

Supplementary Material for om050508g

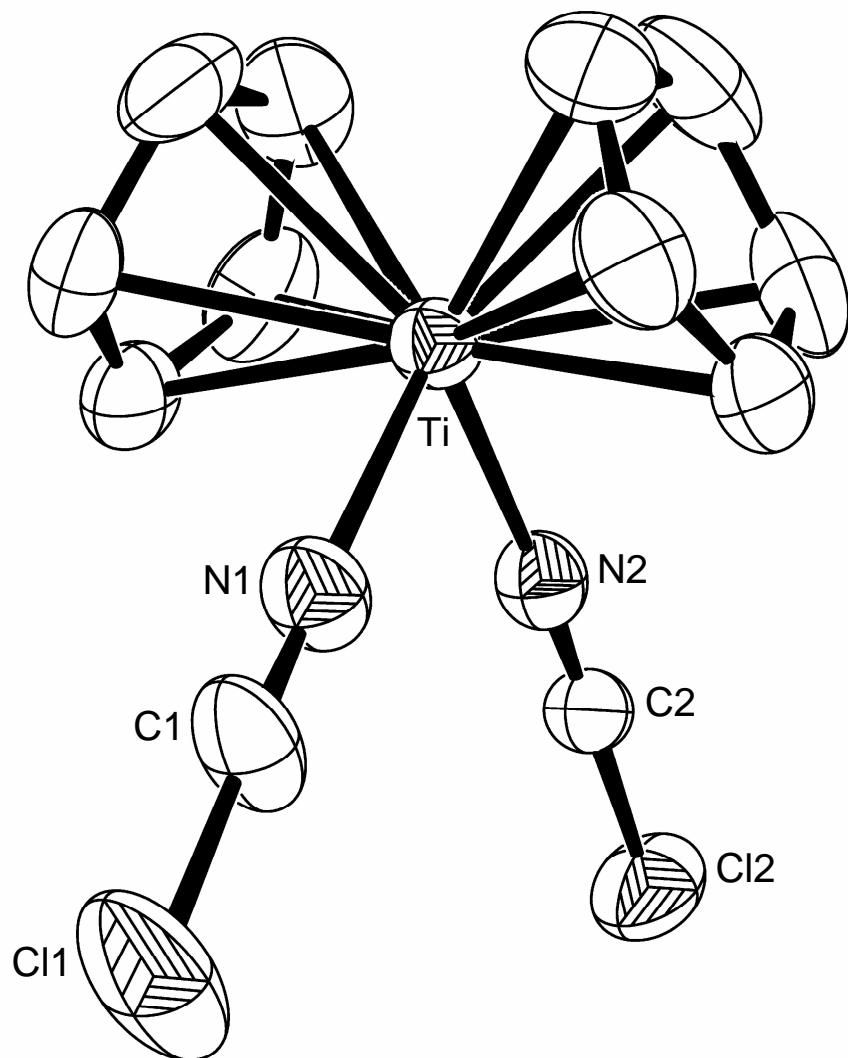


Fig. S1 Molecular structure of the cation in 1 with thermal ellipsoids at the 50% probability level. Hydrogen atoms are omitted for clarity. Selected bond lengths (\AA) and angles ($^\circ$): Ti1-N1 2.117(9), Ti1-N2 2.126(9), N1-C1 1.15(1), N2-C2 1.14(1), C1-Cl1 1.59(1), C2-Cl2 1.60(1), Ti1-N1-C1 174.5(8), N1-C1-Cl1 178(1), N1-Ti1-N2 85.4(4).

