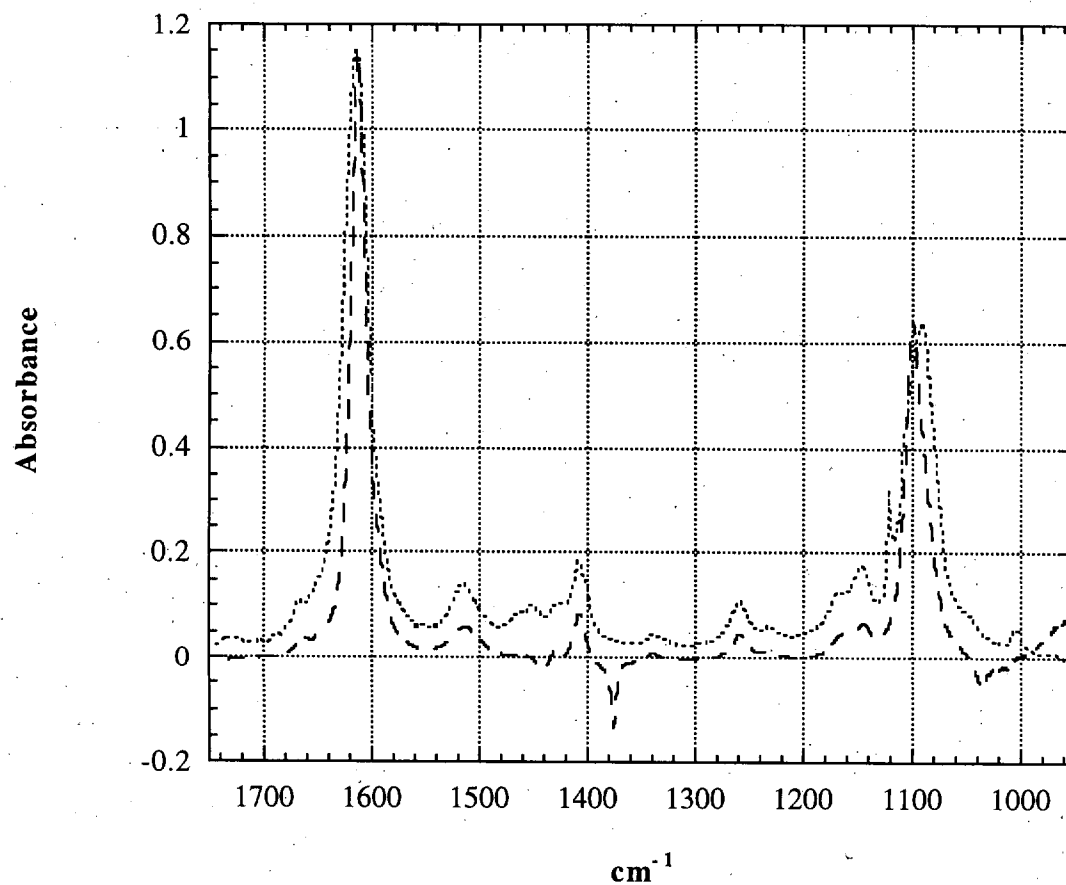
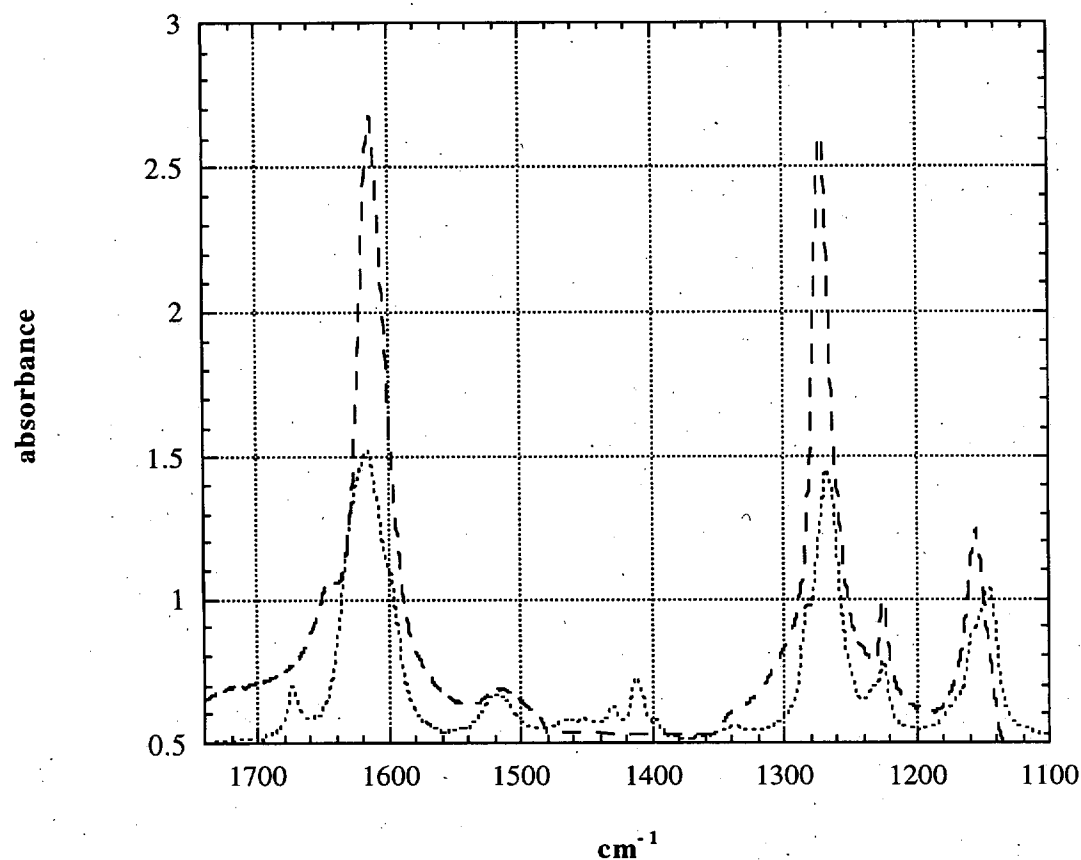


