Electronic Supplementary Information

New approach to hydrosilylation reaction in ionic liquids as solvent in microreactor system

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Viscosities measurements

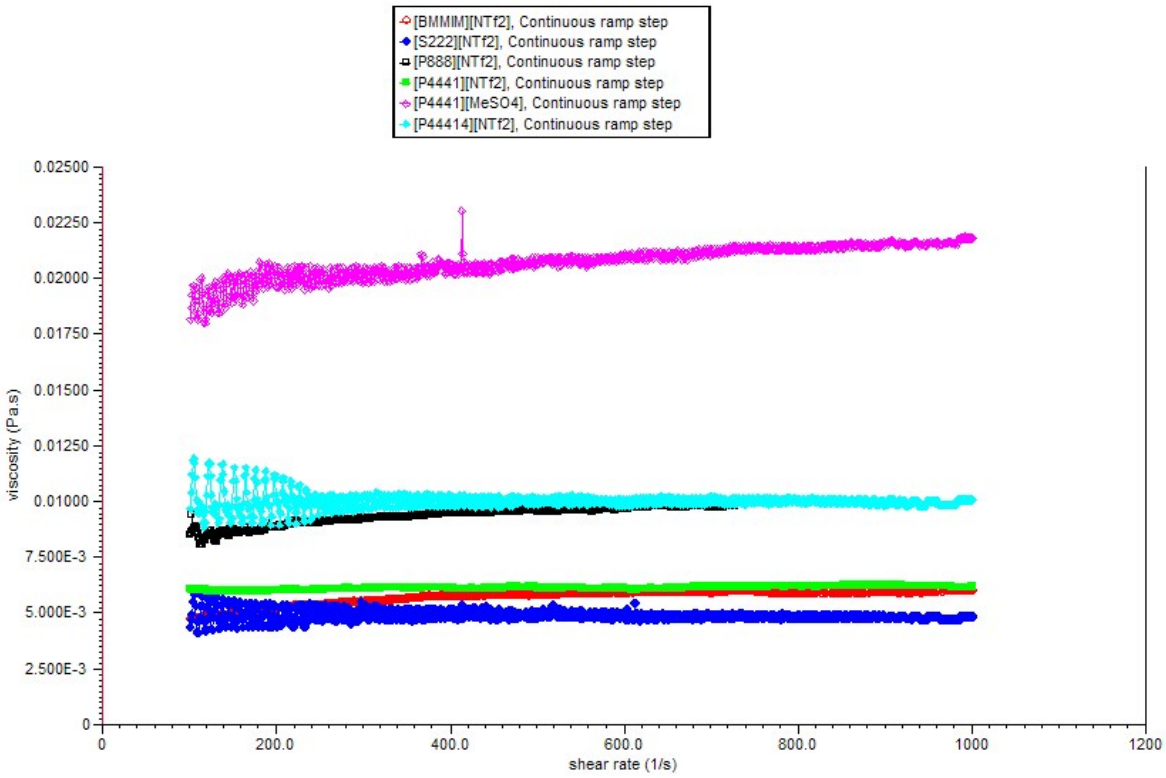


Figure S1. Correlation of the viscosity vs. sheare rate for all tested ILs at 100°C; All experiments were performer at the process temperature of 100 °C using rheometer equipped with the plate-plate geometry (40mm, 0° geometry) with continuous ramp of the shear rate from 100 to 1000 [1/s].

