

Supporting information

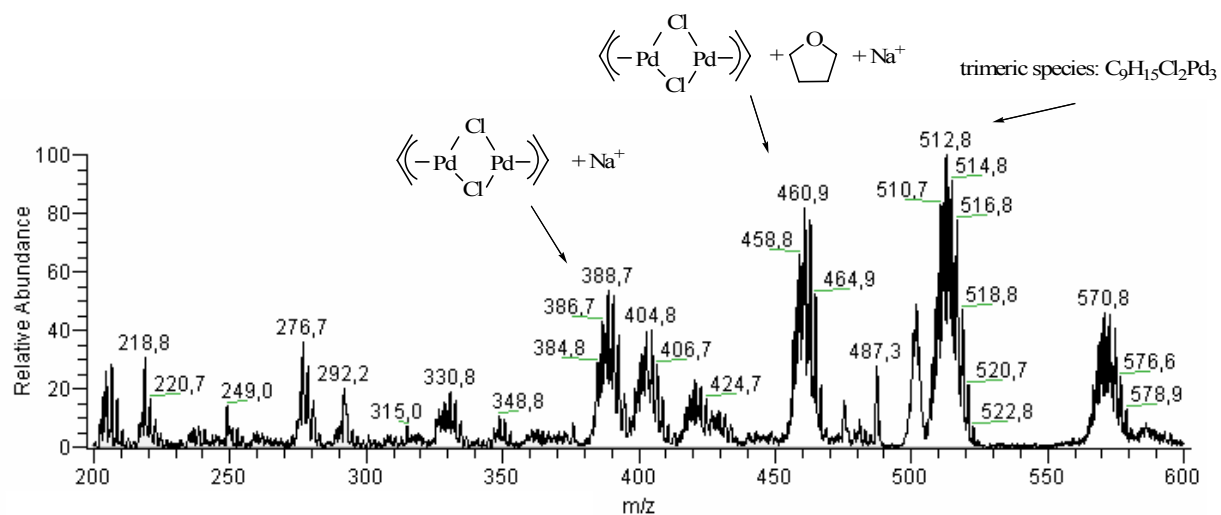
Substitution of allylic acetates with sodium *p*-toluenesulfinate in aqueous media using allylpalladium chloride dimer and a water-soluble ligand as the catalytic system; electrospray ionisation mass spectrometry analysis

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Figure S1. ESI(+)-MS spectrum of **7**. Experimental conditions: **7** in a mixture of H₂O, MeOH and THF (1:1:0.2).



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Corresponding expanded ESI(+)-MS spectra of above detected species and their theoretical spectra.