Figure S1



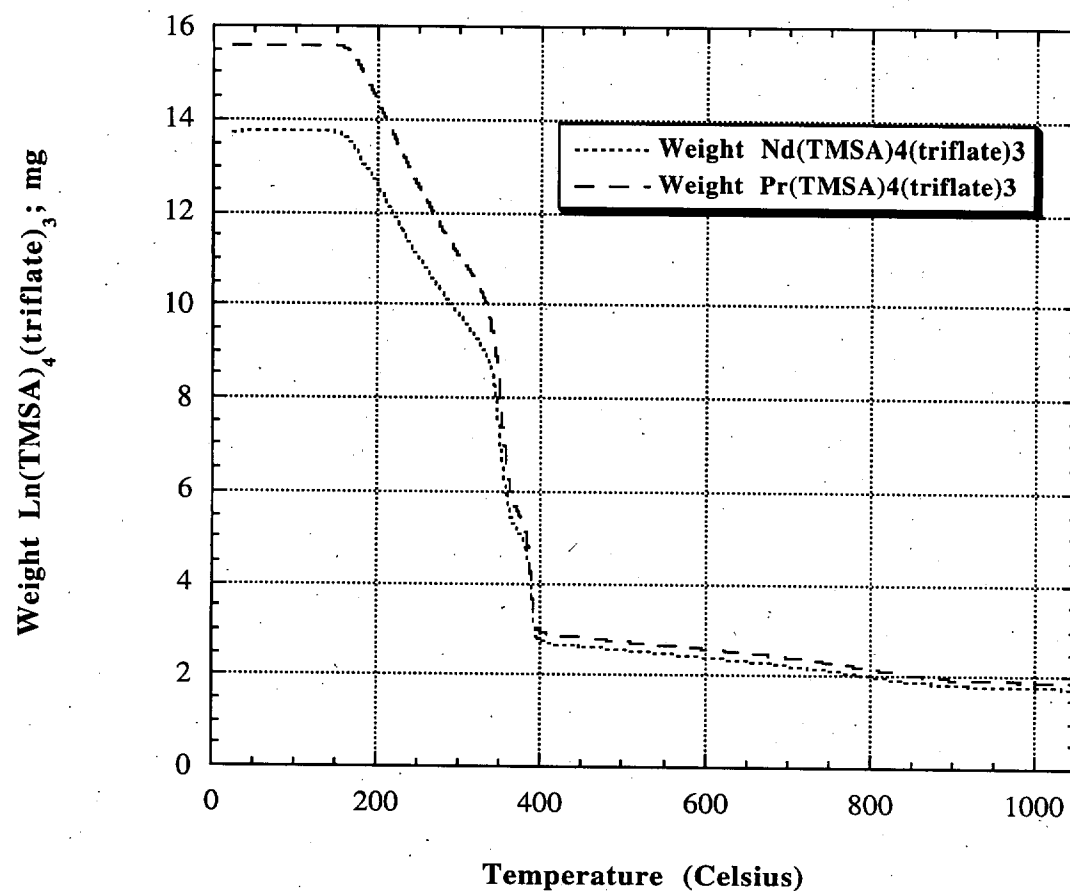
Supplemental Figure 1. IR spectra of the amide and anion regions for $\text{La}(\text{TMSA})_4(\text{ClO}_4)_3$ in anhydrous CH_3CN (dashed line) and as a KBr pellet (dotted line). Contributions due to solvent have been subtracted out from the solution spectrum.