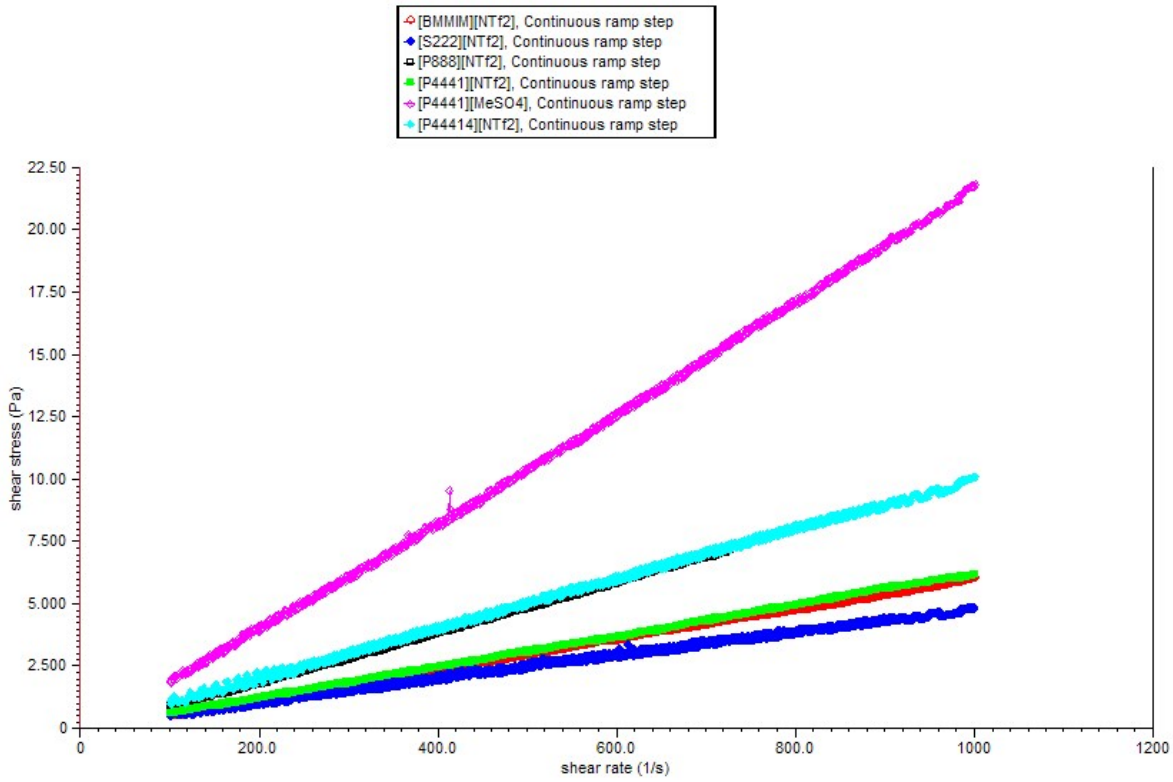


Figure S2. Correlation of the shear stress vs sheare rate for all tested ILs at 100^{o}C

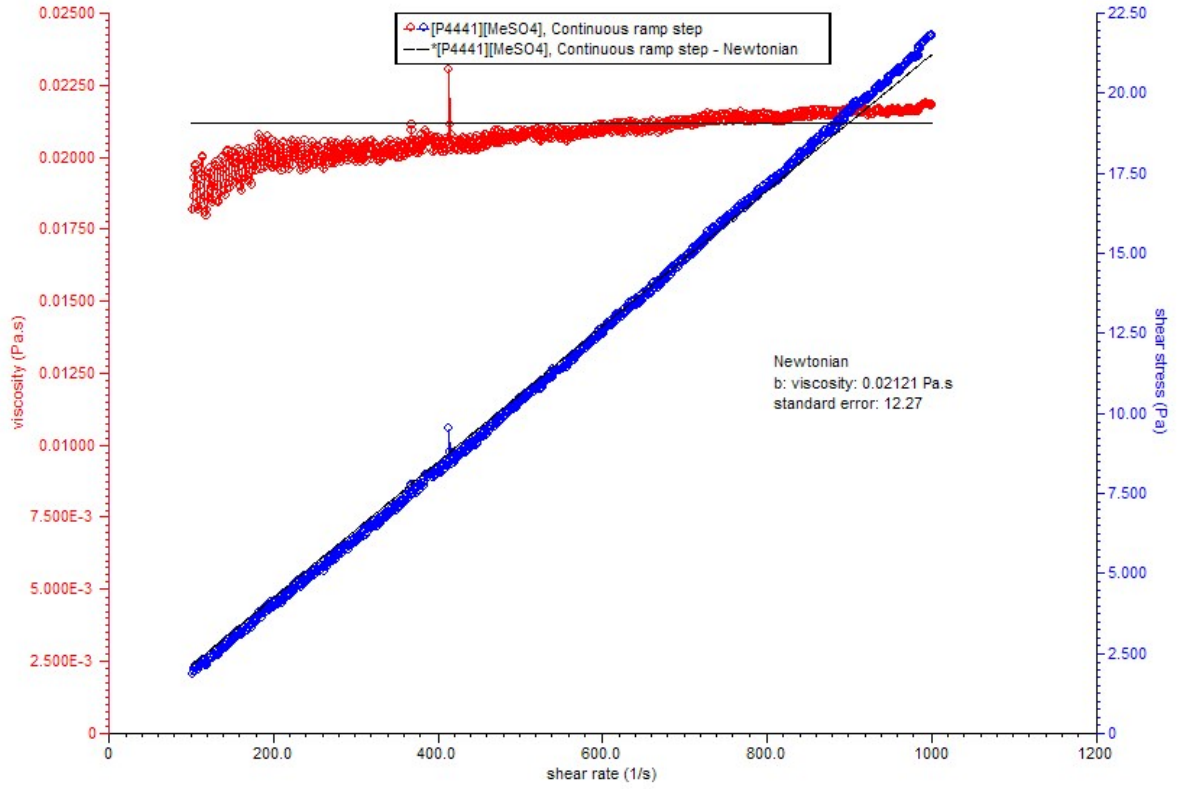


Figure S3. Correlation of the viscosity and shear stress vs sheare rate for $[P_{4441}][MeSO_4]$ (**1**) at 100°C