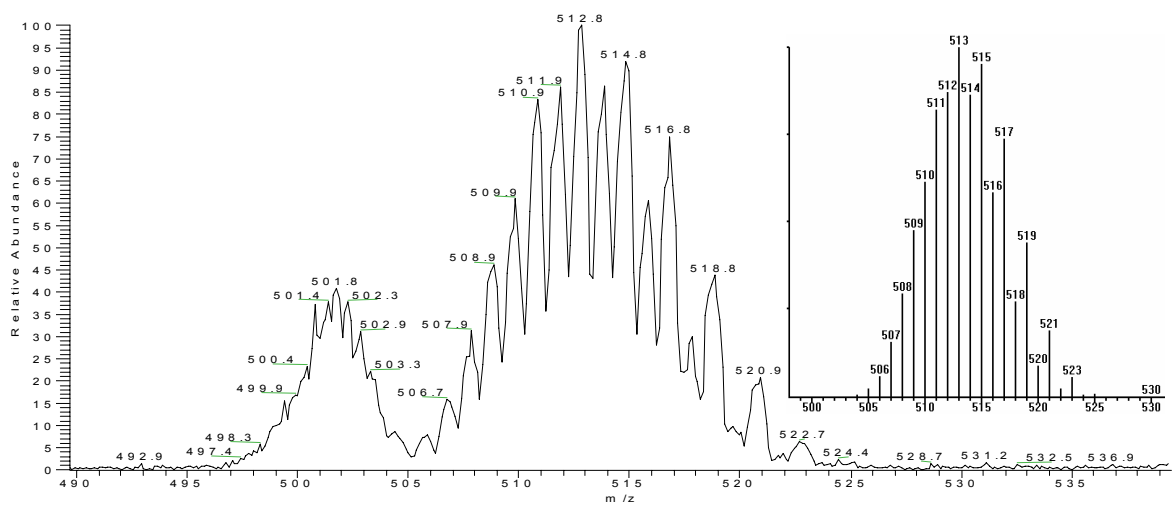
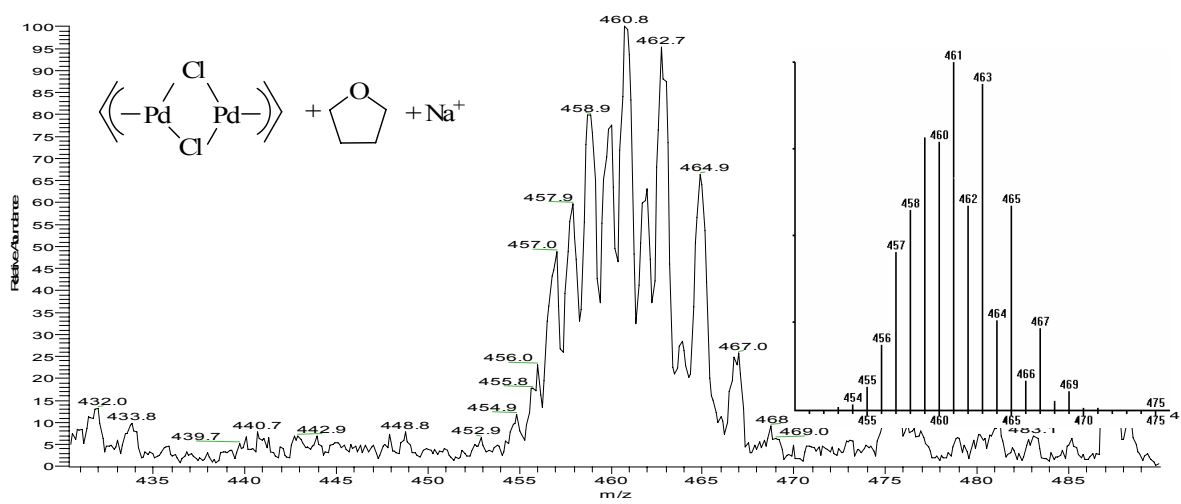