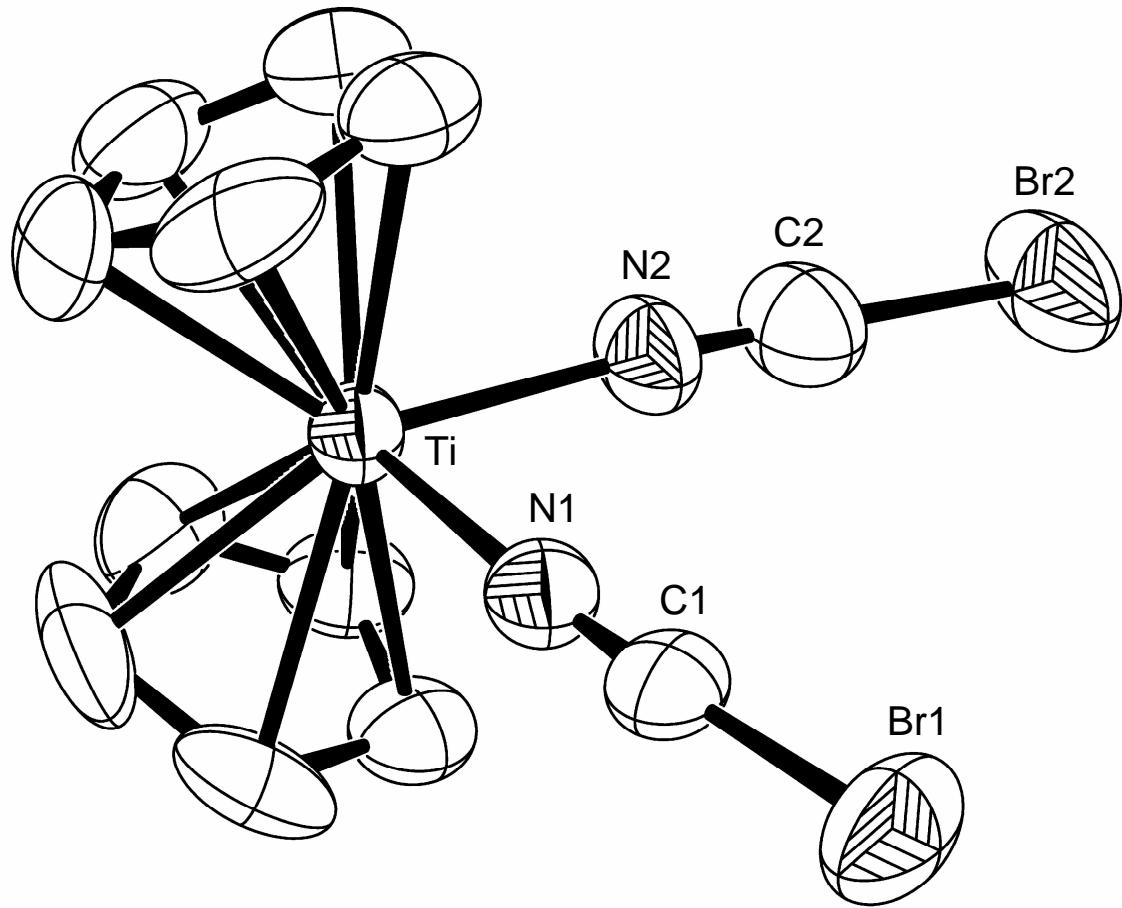
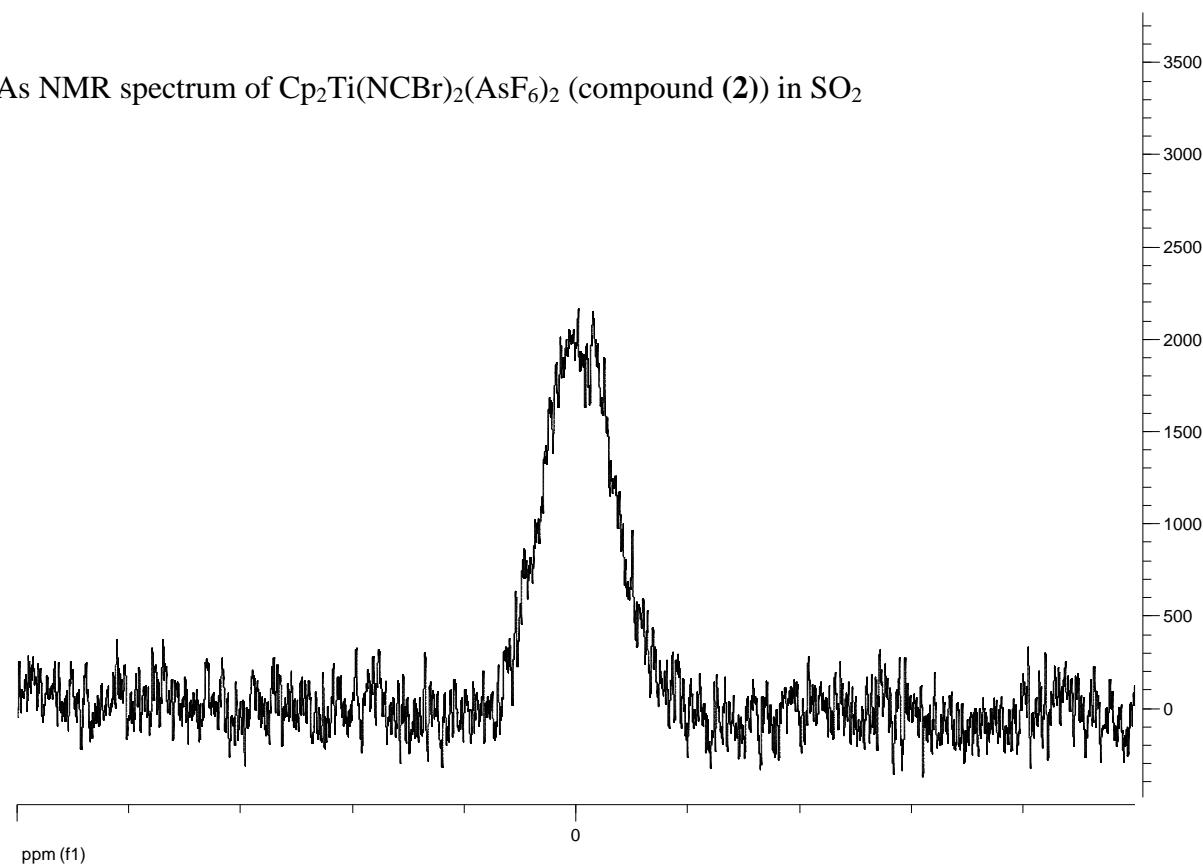