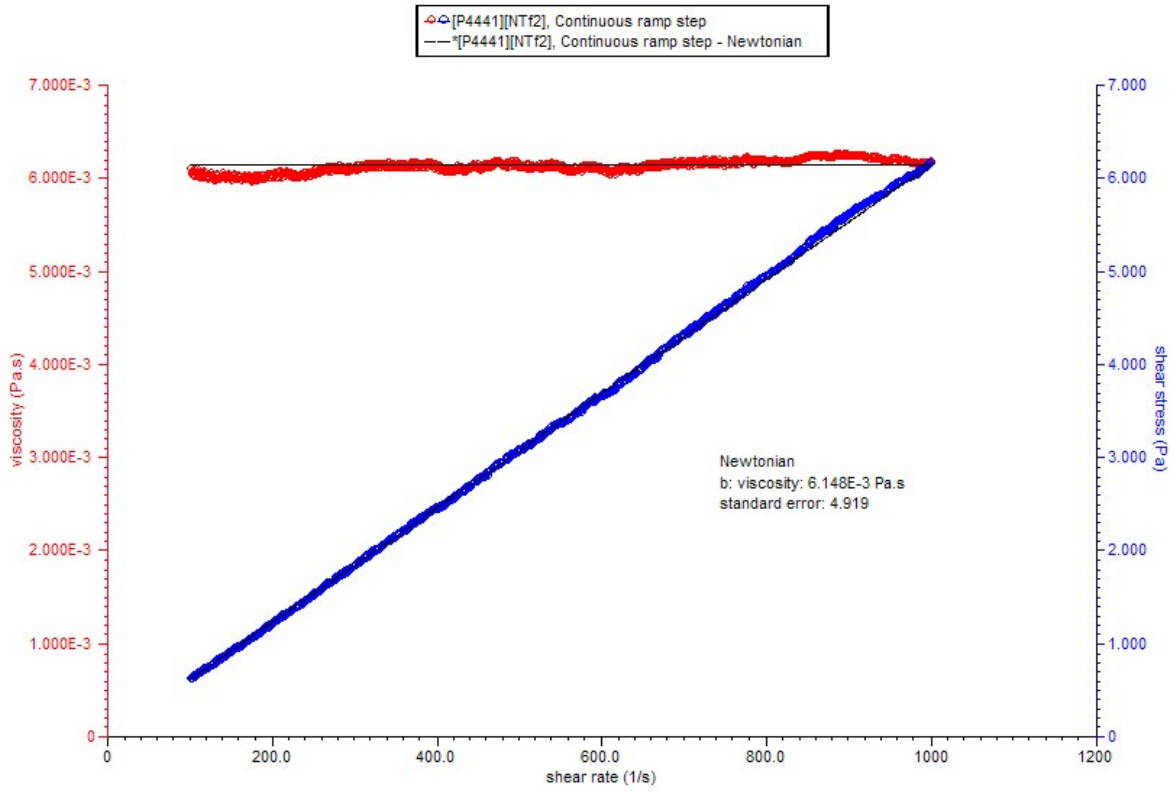


Figure S4. Correlation of the viscosity and shear stress vs sheare rate for $[P_{4441}][NTf_2]$ (**3**) at 100°C

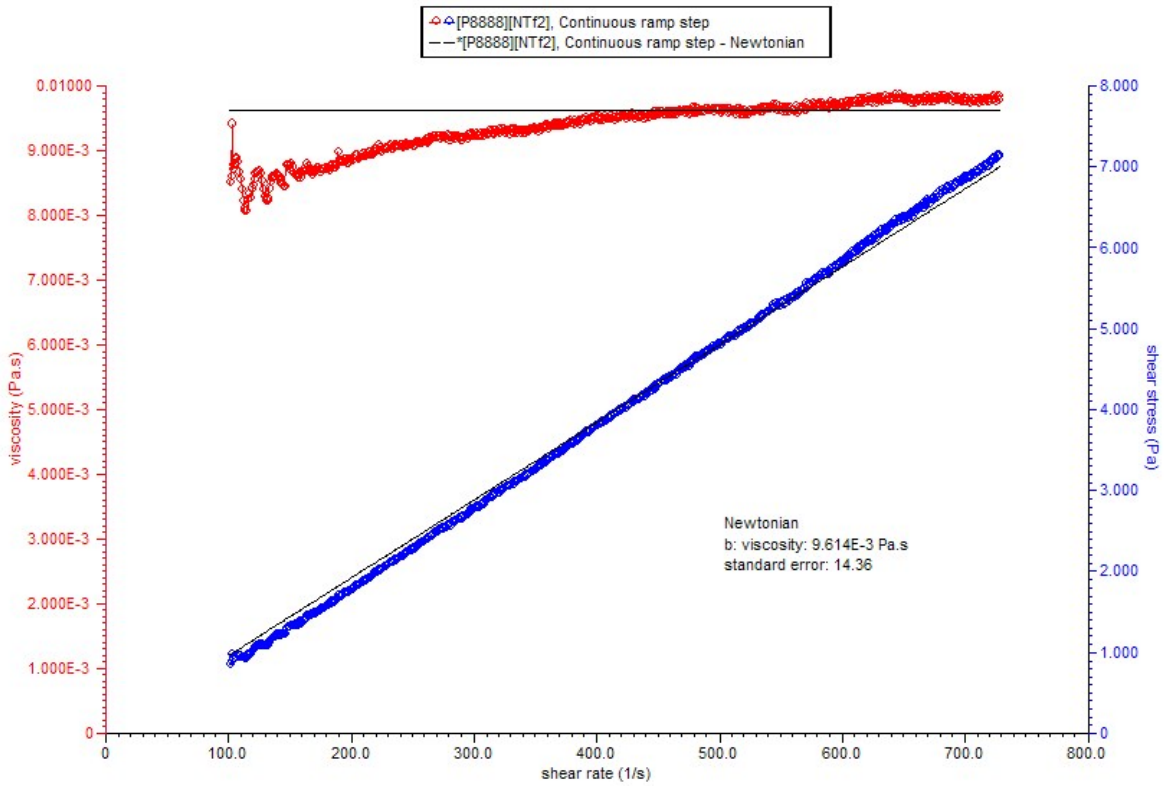


Figure S5. Correlation of the viscosity and shear stress vs sheare rate for $[P_{8888}][NTf_2]$ (**4**) at 100°C

