.000	0.645
343.15	0.851	0.149	0.188	0.812
	0.775	0.164	0.181	0.799
	0.711	0.173	0.172	0.796
	0.707	0.176	0.176	0.792
	0.706	0.175	0.176	0.792
	0.606	0.195	0.167	0.774
	0.521	0.216	0.160	0.753
	0.446	0.242	0.153	0.732
	0.391	0.260	0.146	0.714

0.305	0.305	0.143	0.662
0.259	0.345	0.140	0.638

Table S5. LLE data for ternary system

DMF/decane/dodecanal measured by the analytic

method within this work

T (K)	decane-rich phase		DMF-rich phase	
	w _{decane} (g/g)	w _{DMF} (g/g)	w _{decane} (g/g)	w _{DMF} (g/g)
283.15	0.980	0.020	0.041	0.959
	0.941	0.027	0.044	0.939
	0.874	0.045	0.052	0.909
	0.868	0.049	0.061	0.897
	0.809	0.059	0.065	0.863
	0.729	0.091	0.082	0.818
	0.636	0.132	0.104	0.762
	0.427	0.287	0.173	0.610
	0.346	0.378	0.231	0.528
288.15	0.976	0.024	0.044	0.956
	0.976	0.024	0.044	0.956
	0.871	0.053	0.057	0.904
	0.863	0.056	0.062	0.895
	0.809	0.074	0.070	0.868
	0.732	0.108	0.087	0.826
	0.668	0.141	0.116	0.775
	0.573	0.195	0.131	0.720
298.15	0.962	0.038	0.055	0.945
	0.961	0.039	0.057	0.943
	0.961	0.039	0.056	0.944
	0.911	0.053	0.067	0.912
	0.861	0.067	0.076	0.883
	0.846	0.074	0.080	0.877
	0.844	0.075	0.079	0.877
	0.789	0.096	0.092	0.840
	0.704	0.139	0.114	0.792
	0.696	0.142	0.117	0.786
	0.634	0.182	0.136	0.747

0.577

0.212

0.153

0.705