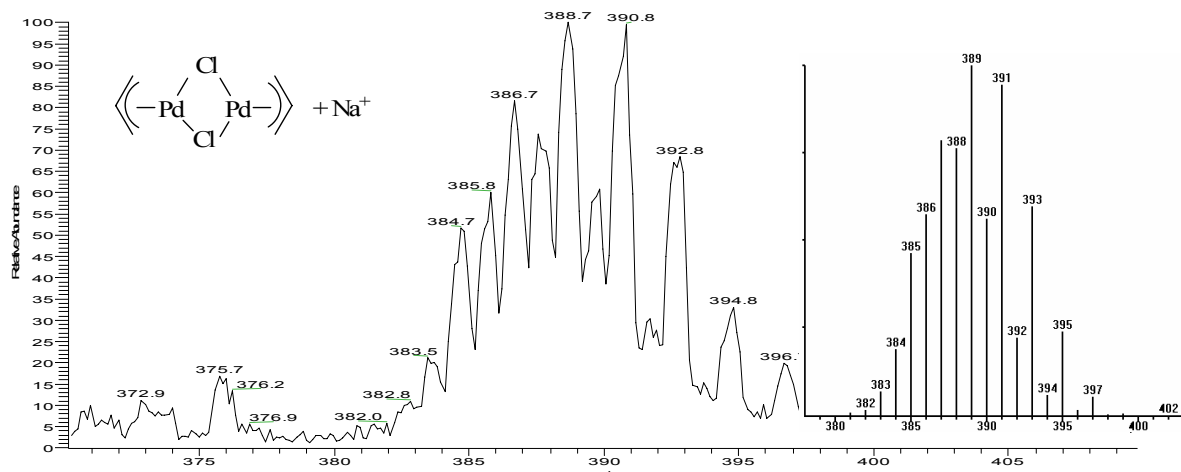
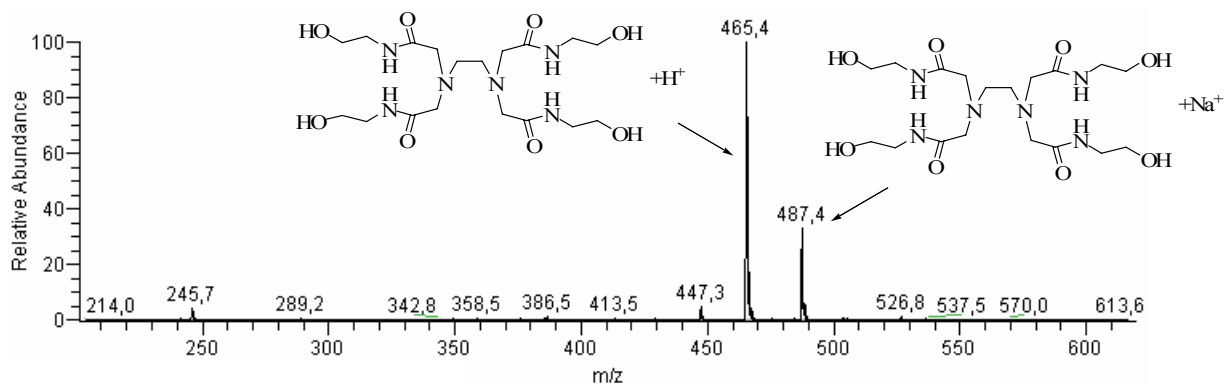


