Supporting Information

Continuous flow Friedel-Crafts alkylation catalyzed by silica supported phosphotungstic acid: an environmentally benign process

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1. Nitrogen adsorption isotherms and BJH plots of the PTA/SiO_2 composites

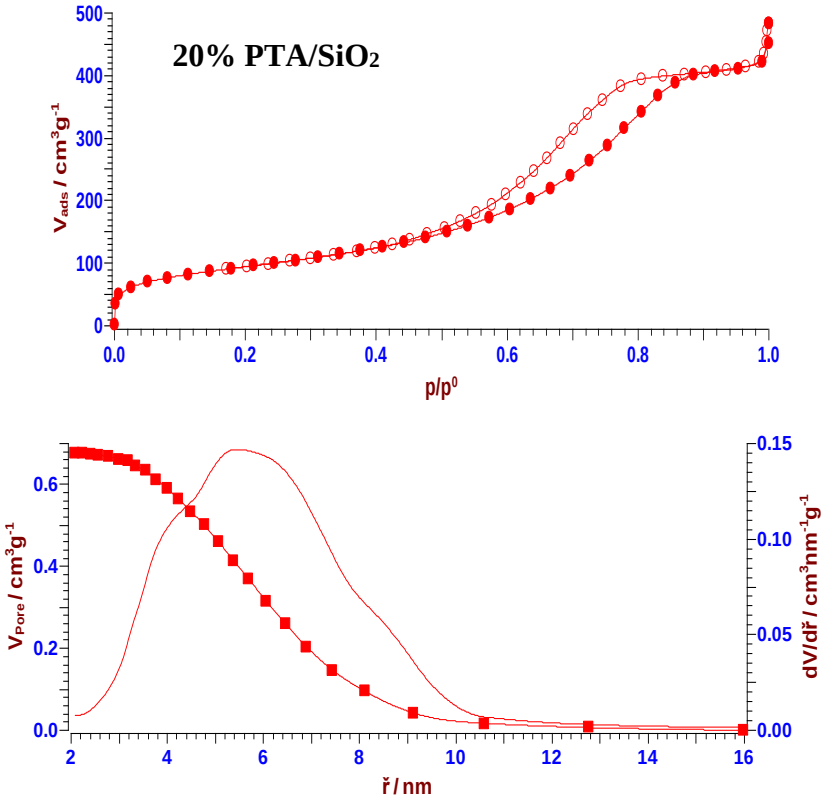


