Table S1 Comparison of measured densities ρ (g cm^{-3}) and dynamic viscosities η (mPa s) of the pure solvents with literature values at 298.15 K

Solvent	ρ		η	
	Expt.	Lit.	Expt.	Lit.
DMF	0.94406	0.94387 [2]	0.805	0.802 [2]
		0.9438 [15]		0.80 [16]
		0.9444 [16]		0.8024 [15,23]
		0.9445 [17]		
		0.94393 [18]		
		0.94332 [19]		
		0.94539 [20]		
		0.94383 [21]		
		0.9436 [22]		
NMF	0.99929	1.0000 [2]	1.760	1.65 [16]
		0.9988 [16]		1.6503 [23]
		0.99989 [21]		
		0.9990 [22]		
WATER	0.99704	0.9970474 [2]	0.890	0.89025 [2]
		0.9970 [16]		0.89 [16]
		0.99704 [24]		0.8937 [25]
		0.99705 [26]		
		0.997048 [27]		

Table S2 Experimental densities ρ (g cm^{-3}), dynamic viscosities η (mPa s), excess molar volumes V_m^E (cm^3 mol^{-1}), mixing viscosities $\Delta_{mix}h$ (mPa s) and molar excess Gibbs energies for the activation of viscous flow ΔG_m^{*E} (kJ mol^{-1}) for the DMF (1) + NMF (2) mixture at 298.15 K

x_1	ρ	η	V_m^E	$\Delta_{mix}h$	ΔG_m^{*E}
0.0335	0.99679	1.674	-0.0011	-0.054	-0.055
0.0715	0.99403	1.605	-0.0028	-0.087	-0.081
0.1058	0.99161	1.548	-0.0042	-0.111	-0.100
0.1496	0.98861	1.483	-0.0066	-0.134	-0.117
0.1855	0.98622	1.431	-0.0082	-0.152	-0.133
0.2229	0.98380	1.380	-0.0108	-0.167	-0.148
0.2584	0.98154	1.335	-0.0114	-0.178	-0.159
0.3065	0.97860	1.279	-0.0150	-0.188	-0.169
0.3498	0.97601	1.231	-0.0163	-0.195	-0.178
0.4014	0.97302	1.179	-0.0181	-0.198	-0.184
0.4381	0.97097	1.146	-0.0207	-0.196	-0.183
0.4883	0.96821	1.101	-0.0213	-0.193	-0.185
0.5366	0.96564	1.062	-0.0223	-0.186	-0.181
0.5865	0.96306	1.025	-0.0229	-0.175	-0.173
0.6943	0.95770	0.954	-0.0207	-0.143	-0.146
0.7529	0.95492	0.921	-0.0188	-0.120	-0.123
0.8197	0.95182	0.887	-0.0127	-0.090	-0.092
0.8708	0.94954	0.862	-0.0092	-0.066	-0.068

Table S3 Excess molar volumes $V^{E}_{m,123}$ (cm^3 mol^{-1}), mixing viscosities $\Delta_{mix}h_{123}$ (mPa s) and molar excess Gibbs energies for the activation of viscous flow $\Delta G^{*E}_{m,123}$ (kJ mol^{-1}) for the DMF (1) + NMF (2) + WATER (3) ternary mixture at 298.15 K