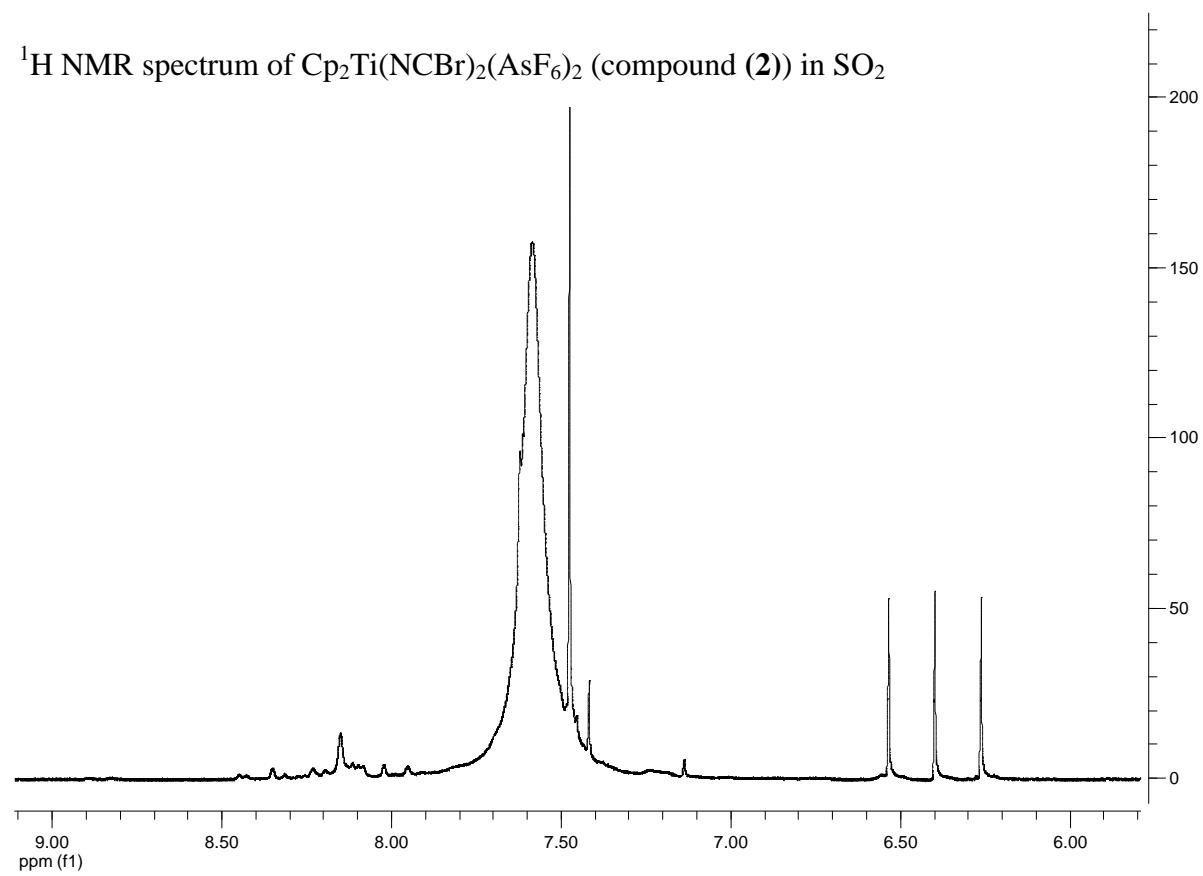