Fig. S1 Nitrogen adsorption isotherm and BJH plot of the 20% PTA/SiO_2

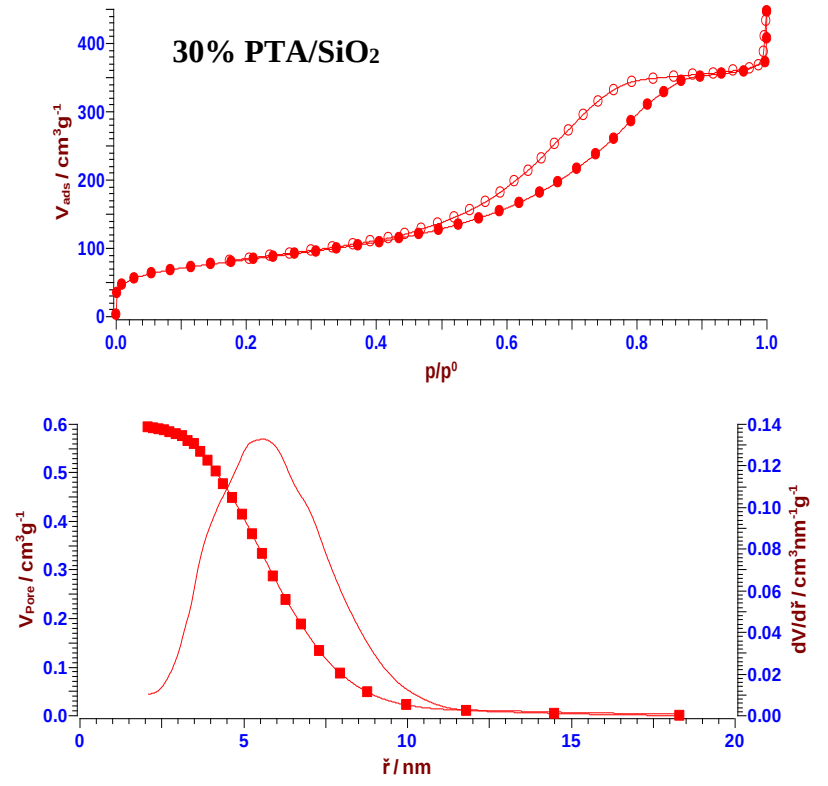


Fig. S2 Nitrogen adsorption isotherm and BJH plot of the 30% PTA/SiO_2

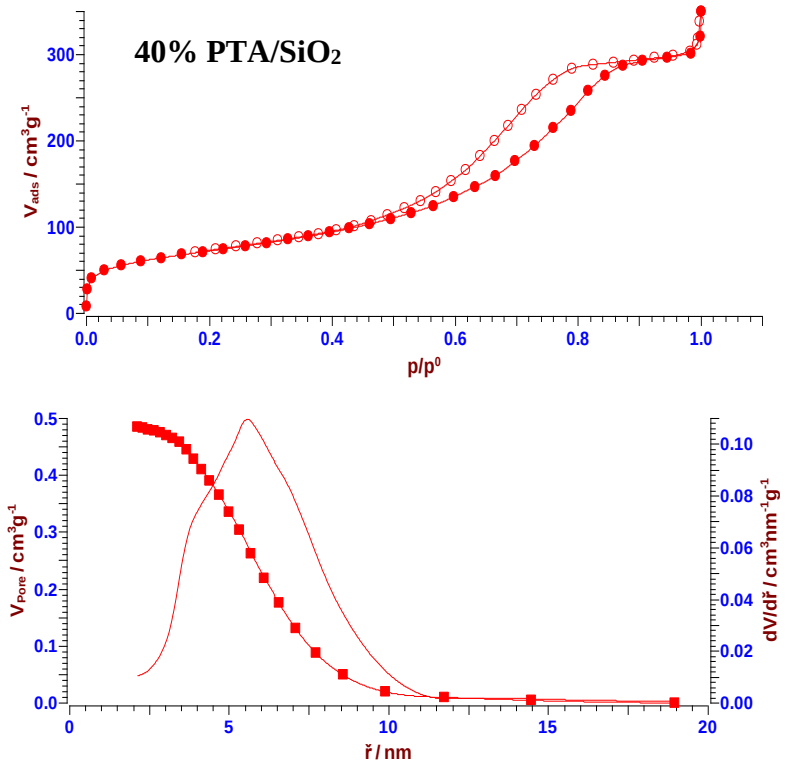


Fig. S3 Nitrogen adsorption isotherm and BJH plot of the 40% PTA/SiO_2