Figure S2



Supplemental Figure 2. IR spectra of the amide and anion regions for $\text{Eu}(\text{TMSA})_4(\text{CF}_3\text{SO}_3)_3$ in anhydrous CH_3CN (dashed line) and as a KBr pellet (dotted line). Contributions due to solvent have been subtracted out from the solution spectrum.

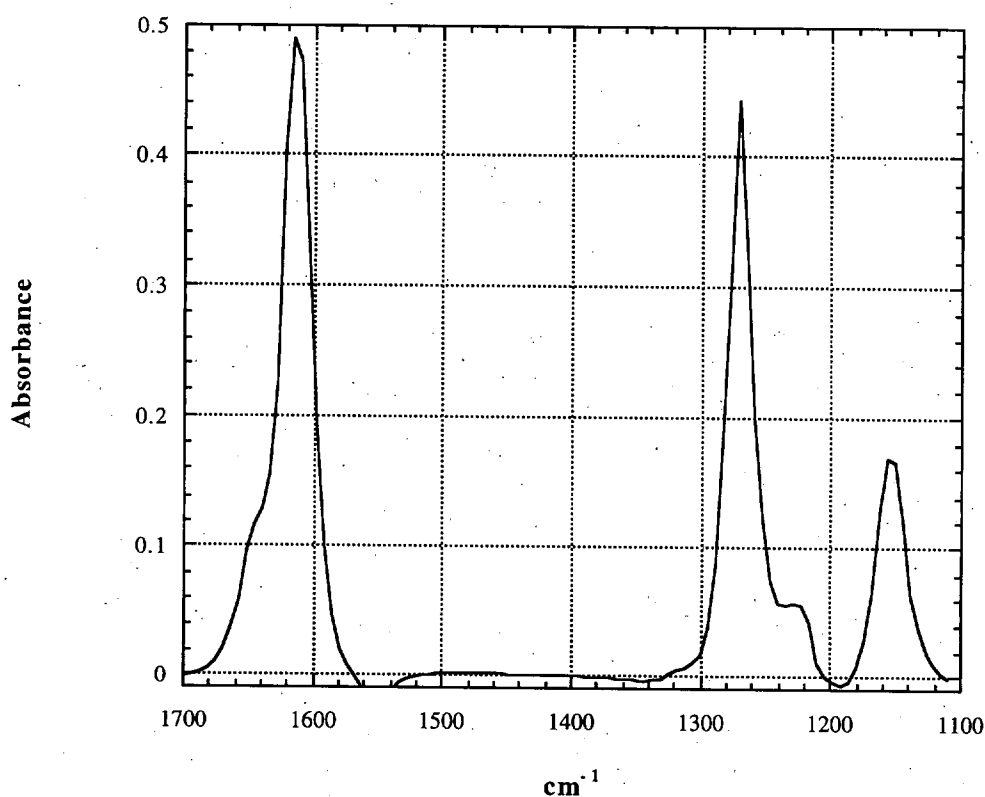
Figure S3



Supplemental Figure 3.

