

Supplementary Information

Mr M JENNINGS MICRO ANALYTICAL LABORATORY SCHOOL OF CHEMISTRY THE UNIVERSITY OF MANCHESTER MANCHESTER M13 9PL		
PLEASE GIVE APPROX. PERCENTAGES OF ELEMENTS PRESENT IN THE EXPECTED COLUMN.		
	EXPECTED	FOUND
C	40.26	40.22
H	7.6	7.60
N		
Cl		
Br		
I		
F		
S	26.86	26.97
P	12.98	12.82
Mol.Wt.	477.36	
Ni	12.3	12.06
COMMENTS		
TGA 12.36 mg		

Figure S1. Elemental analysis of $[\text{Ni}(\text{iBu}_2\text{PS}_2)_2]$.

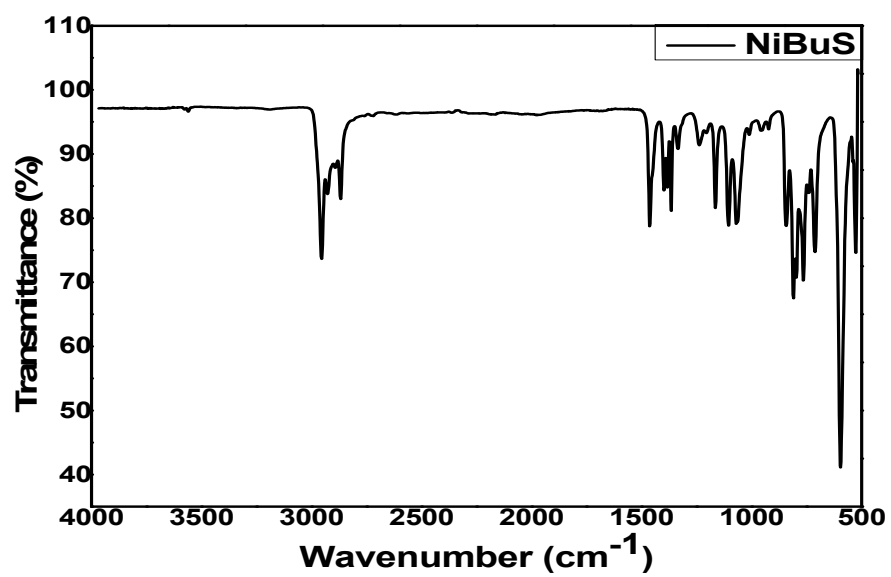


Figure S2. FTIR of $[\text{Ni}(\text{iBu}_2\text{PS}_2)_2]$.