x_1	x_2	$V^{E}_{m,123}$	$\Delta_{mix}h_{123}$	$\Delta G^{*E}_{m,123}$	x_1	x_2	$V^{E}_{m,123}$	$\Delta_{mix}h_{123}$	$\Delta G^{*E}_{m,123}$
0.0113	0.1087	-0.3021	0.491	-2.648	0.2232	0.5536	-0.4340	0.243	-0.179
0.0211	0.1806	-0.4613	0.732	-1.853	0.2348	0.0998	-0.8930	1.317	-0.273
0.0236	0.0570	-0.2268	0.420	-3.004	0.2374	0.5952	-0.2558	0.066	-0.273
0.0252	0.0502	-0.2195	0.398	-3.072	0.2641	0.1735	-0.8615	1.064	-0.153
0.0333	0.2052	-0.5262	0.828	-1.533	0.2811	0.0223	-0.9879	1.530	-0.091
0.0462	0.4304	-0.5785	0.764	-0.636	0.3005	0.0534	-0.9817	1.406	-0.011
0.0546	0.1159	-0.4671	0.788	-1.897	0.3167	0.5953	-0.1561	-0.081	-0.250
0.0561	0.1338	-0.4995	0.843	-1.727	0.3186	0.1212	-0.9348	1.106	-0.028
0.0568	0.4899	-0.5379	0.658	-0.504	0.3292	0.2219	-0.7801	0.746	-0.100
0.0723	0.0294	-0.3608	0.708	-2.326	0.3537	0.1288	-0.9183	0.982	0.006
0.0730	0.5812	-0.4390	0.465	-0.372	0.3673	0.0303	-1.0623	1.330	0.148
0.0734	0.1778	-0.5996	0.968	-1.263	0.3871	0.0655	-1.0111	1.132	0.128
0.0791	0.6886	-0.3030	0.264	-0.274	0.3915	0.2658	-0.6404	0.451	-0.134
0.0795	0.1742	-0.6114	0.976	-1.232	0.4494	0.0447	-1.0209	0.998	0.164
0.0865	0.0474	-0.4569	0.858	-1.920	0.4536	0.3160	-0.4904	0.217	-0.135
0.0943	0.8026	-0.1377	0.046	-0.180	0.4679	0.1684	-0.7430	0.513	-0.058
0.1095	0.2420	-0.6934	1.009	-0.747	0.4783	0.0881	-0.9048	0.753	0.088
0.1367	0.3108	-0.6907	0.906	-0.471	0.5170	0.3354	-0.3025	0.034	-0.202
0.1397	0.3189	-0.6868	0.868	-0.473	0.5387	0.3640	-0.2265	-0.050	-0.213
0.1424	0.0238	-0.6252	1.189	-1.245	0.5406	0.0933	-0.8067	0.552	0.036
0.1475	0.0557	-0.6854	1.221	-1.039	0.5936	0.0480	-0.8319	0.531	0.050
0.1657	0.3793	-0.6303	0.708	-0.339	0.5941	0.2260	-0.3963	0.103	-0.172
0.1736	0.3737	-0.6346	0.688	-0.348	0.6403	0.1152	-0.5702	0.258	-0.070
0.1757	0.0193	-0.7332	1.351	-0.878	0.6918	0.0623	-0.6002	0.269	-0.054
0.1802	0.0651	-0.7858	1.333	-0.685	0.7033	0.2584	-0.1283	-0.098	-0.177
0.1953	0.4709	-0.4934	0.427	-0.284	0.7100	0.1290	-0.3843	0.113	-0.104
0.1959	0.4618	-0.5060	0.429	-0.309	0.7651	0.0734	-0.4026	0.127	-0.091
0.2056	0.5730	-0.3296	0.185	-0.272	0.8022	0.1416	-0.1393	-0.019	-0.096
0.2073	0.1360	-0.8429	1.237	-0.370	0.8565	0.0846	-0.1786	0.005	-0.080
0.2132	0.5216	-0.4014	0.274	-0.271					

Table S4 Standard deviation F of the semiempirical models for the DMF (1) + NMF (2) + WATER (3) ternary mixture at 298.15 K; for asymmetric equations the component 1 is: (a) DMF, (b) NMF and (c) WATER

Model	$V^{E}_{m,123}$			$\Delta_{mix}h_{123}$			$\Delta G^{*E}_{m,123}$		
Köhler		0.0809			0.2127			0.4125	
Jacob and Fitzner		0.0655			0.1413			0.2417	
Colinet		0.0622			0.1626			0.3141	
Tsao and Smith	0.0390[a]	0.1586[b]	0.1725[c]	0.1597[a]	0.4325[b]	0.2390[c]	0.2757[a]	0.6903[b]	0.5244[c]
Toop	0.0691[a]	0.0760[b]	0.1752[c]	0.0792[a]	0.3269[b]	0.2132[c]	0.1497[a]	0.4549[b]	0.5012[c]
Scatchard	0.0668[a]	0.0211[b]	0.1750[c]	0.0563[a]	0.1033[b]	0.2115[c]	0.1032[a]	0.1405[b]	0.5011[c]