

Supplementary Materials

Structural Phase Transition of ThC Under High Pressure

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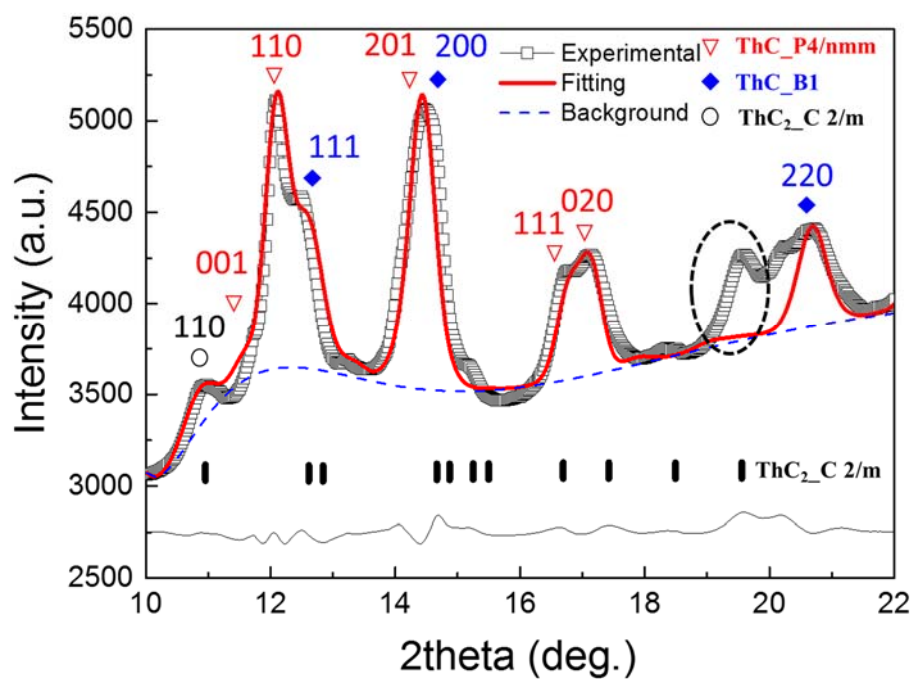


Fig. S1 Rietveld refinement of diffraction file under high pressure (71 GPa)

It should be noted that those black short markers under the diffraction pattern represent the Bragg peaks' positions of high pressure ThC_2 (space group: $C2/m$). The unfitted peak as circled by dotted line may be from the reflection (200) of gasket (stainless steel).

Table S1. Lattice parameters of both B1 and P4/nmm phases under different pressures

Pressure (GPa)	ThC-B1	ThC-P4/nmm	
	a	a	c
1.2	5.321 (4)		
3.5	5.295 (8)		
5.5	5.274 (8)		
7.6	5.257 (8)		
9.8	5.240 (1)		
12.7	5.214 (4)		
18.7	5.165 (9)		
25.1	5.124 (4)		
34.5	5.061 (4)		
37.4	5.029 (2)		
48.6	4.970 (5)		
53.2	4.961 (4)		
58.3	4.961 (4)	4.204 (9)	3.099 (3)
60.2	4.960 (8)	4.188 (5)	3.091 (1)
62.3	4.937 (1)	4.158 (7)	3.081 (2)
64.8	4.940 (8)	4.157 (8)	3.061 (2)
68.3	4.929 (4)	4.150 (1)	3.040 (5)
71.0		4.163 (8)	3.000 (2)