Fig. S2 Molecular structure of the cation in 2 with thermal ellipsoids at the 50% probability level. Hydrogen atoms are omitted for clarity. Selected bond lengths (\AA) and angles ($^\circ$): Ti1-N1 2.11(1), Ti1-N2 2.106(9), N1-C1 1.10(1), N2-C2 1.15(1), C1-Br1 1.82(1), C2-Br2 1.76(1), Ti1-N1-C1 173(1), N1-C1-Br1 179(1), N1-Ti1-N2 84.7(4).

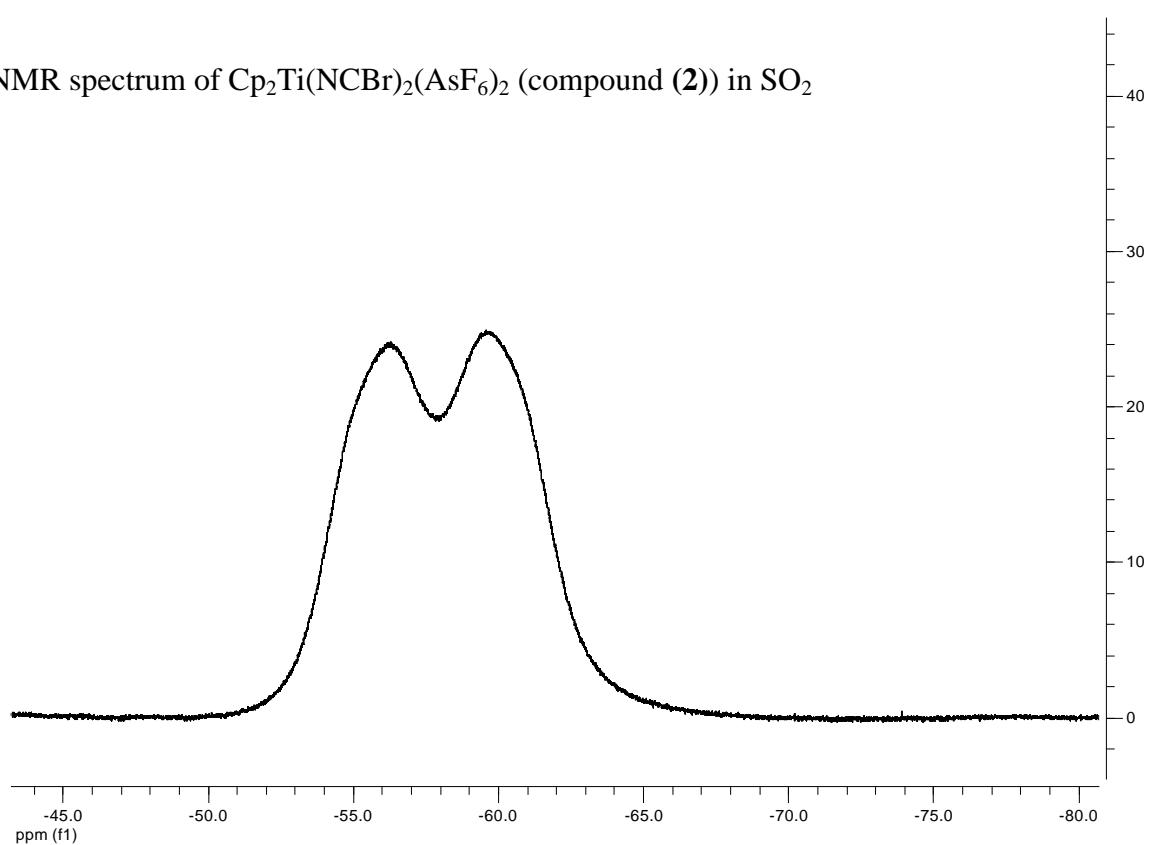
^{75}As NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCBr})_2(\text{AsF}_6)_2$ (compound **(2)**) in SO_2



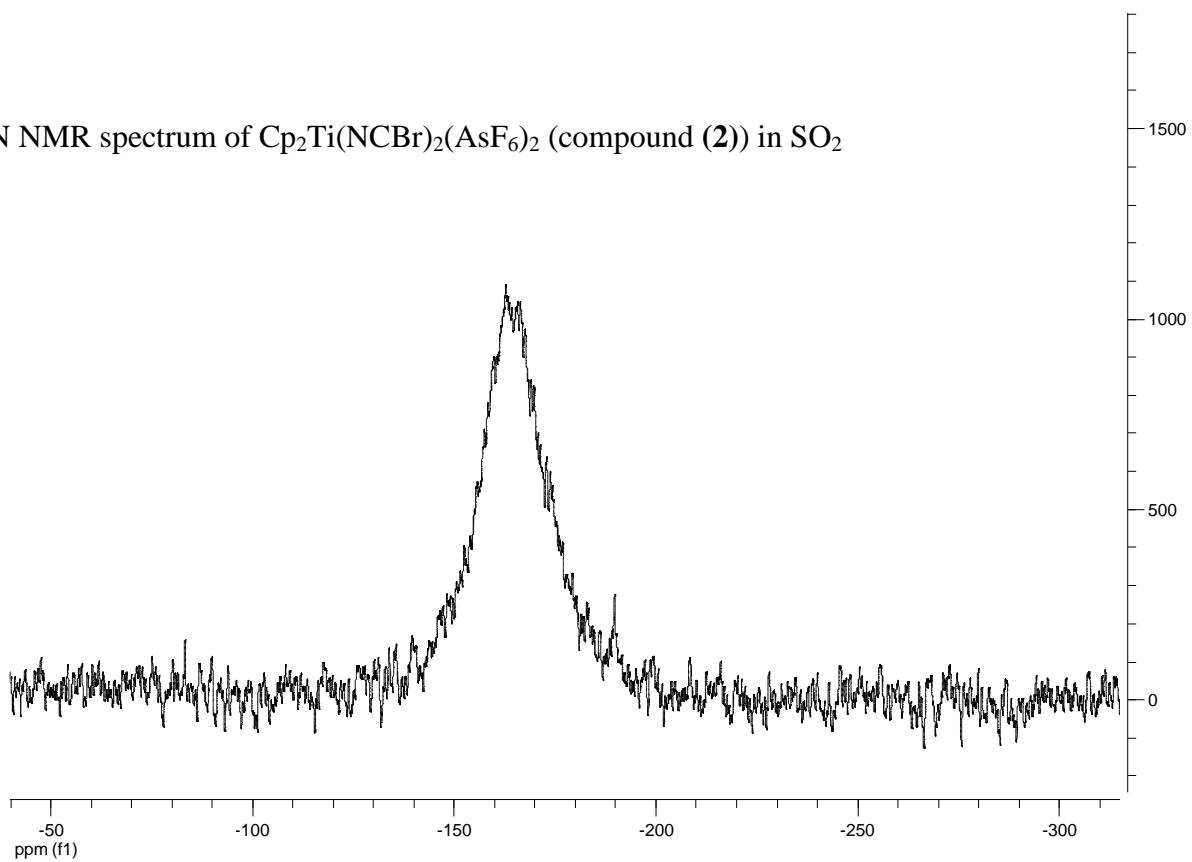
^1H NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCBr})_2(\text{AsF}_6)_2$ (compound **(2)**) in SO_2