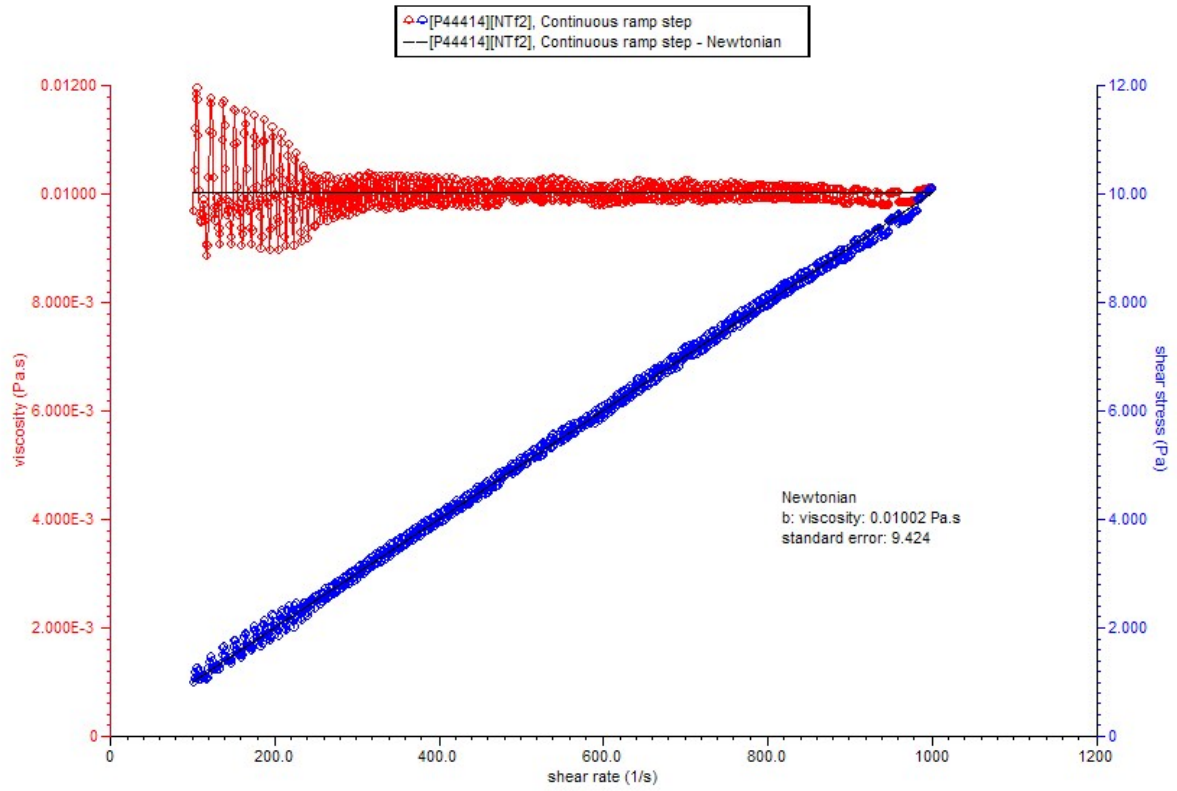


Figure S6. Correlation of the viscosity and shear stress vs sheare rate for $[P_{44414}][NTf_2]$ (**5**) at 100°C