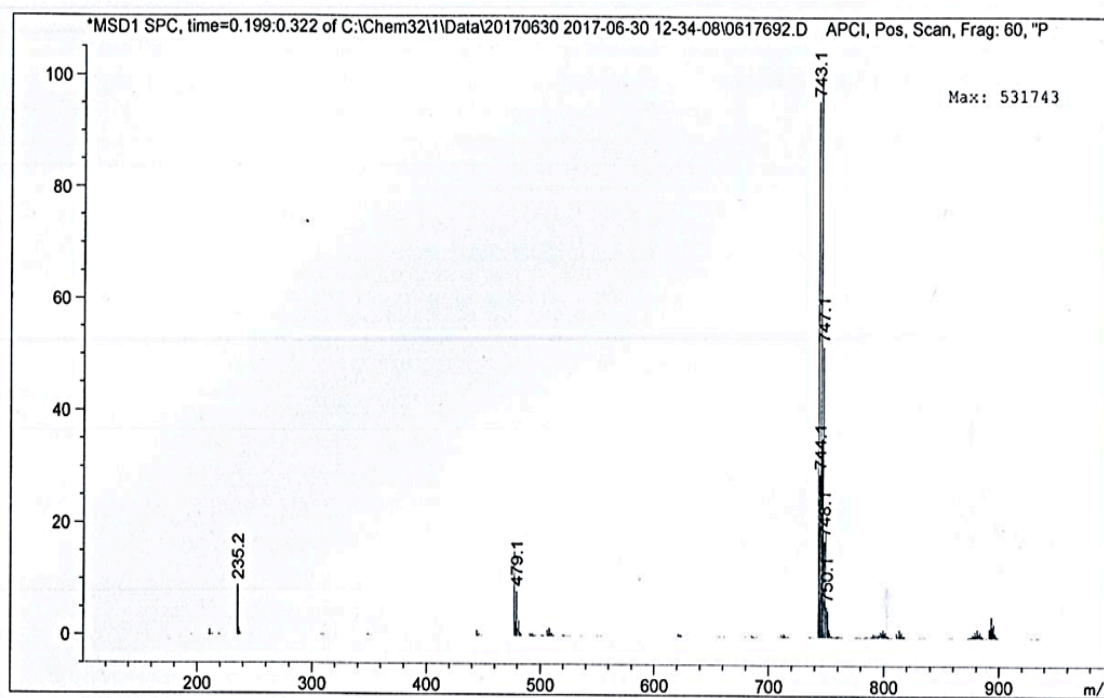
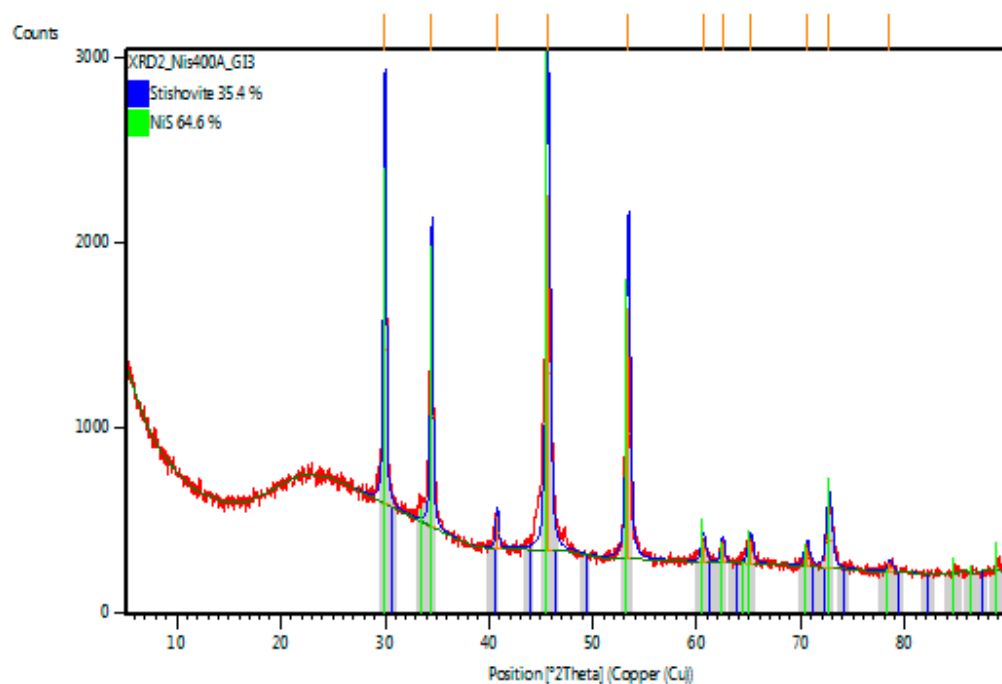


Figure S3. Mass Spectra of $[\text{Ni}(\text{iBu}_2\text{PS}_2)_2]$.



Peak List

Pos. [°2Th.]	Height [cts]	FWHMLeft [°2Th.]	d-spacing [Å]	Rel. Int. [%]
<u>TipWidth Matched by</u>				
29.9883	1657.23	0.2952	2.97981	86.17
0.3542	96-900-9241			
34.4906	1206.79	0.2952	2.60044	62.75
0.3542	96-900-9241			
40.7825	172.01	0.2952	2.21261	8.94
0.3542	96-900-7153			
45.6720	1923.14	0.4428	1.98647	100.00
0.5314	96-900-9241			
53.3815	1358.14	0.4428	1.71634	70.62
0.5314	96-900-9241			
60.6115	114.10	0.4920	1.52777	5.93
0.5904	96-900-7153;96..			
62.4412	105.87	0.3936	1.48734	5.51
0.4723	96-900-9241			
65.1305	117.59	0.5904	1.43228	6.11
0.7085	96-900-9241			
70.5385	101.38	0.5904	1.33514	5.27
0.7085	96-900-7153;96..			
72.6745	302.45	0.5904	1.30108	15.73
0.7085	96-900-7153;96..			
78.5452	50.47	0.5904	1.21789	2.62

0.7085 96-900-7153;96..

Pattern List

Visible	Ref.Code	Score	Compound Name	Displ.[°2Th]	Scale Fac.
<hr/>					
Chem. Formula	<hr/>				
*	96-900-7153	16	Stishovite	0.000	
0.106	Si2.00 O4.00				
*	96-900-9241	78	NiS	0.000	
1.042	Ni2.00 S2.00				