TGA plots for isolated $\text{Nd}(\text{TMSA})_4(\text{CF}_3\text{SO}_3)_3$ and $\text{Pr}(\text{TMSA})_4(\text{CF}_3\text{SO}_3)_3$.

Figure S4



Supplemental Figure 4.

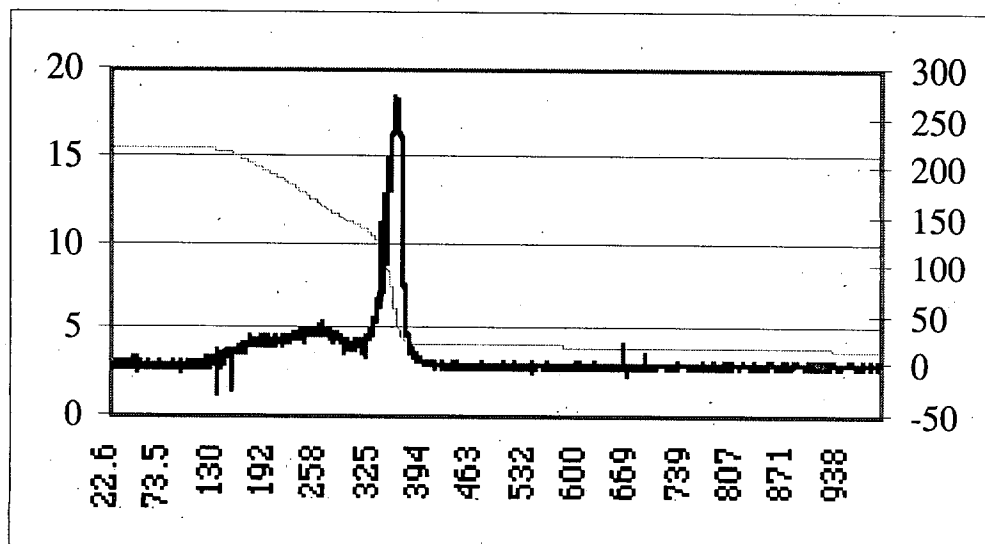
IR spectra of the amide and anion regions for

$\text{Yb}(\text{TMSA})_3(\text{H}_2\text{O})(\text{CF}_3\text{SO}_3)_3$ in anhydrous CH_3CN (dashed line)

and as a KBr pellet (dotted line). Contributions due to solvent

have been subtracted out from the solution spectrum.

Figure S5



Supplemental Figure 5. TGA plot for isolated $\text{Yb}(\text{TMSA})_3(\text{H}_2\text{O})(\text{CF}_3\text{SO}_3)$.

Supplemental Figure 6.

IR spectra of the water (top) and amide & triflate (bottom) regions

for isolated $\text{Pr}(\text{TMSA})_2(\text{H}_2\text{O})_3(\text{CF}_3\text{SO}_3)_3$ in CH_3CN solution.

Contributions due to solvent have been subtracted out from the solution spectrum.