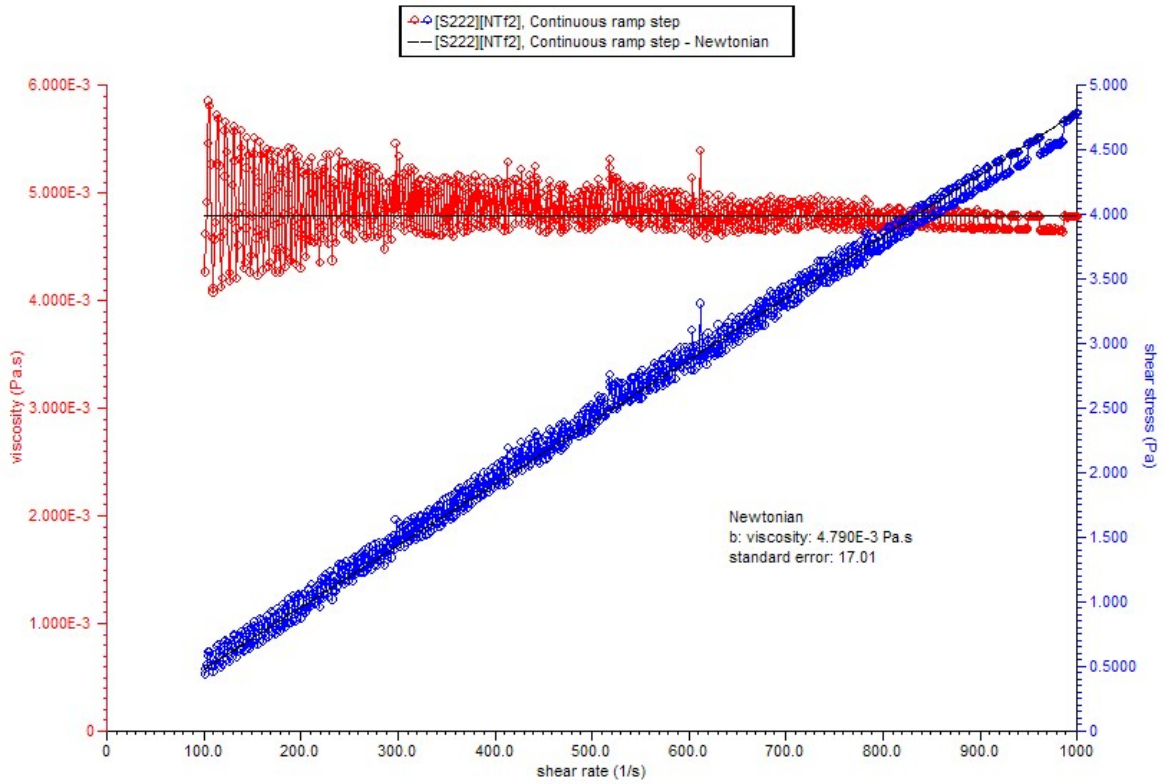


Figure S7. Correlation of the viscosity and shear stress vs sheare rate for $[S_{222}][NTf_2]$ (**6**) at 100°C

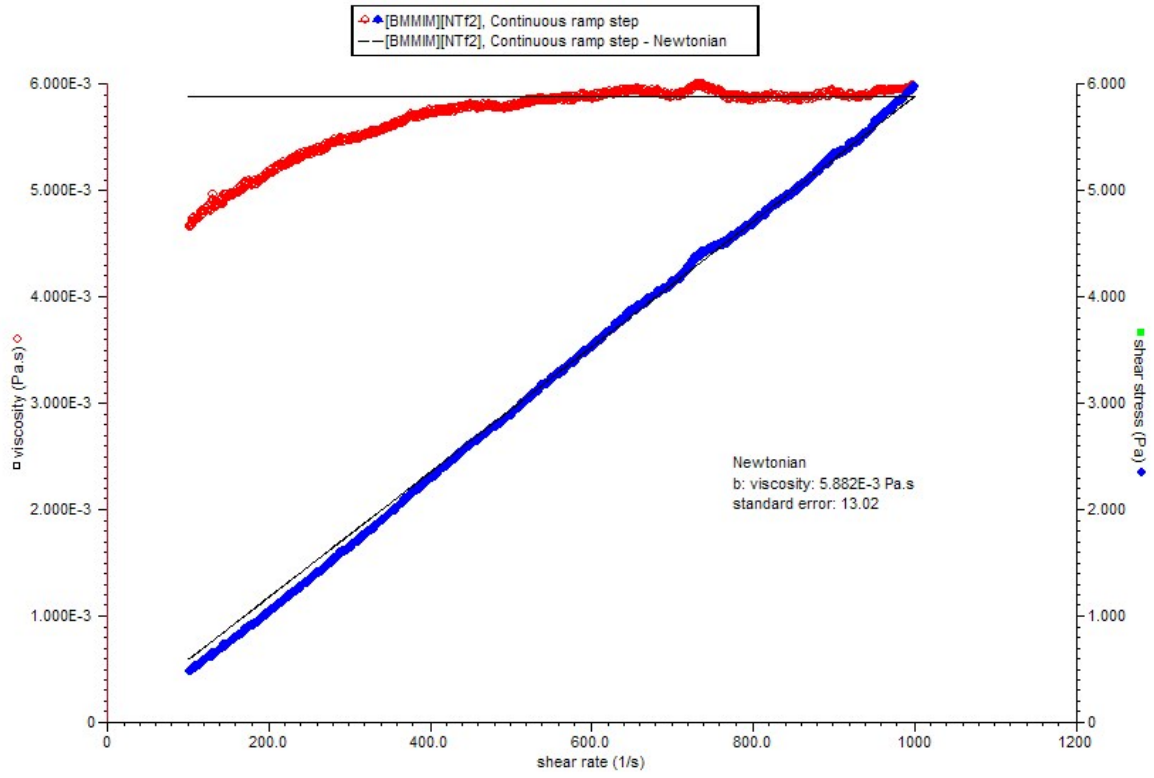


Figure S8. Correlation of the viscosity and shear stress vs sheare rate for [BMMIM][NTf_2] (**7**) at 100°C