Graphics

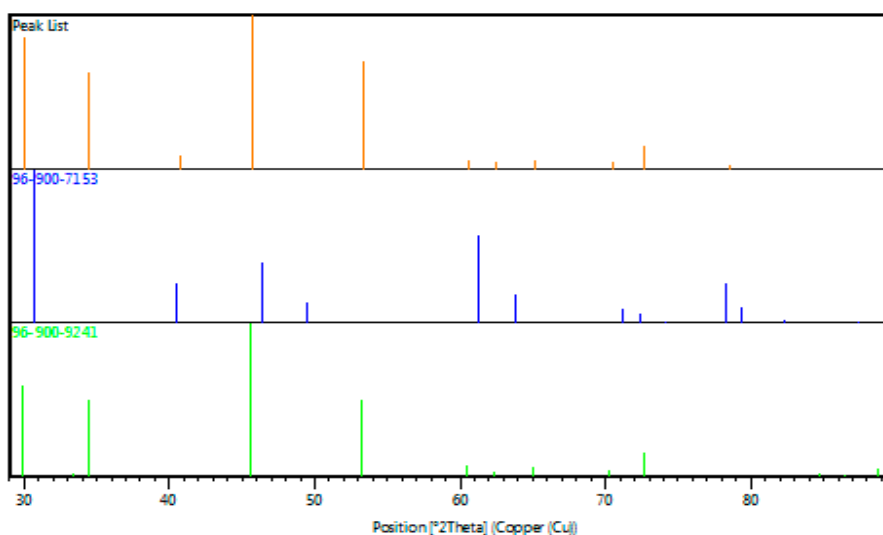


Figure S4. Rietveld Refinement graphics of NiS.400A

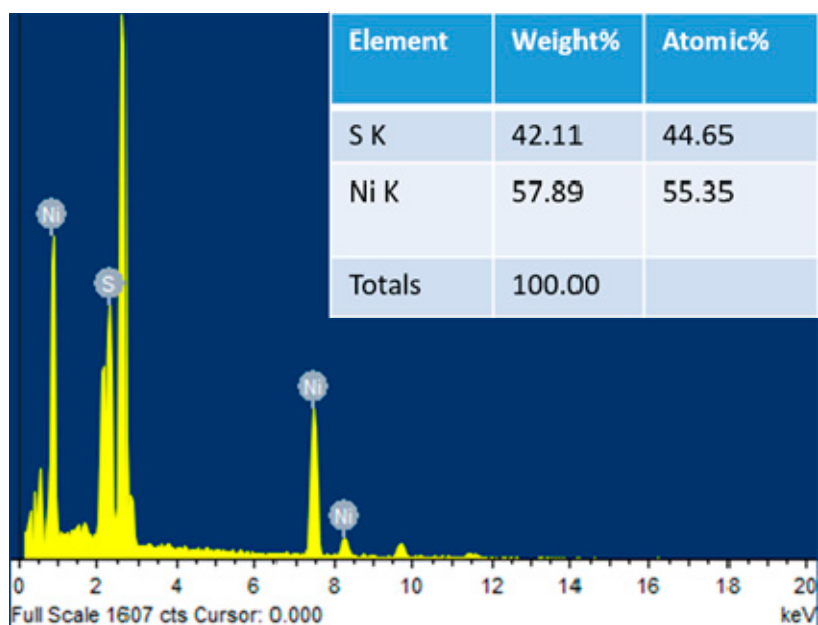


Figure S5a. EDX analysis of NiS at 400 °C

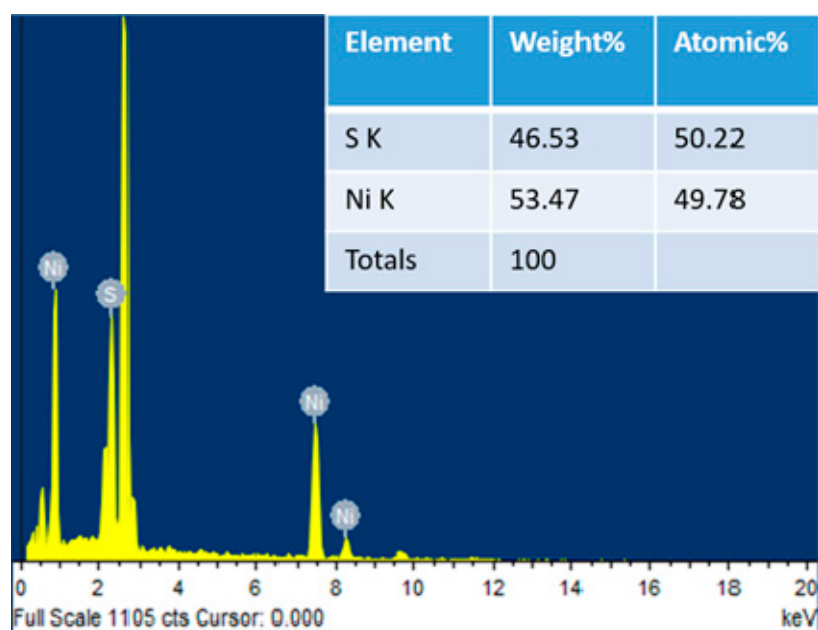


Figure S5b. EDX analysis of NiS at 450 °C