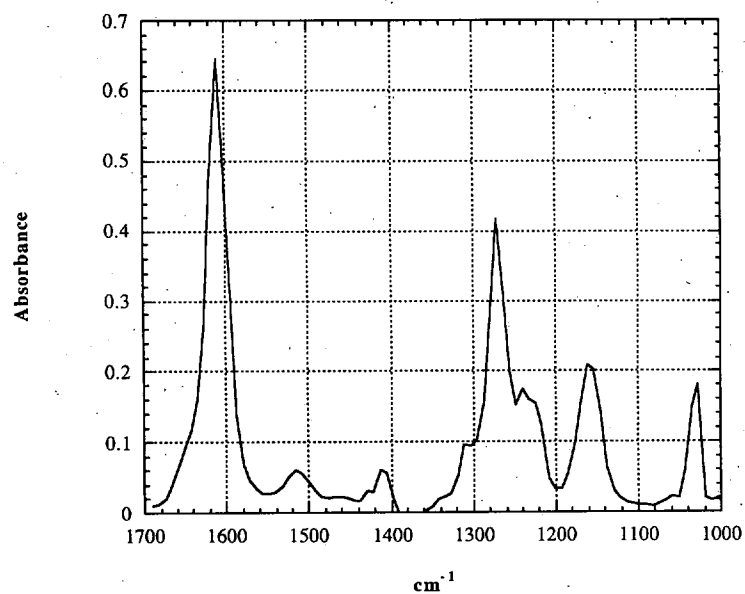
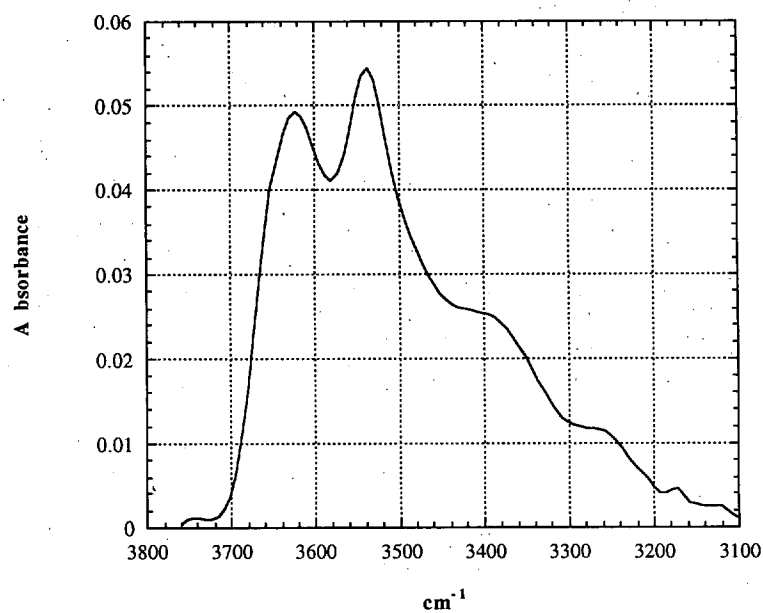