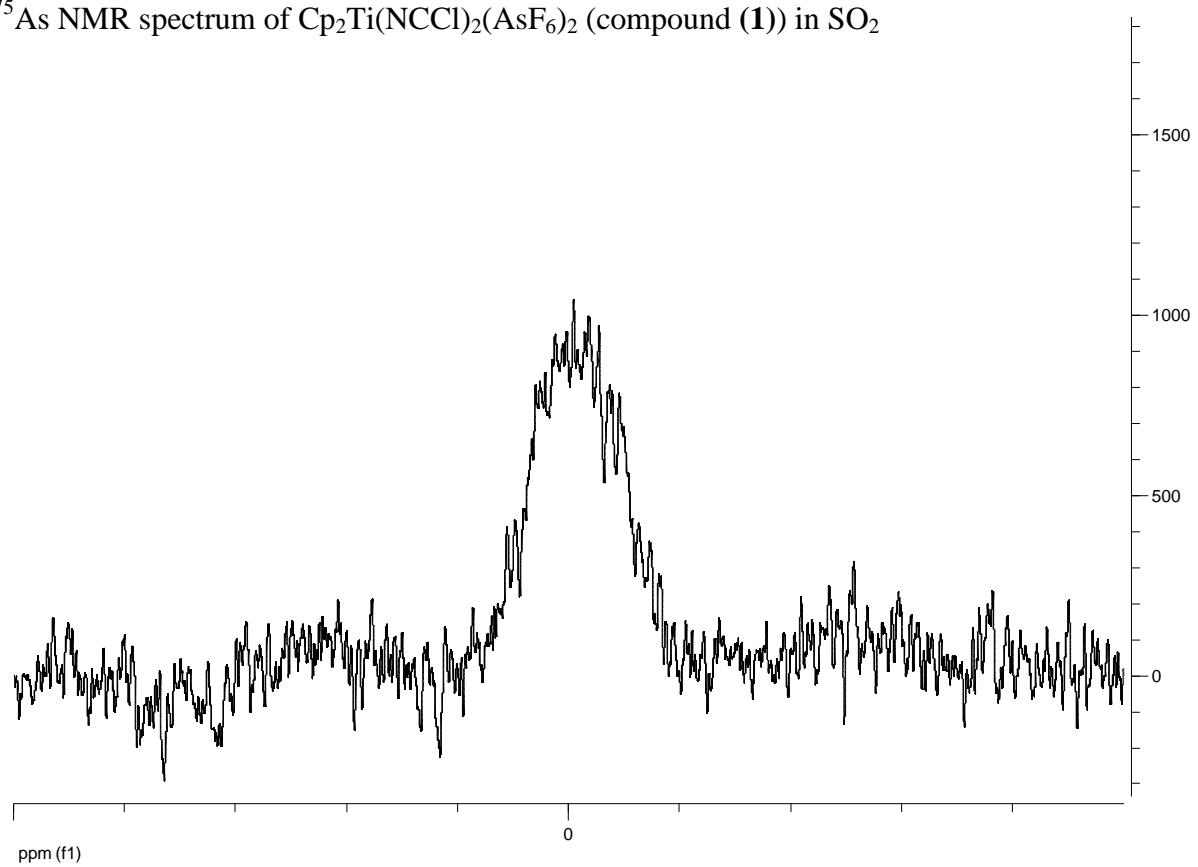
^{19}F NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCBr})_2(\text{AsF}_6)_2$ (compound **(2)**) in SO_2