Figure S2. ESI(+)-MS spectrum of L_H. Experimental conditions: L_H in a mixture of H₂O and MeOH (1:1).



Corresponding expanded ESI(+)-MS spectra of above detected species and their theoretical spectra.

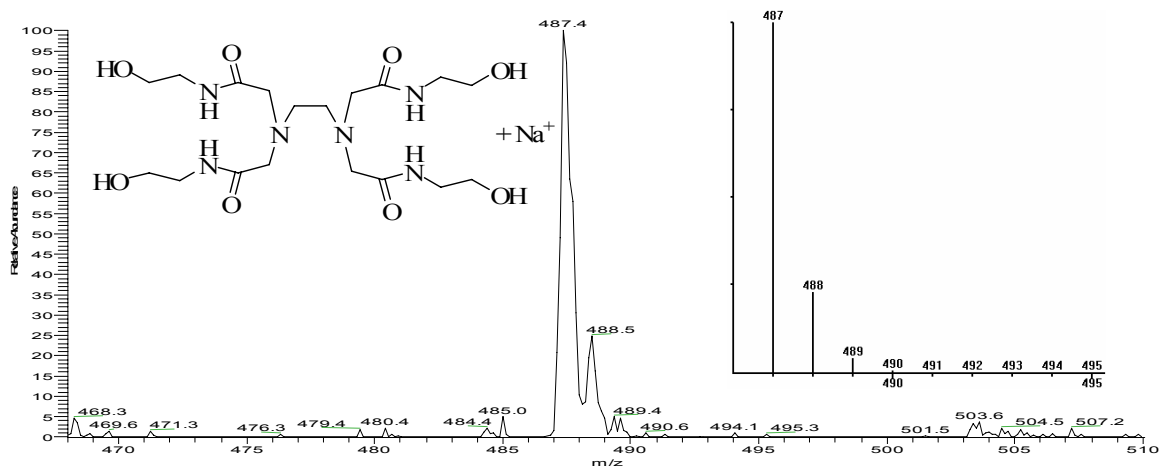
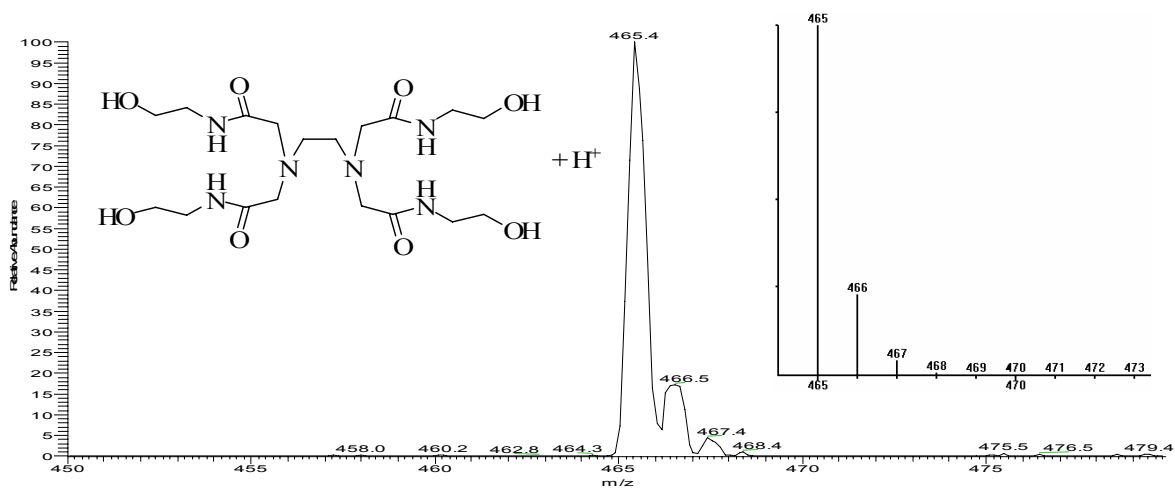
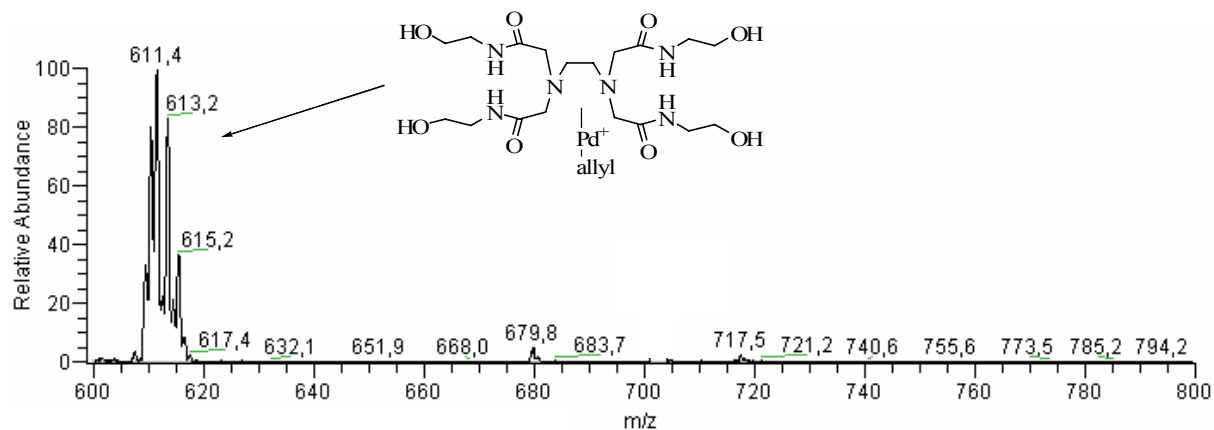


Figure S3. ESI(+)-MS spectrum of **7** + L_H. ^aExperimental conditions: **7**, L_H (2 equiv.) in a mixture of H₂O and MeOH (1:1).



Corresponding expanded ESI(+)-MS spectra of above detected species and their theoretical spectra.