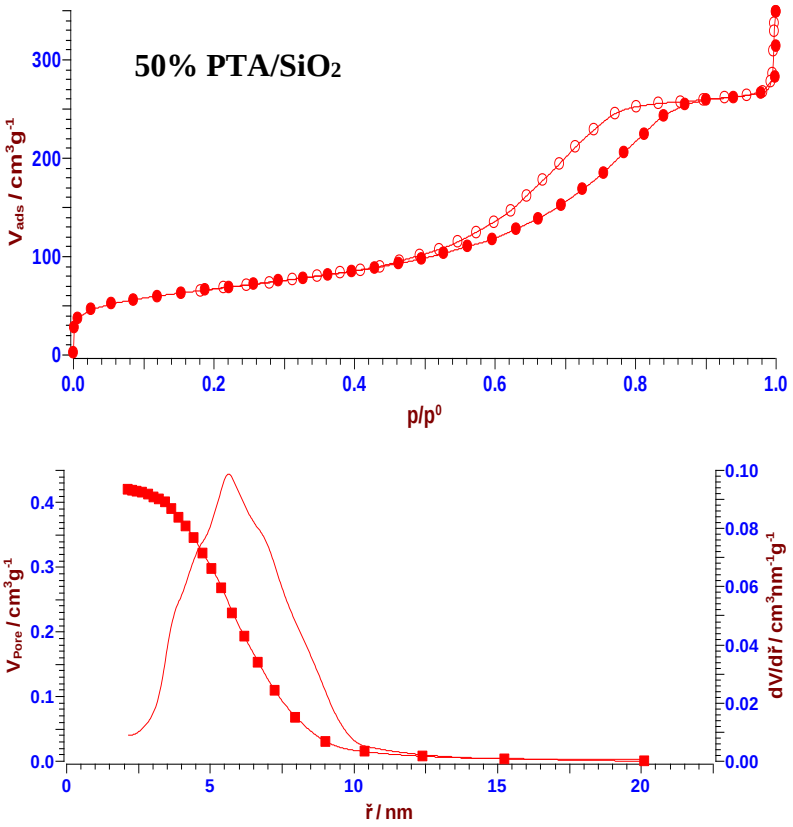


Fig. S4 Nitrogen adsorption isotherm and BJH plot of the 50% PTA/SiO_2

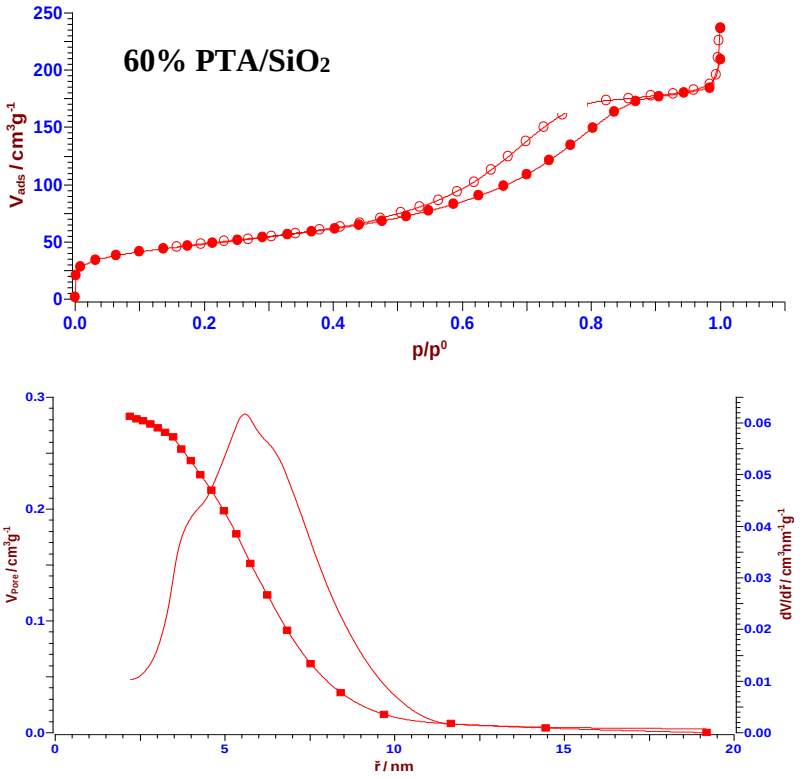


Fig. S5 Nitrogen adsorption isotherm and BJH plot of the 60% PTA/SiO_2

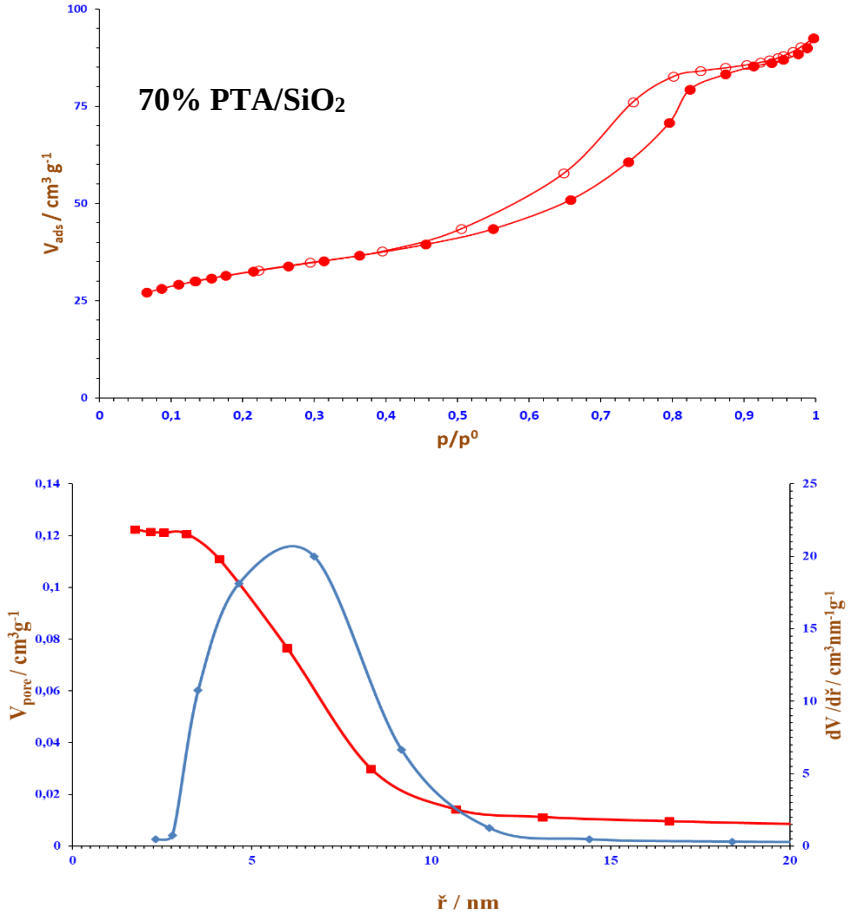


Fig. S6 Nitrogen adsorption isotherm and BJH plot of the 70% PTA/SiO_2