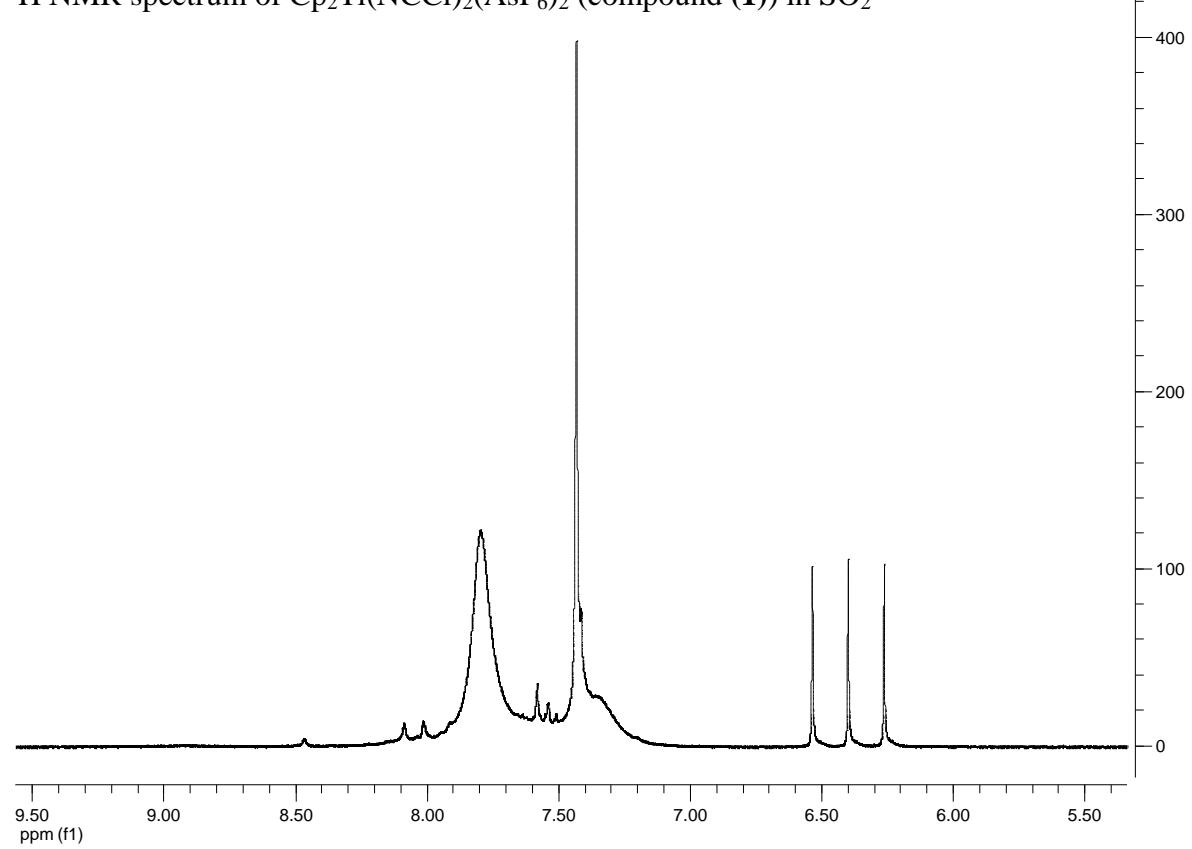
^{14}N NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCBr})_2(\text{AsF}_6)_2$ (compound **(2)**) in SO_2



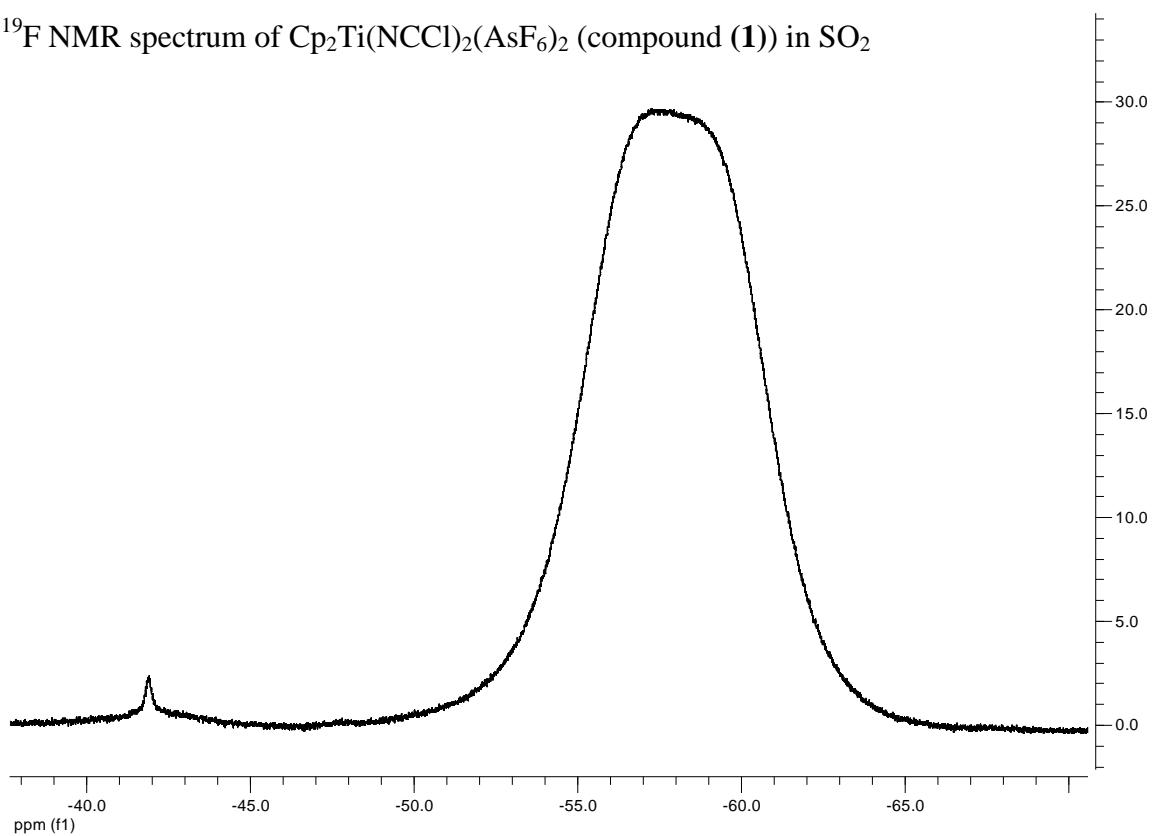
^{75}As NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCCl})_2(\text{AsF}_6)_2$ (compound **(1)**) in SO_2