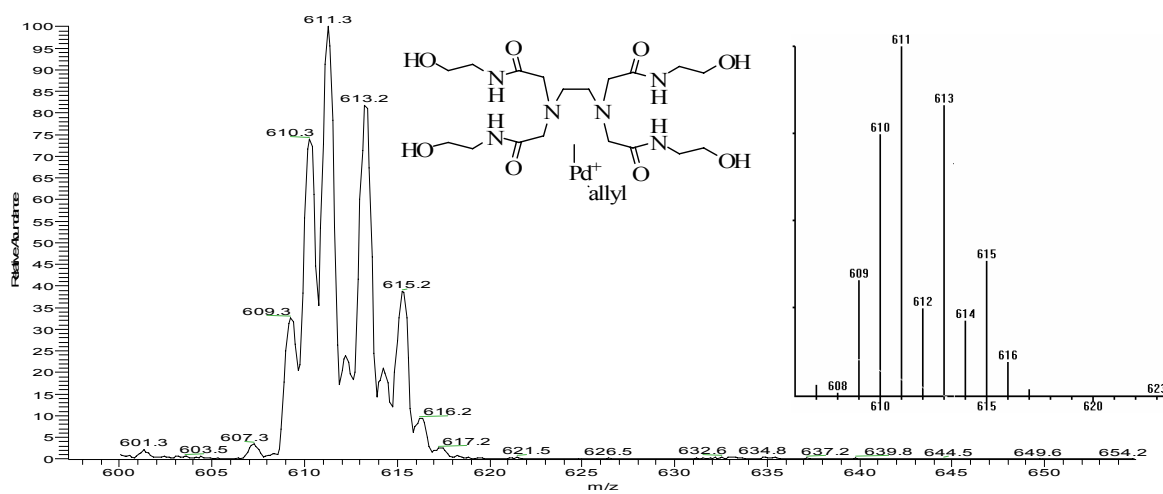
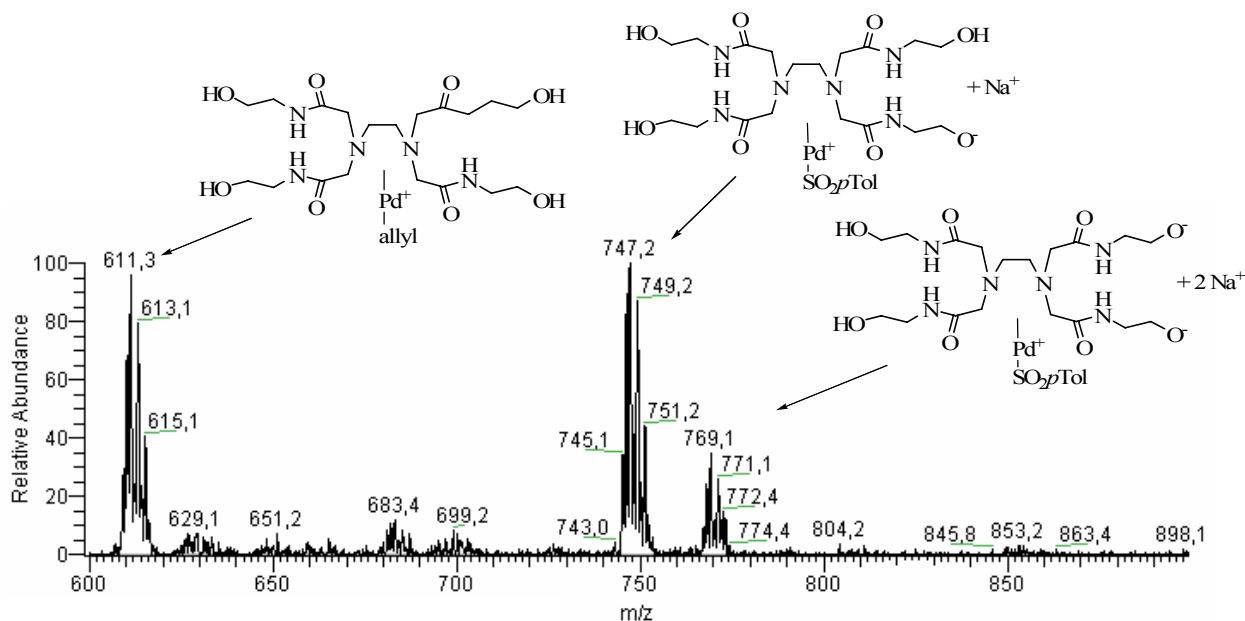
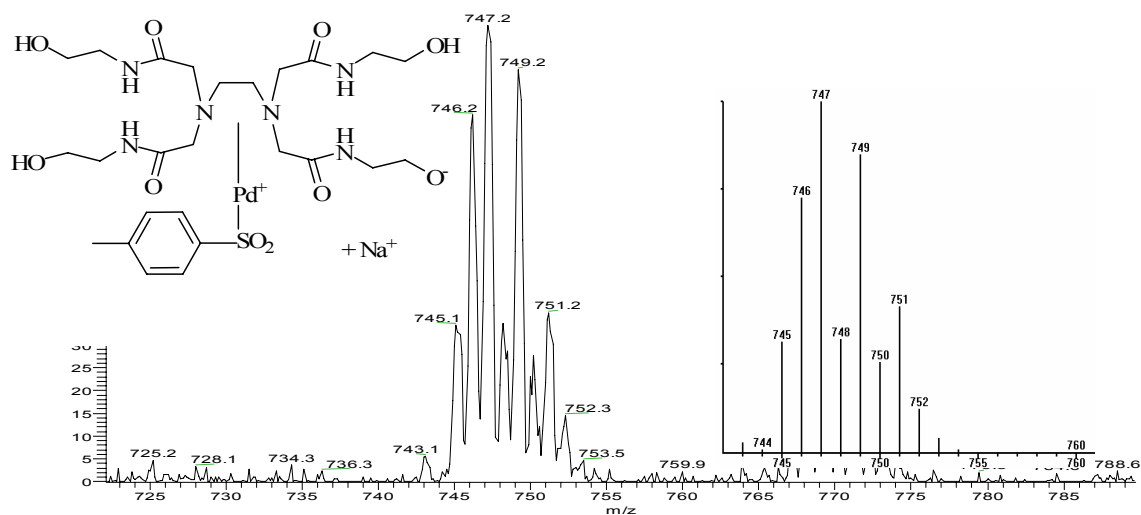