GC chromatograms

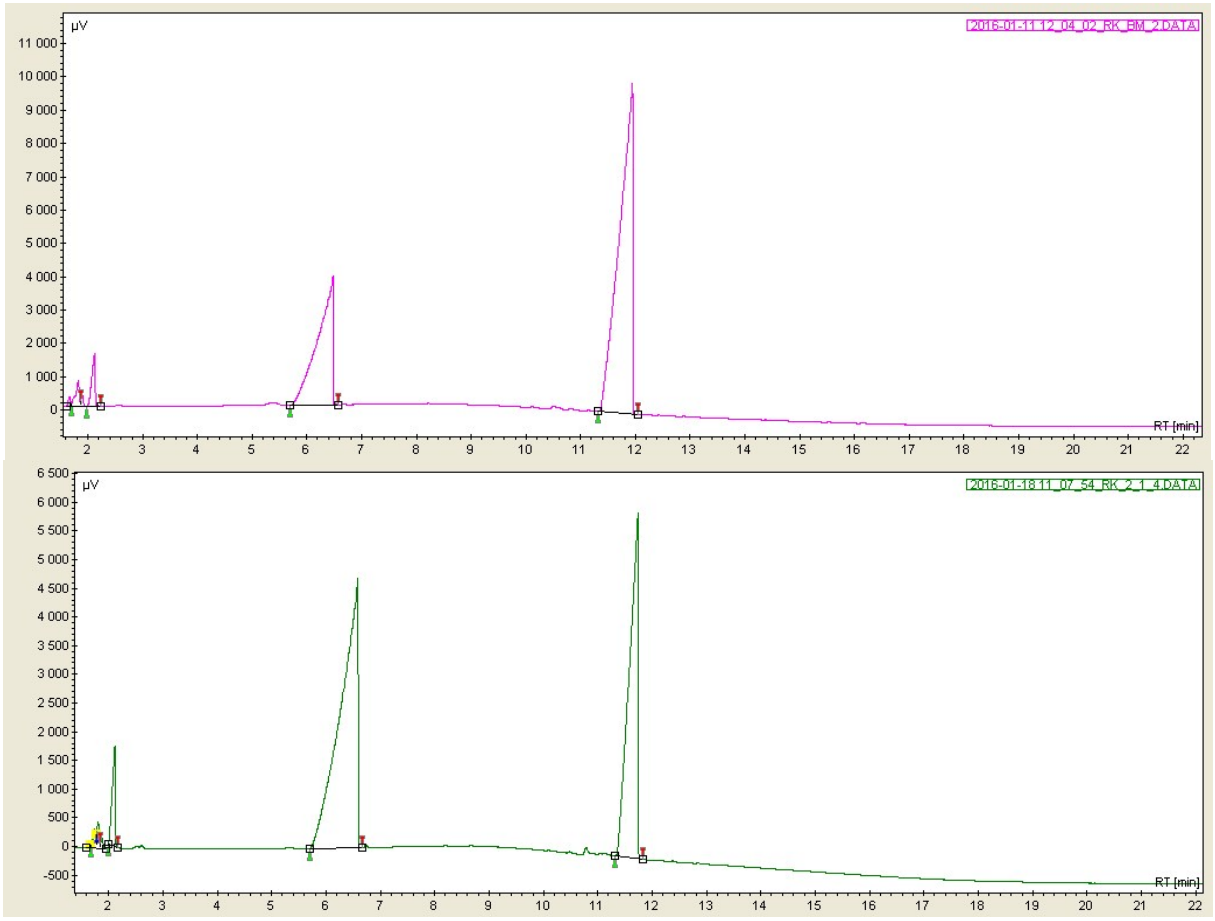


Figure S9. GC chromatograms of post reaction mixture obtained from A batch reaction using [BMMMIM][NTf_2] (**7**) as solvent for catalyst, B- reaction in microreactor using [BMMMIM][NTf_2] (**7**) as solvent for catalyst; retention times 1.5-2.0 min – substrates (1-octene, HMTS), 6.4 min – decane (internal standard), 11.7 min – product (octylohepthamethyltrisiloxane)

GC/MS/MS chromatograms

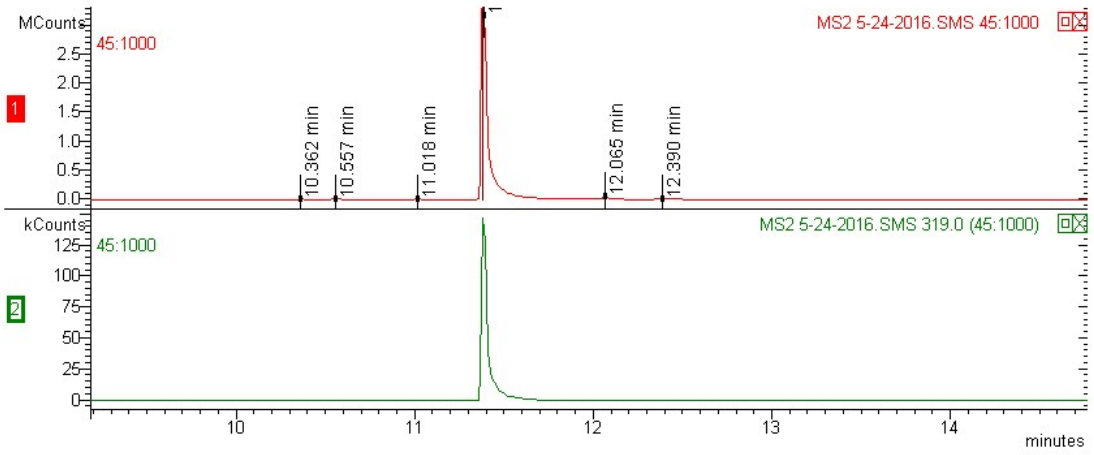


Figure S10. GC-MS chromatogram of octylohepthamethyltrisiloxane obtained from batch reaction using [BMMMIM][NTf_2] (**7**) as solvent for catalyst; 1- TIC chromatogram, 2- 319M/z chromatogram