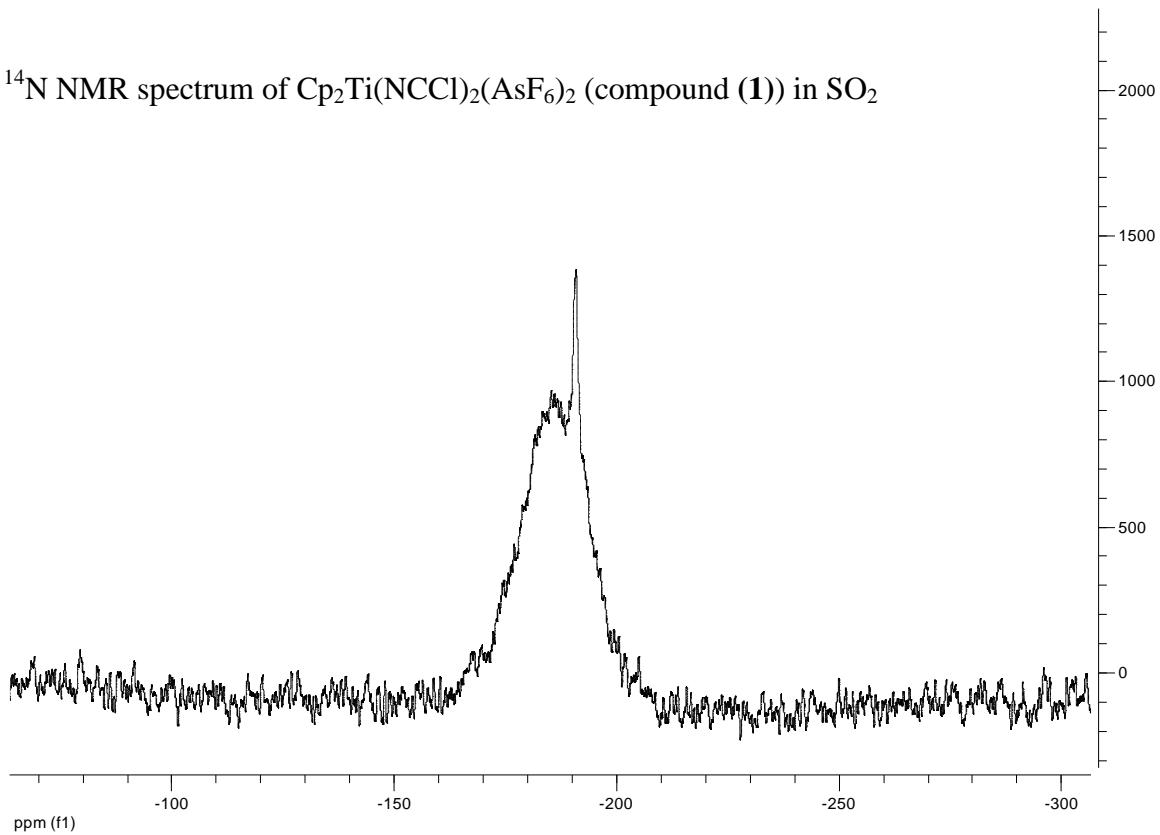
^1H NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCCl})_2(\text{AsF}_6)_2$ (compound **(1)**) in SO_2



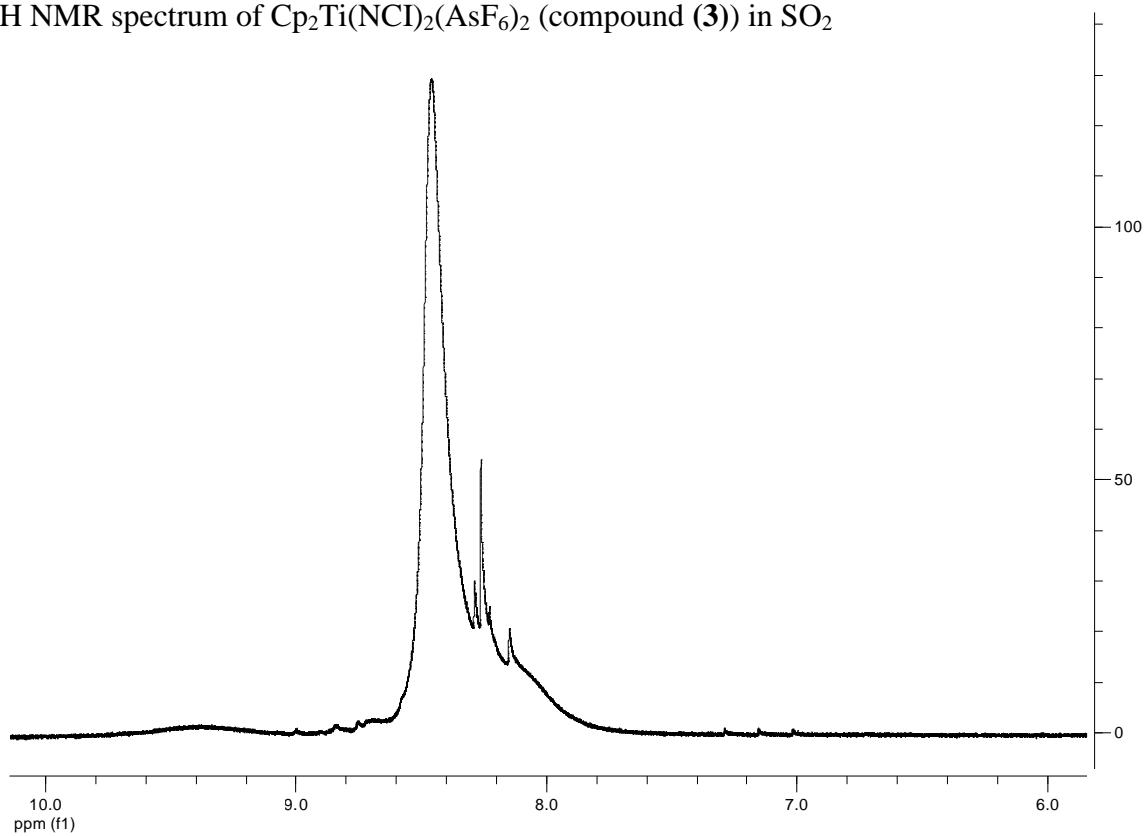
^{19}F NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCCl})_2(\text{AsF}_6)_2$ (compound **(1)**) in SO_2