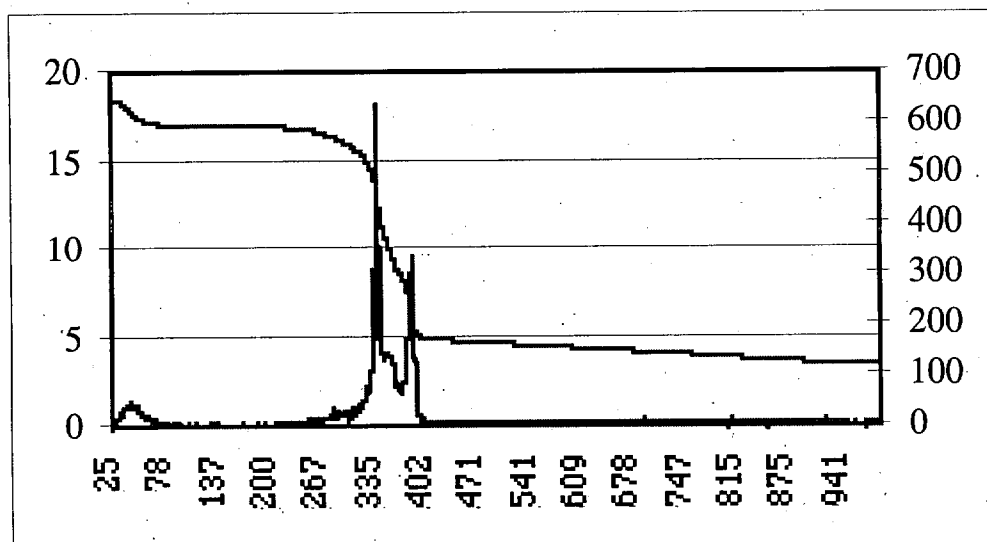
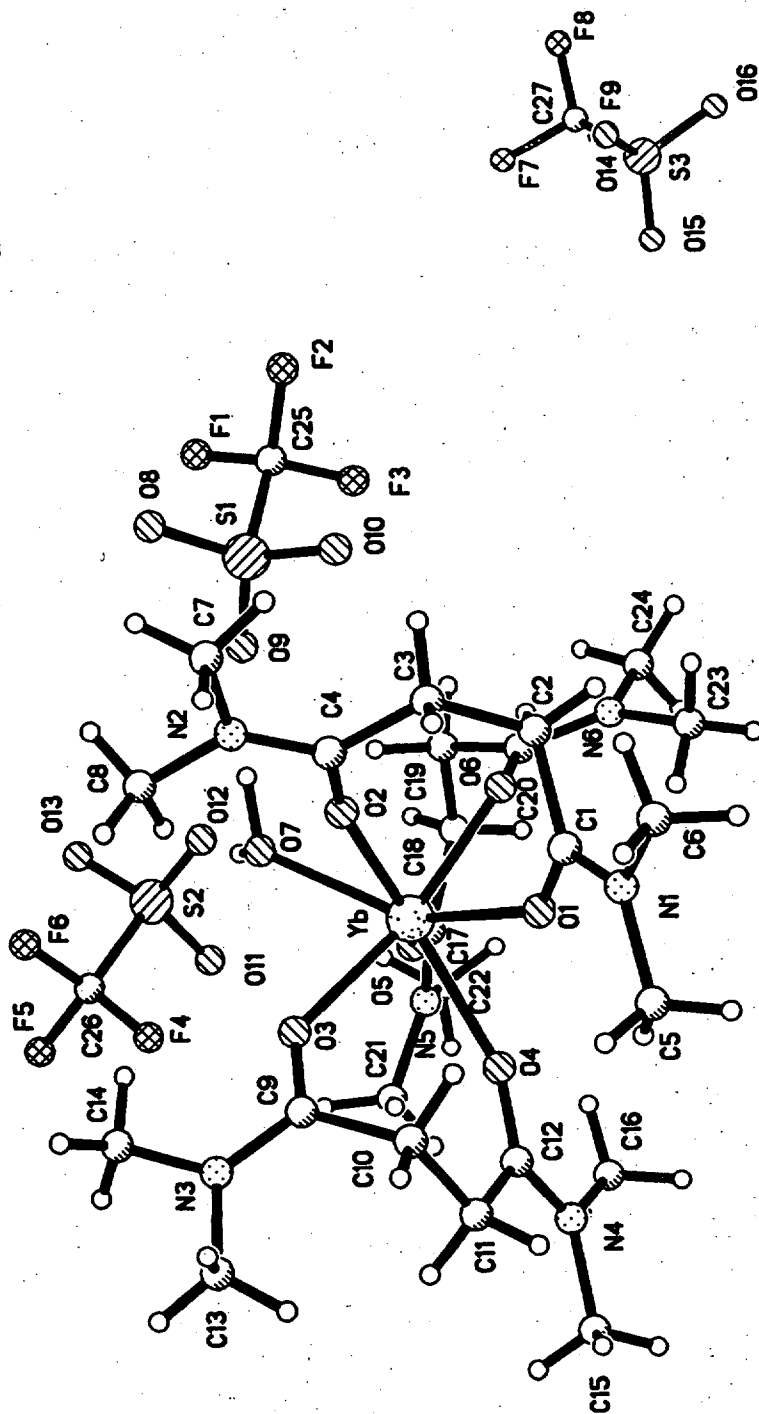