Figure S4. ESI(+)-MS spectrum of the aqueous phase after extraction of the crude mixture with CH₂Cl₂. Experimental conditions: As in figure 3 for 24 h followed by extraction with CH₂Cl₂.



Corresponding expanded ESI(+)-MS spectra of above detected species and their theoretical spectra.



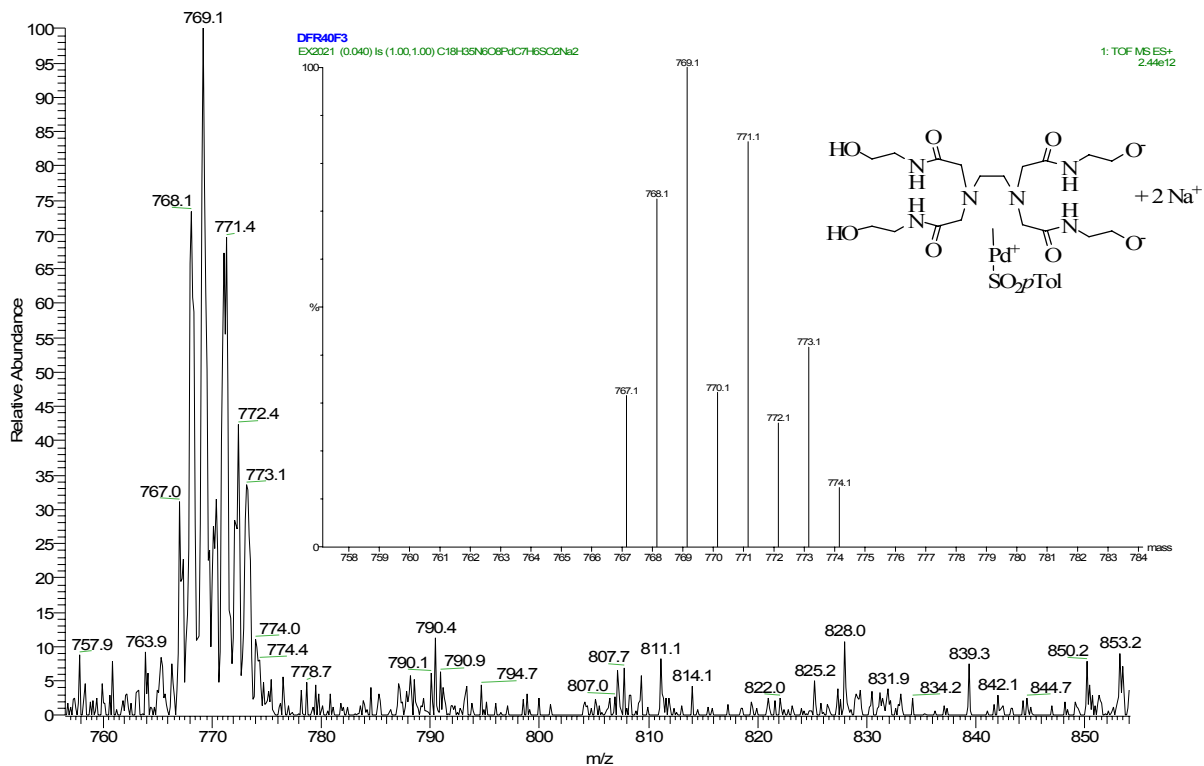
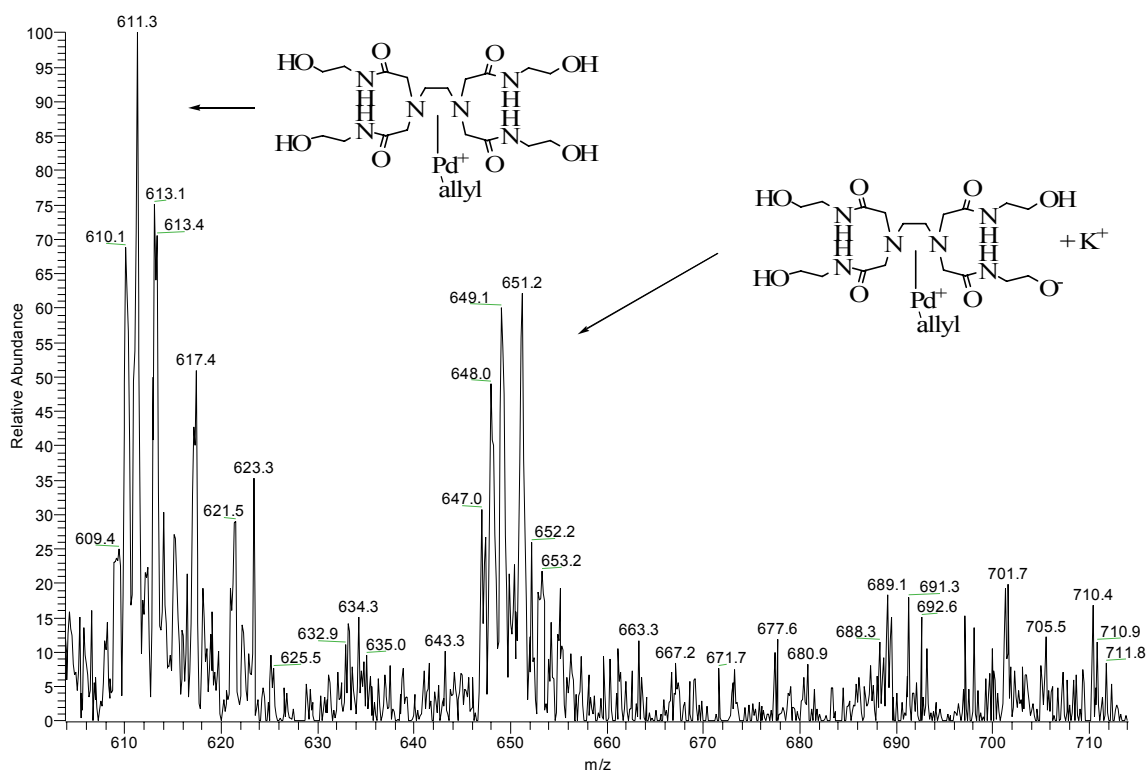


Figure S5. ESI(+)-MS spectrum of the crude mixture using K_2CO_3 and $CH_2(COMe)_2$. Experimental conditions: **7**, L_H (2 equiv.), **2** (2 equiv.), K_2CO_3 (4 equiv.), $CH_2(COMe)_2$ (4 equiv.), $H_2O/MeOH$ (1:1), $50^\circ C$, 1 h.



Corresponding expanded ESI(+)-MS spectra of above detected species and their theoretical spectra.