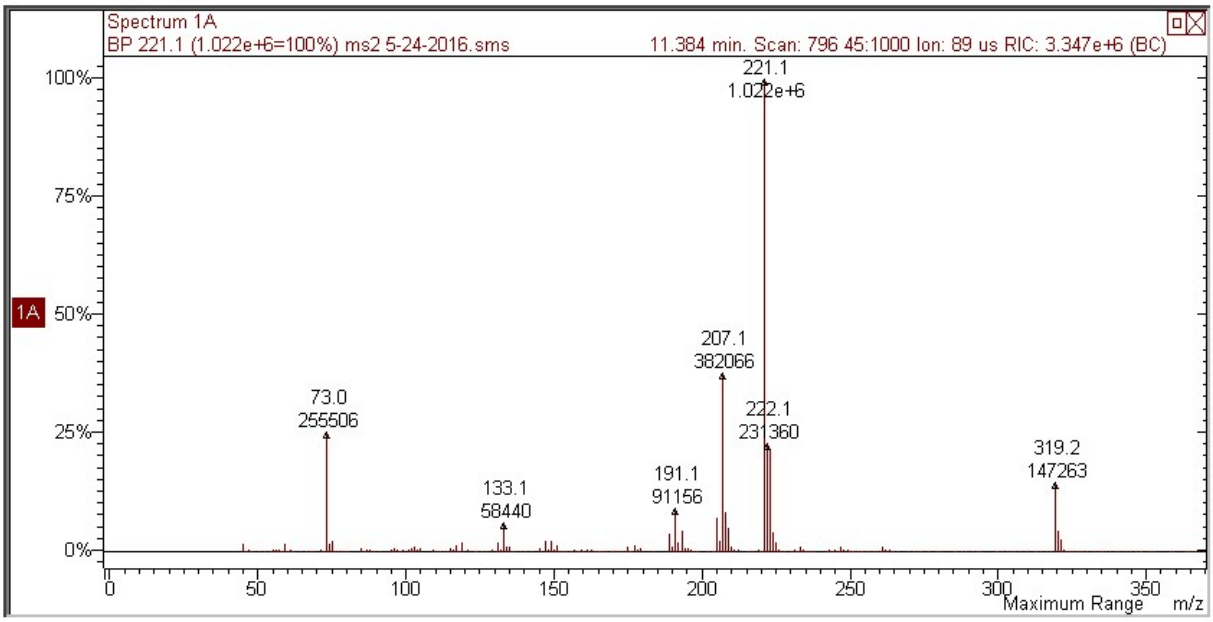


Figure S11. MS spectra of octylhepthamethyltrisiloxane (product) at the retention time 11.38 min obtained from batch reaction using [BMMMIM][NTf_2] (**7**) as solvent for catalyst

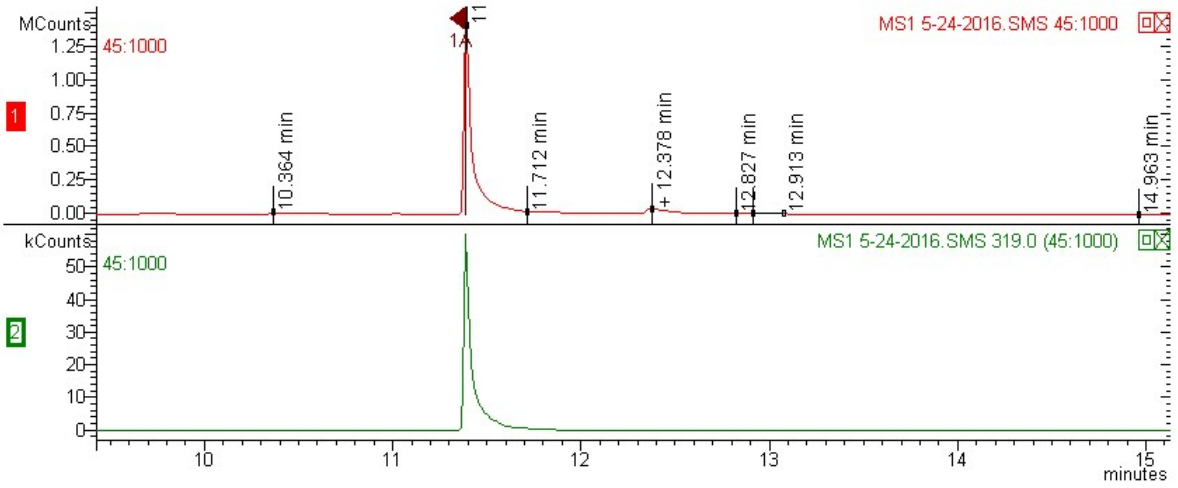


Figure S12. GC-MS chromatogram of octylohepthamethyltrisiloxane obtained from reaction using [BMMMIM][NTf_2] (**7**) as solvent for catalyst in microreactor systems; 1- TIC chromatogram, 2- 319M/z chromatogram