Figure S7.



Supplemental Figure 7. TGA (left axis) and DTG (right axis) plot for isolated $\text{Pr}(\text{TMSA})_2(\text{H}_2\text{O})_3(\text{CF}_3\text{SO}_3)_3$ in CH_3CN solution.

Figure 1 Thermal ellipsoid plot of the structure of compound 1a at 100 K. The structure is shown with thermal ellipsoids at the 50% probability level. Hydrogen atoms are shown as small spheres of arbitrary radii.



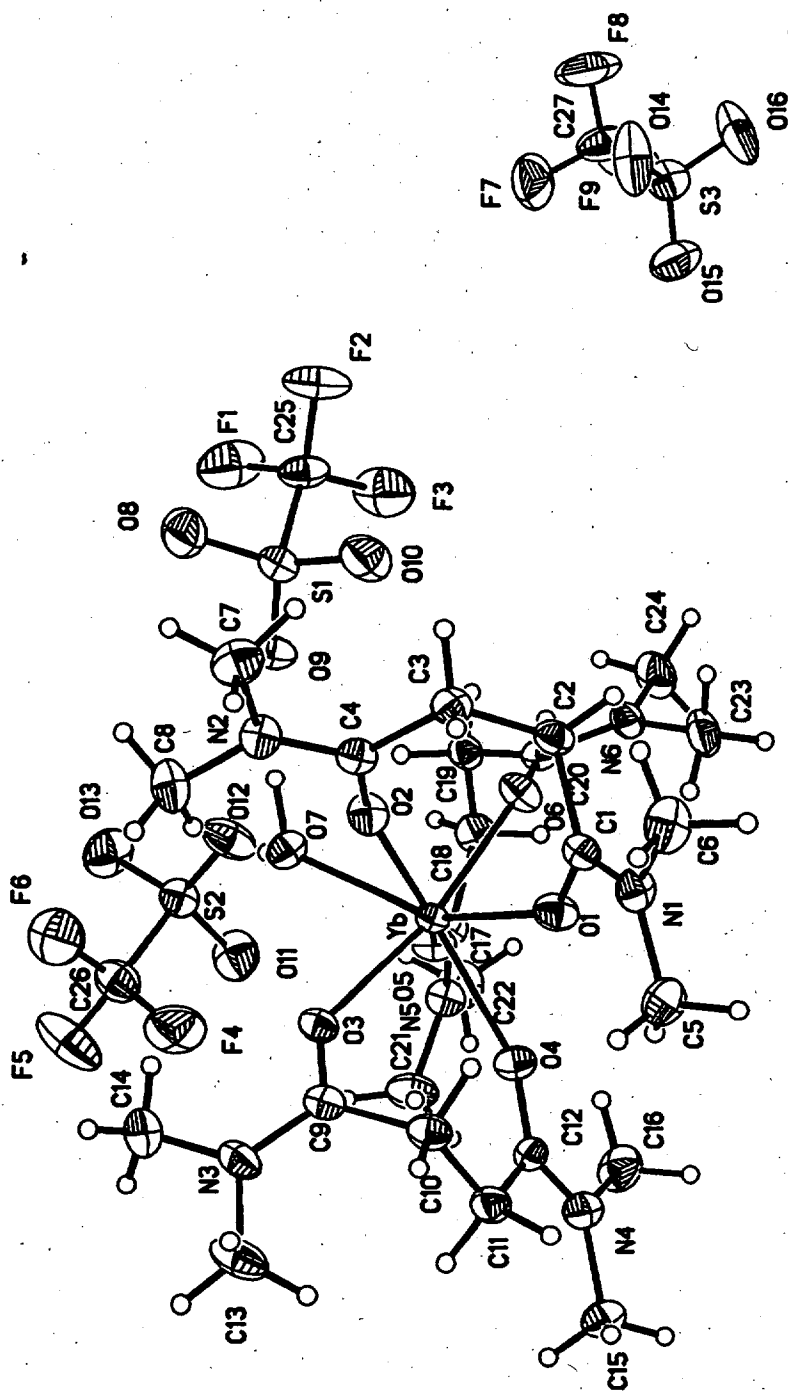


Fig. 1. Thermal ellipsoid plot of the structure of the compound.