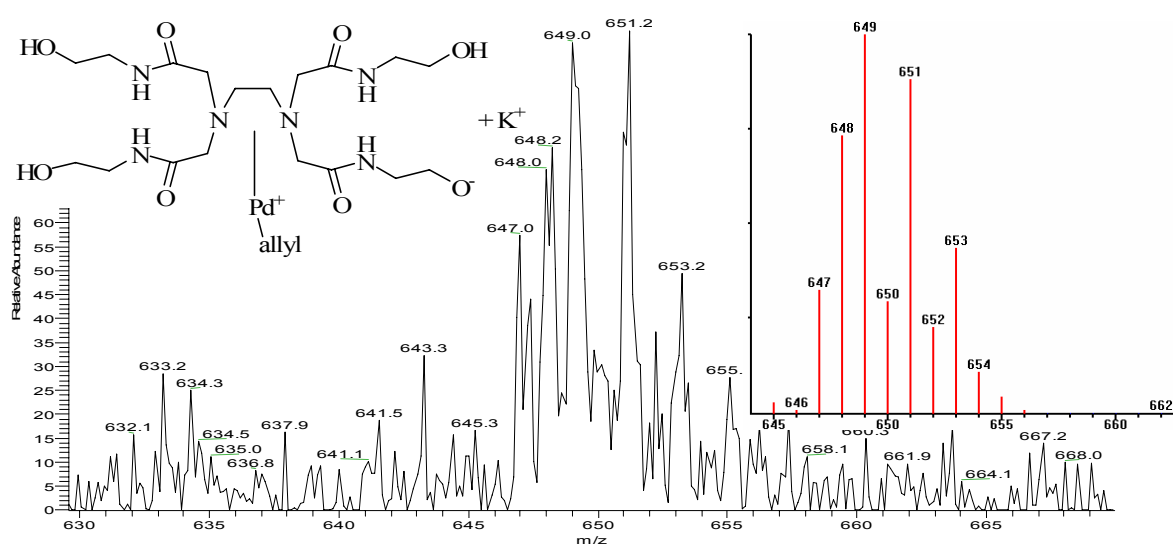
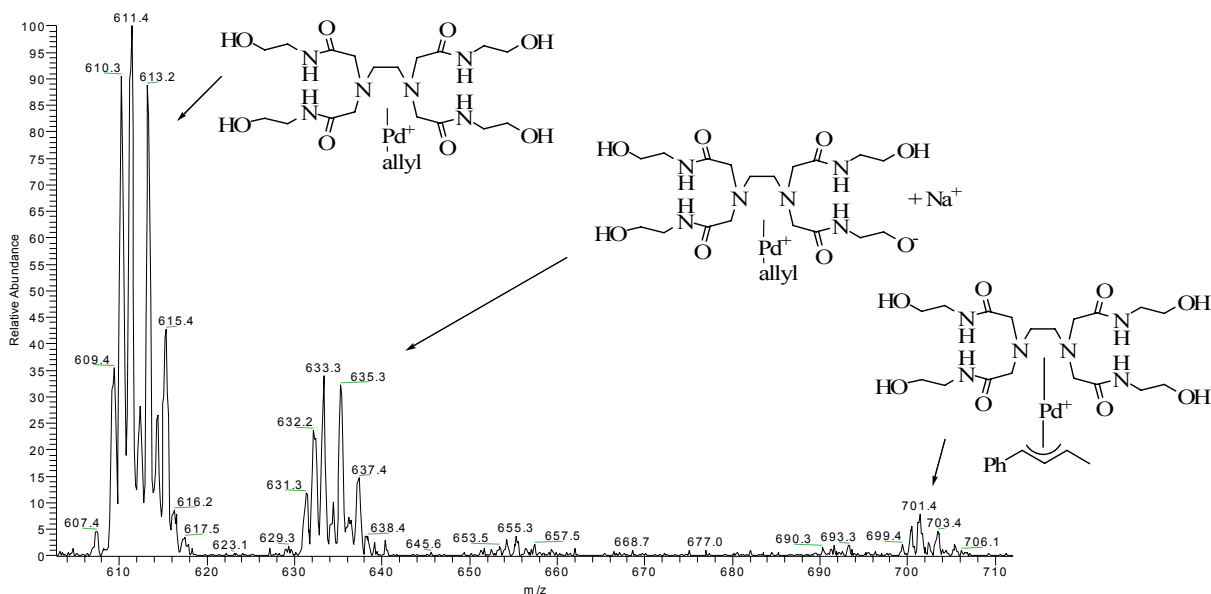


Figure S6. ESI(+)-MS spectrum of the crude mixture using $\text{NaCH}(\text{COMe})_2$. Experimental conditions: **7**, L_H (2 equiv.), **2** (2 equiv.), $\text{NaCH}(\text{COMe})_2$ (4 equiv.), $\text{H}_2\text{O}/\text{MeOH}$ (1:1), 50°C , 1 h.



Corresponding expanded ESI(+)-MS spectra of above detected species and their theoretical spectra.