2. Characterization of the catalysts by XRPD and NMR

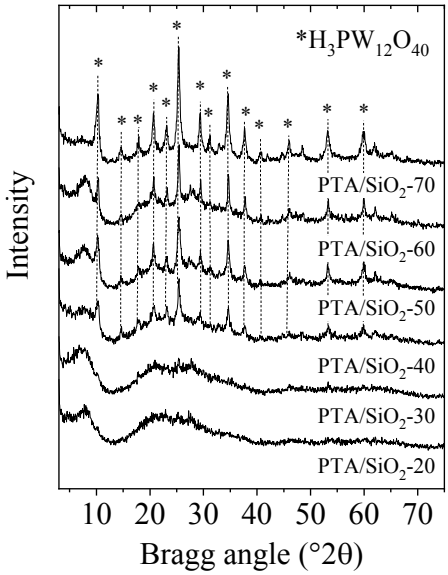


Fig. S7 XRPD patterns of PTA/SiO_2 catalysts

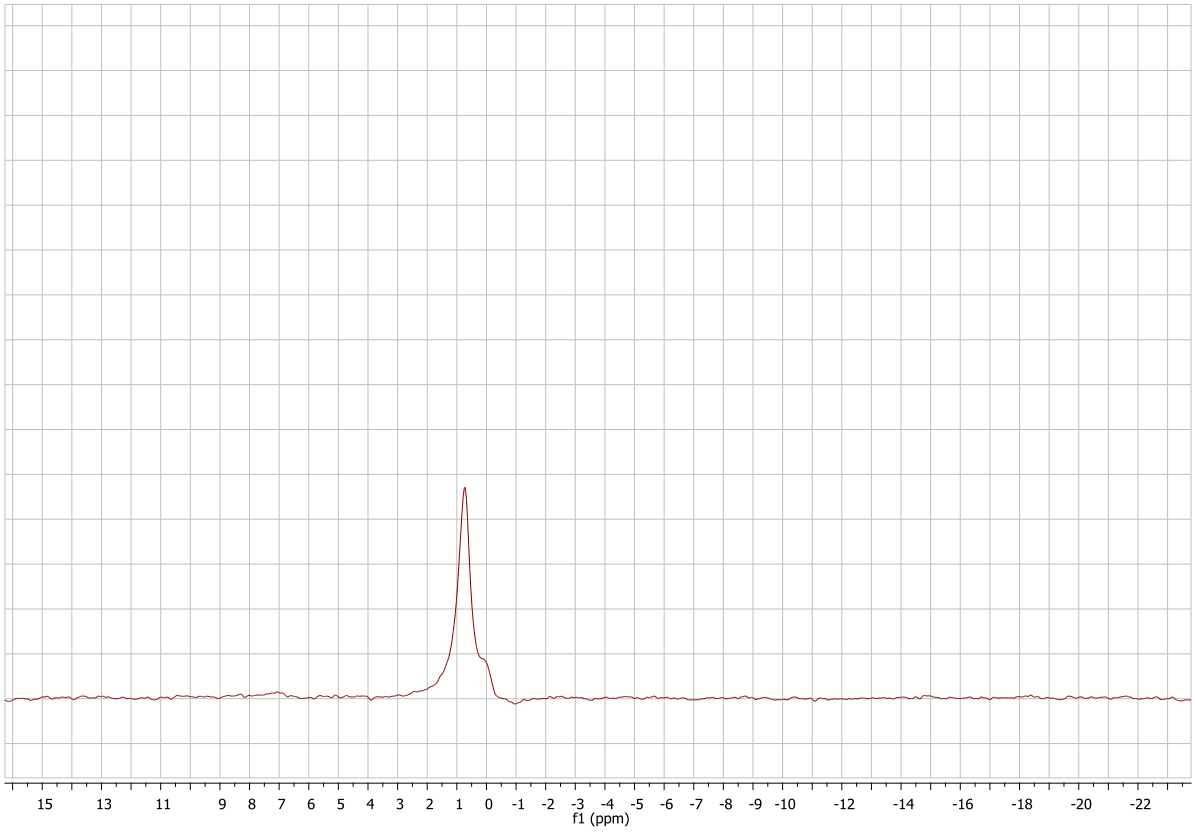


Fig. S8 ^{1}H MAS NMR spectrum of the catalyst after its second use (depicted on in Diagram 8) in the flow process