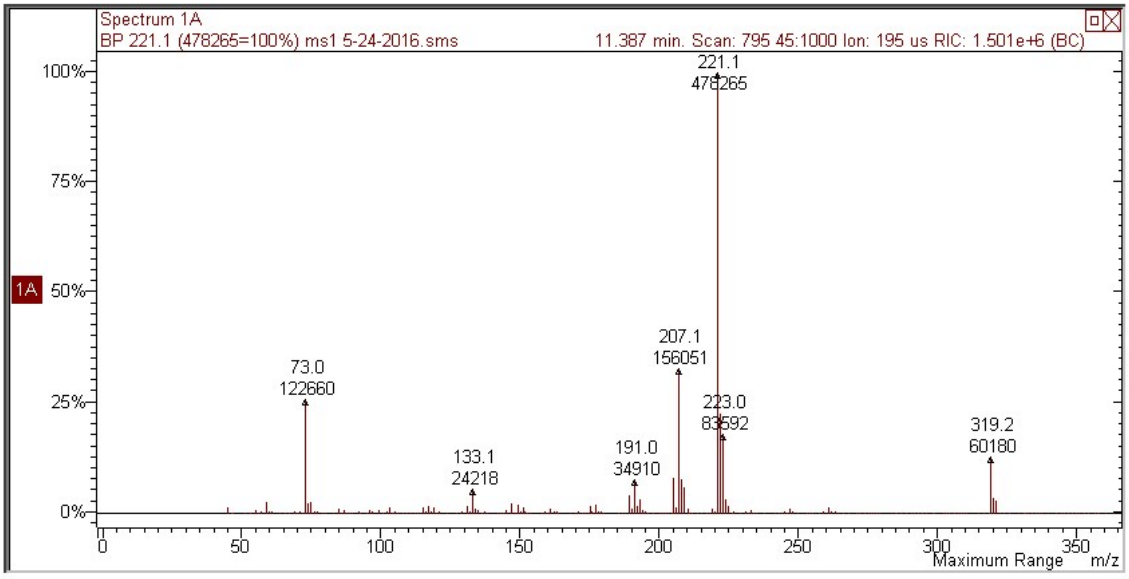
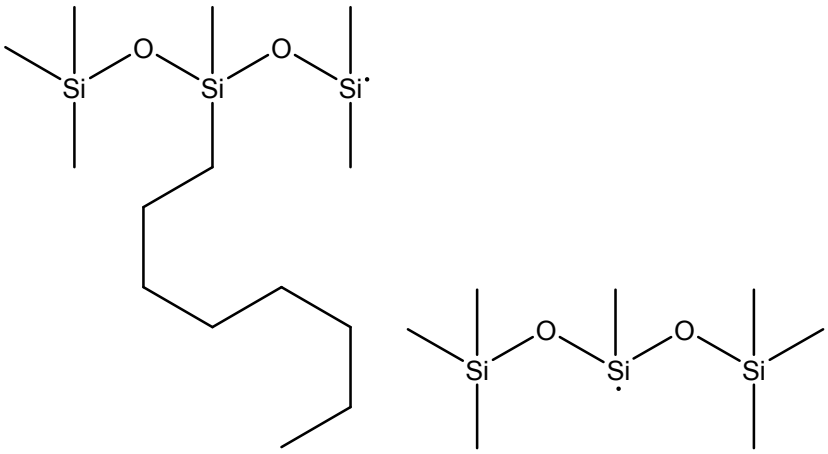
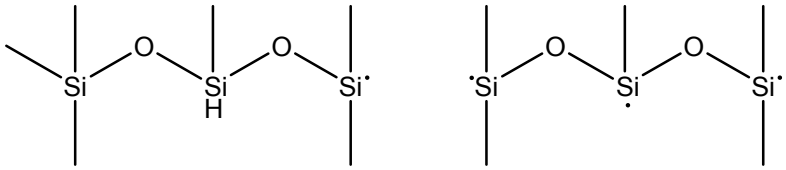


Figure S13. MS spectra of octylhepthamethyltrisiloxane (product) at the retention time 11.38 min obtained from reaction using [BMMMIM][NTf_2] (**7**) as solvent for catalyst in microreactor systems



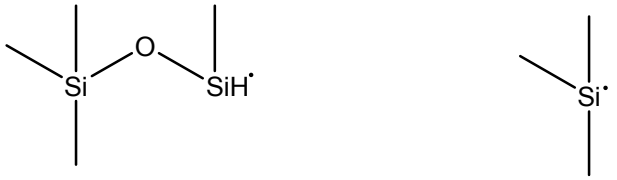
Chemical Formula: $C_{14}H_{35}O_2Si_3^{\bullet}$
Exact Mass: 319,19

Chemical Formula: $C_7H_{21}O_2Si_3^{\bullet}$
Exact Mass: 221,08



Chemical Formula: $C_6H_{19}O_2Si_3^{\bullet}$
Exact Mass: 207,07

Chemical Formula: $C_5H_{15}O_2Si_3^{\bullet}$
Exact Mass: 191,04



Chemical Formula: $C_4H_{13}OSi_2^{\bullet}$
Exact Mass: 133,05

Chemical Formula: $C_3H_9Si^{\bullet}$
Exact Mass: 73,05

Figure S14. Proposed fragmentation of MS spectra of octylhepthamethyltrisiloxane as observed for the peak from GC-MS measurements at the retention time 11.38 min