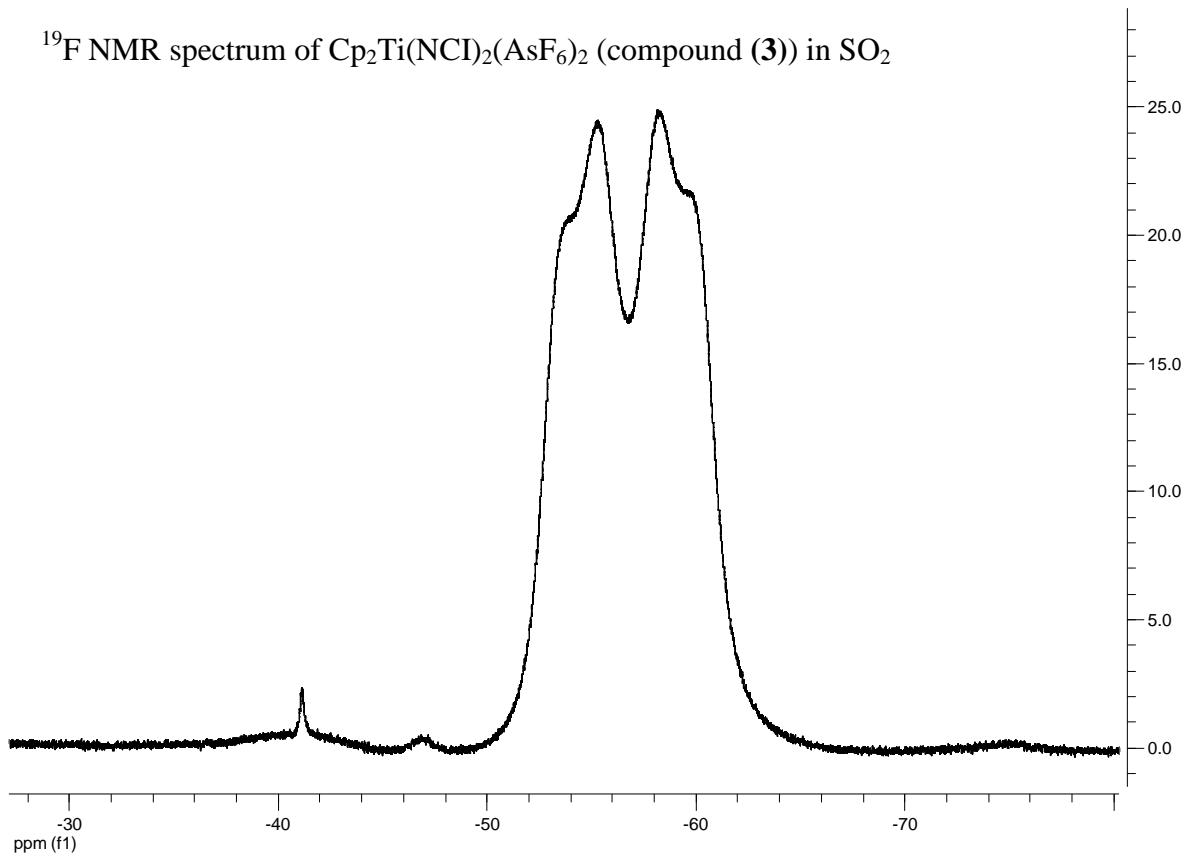
^{14}N NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCCl})_2(\text{AsF}_6)_2$ (compound **(1)**) in SO_2



^1H NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCI})_2(\text{AsF}_6)_2$ (compound **(3)**) in SO_2



^{19}F NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCI})_2(\text{AsF}_6)_2$ (compound **(3)**) in SO_2



^{14}N NMR spectrum of $\text{Cp}_2\text{Ti}(\text{NCI})_2(\text{AsF}_6)_2$ (compound **(3)**) in SO_2