3. NMR spectra and GC chromatograms of the alkylation product

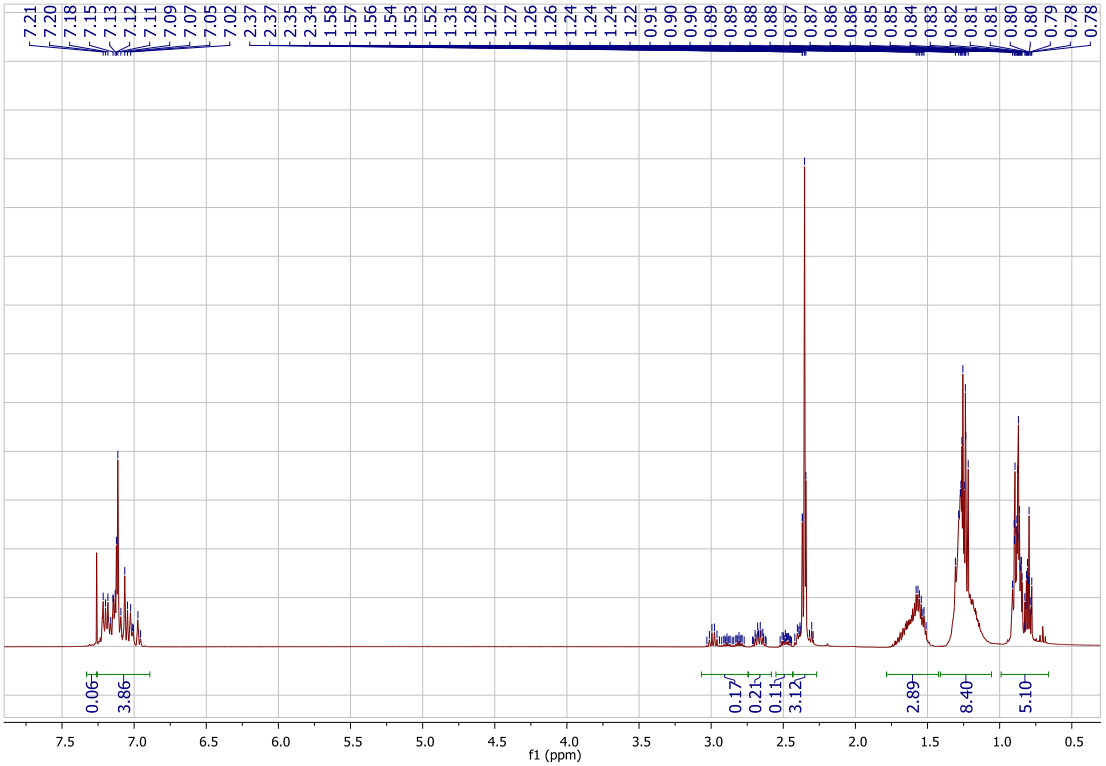


Fig S9 ^{1}H NMR spectrum of the isomeric mixture of octyltoluenes

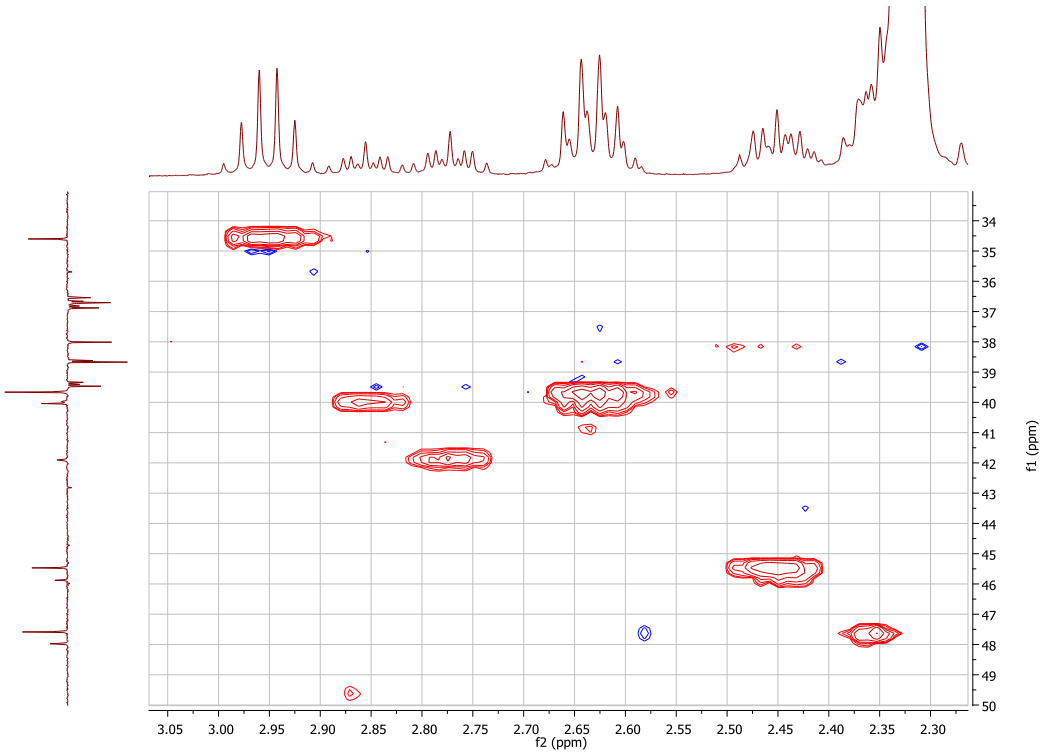
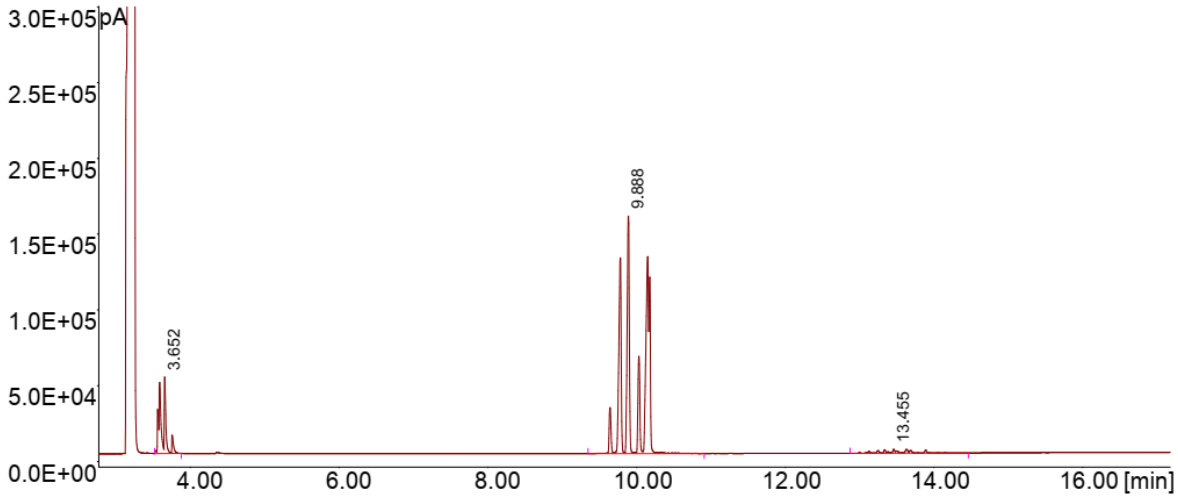


Fig S10 HSQC spectrum of the isomeric mixture of octyltoluenes (selected region)



#	Name	RT [min]	Area [pA*s]	% Area
1		3.652	177859	13.449
2		9.888	1107841	83.771
3		13.455	36762	2.780

Fig. S11 GC chromatogram of the alkylation product containing starting material (elution order: toluene, isomers of octene, isomers of octyl toluene, isomers of dioctyl toluenes)