

Electronic Supplementary Information for:

A New Carbon Intercalated Compound of Dion-Jacobson Phase  
 $\text{HLaNb}_2\text{O}_7$

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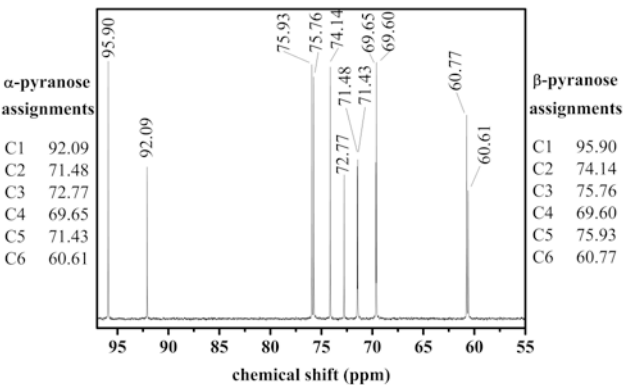


Figure. S1  $^{13}\text{C}$  NMR spectrum of D-glucopyranose.

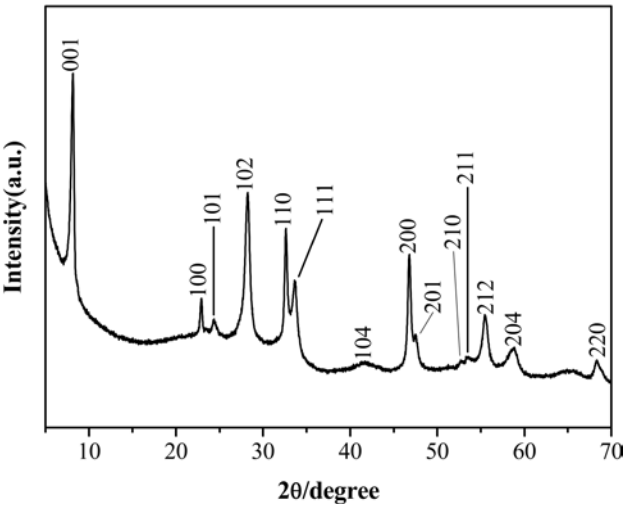


Figure. S2 XRD pattern of the product prepared by annealing D-glucopyranose- $\text{HLaNb}_2\text{O}_7$  at  $350^\circ\text{C}$ .

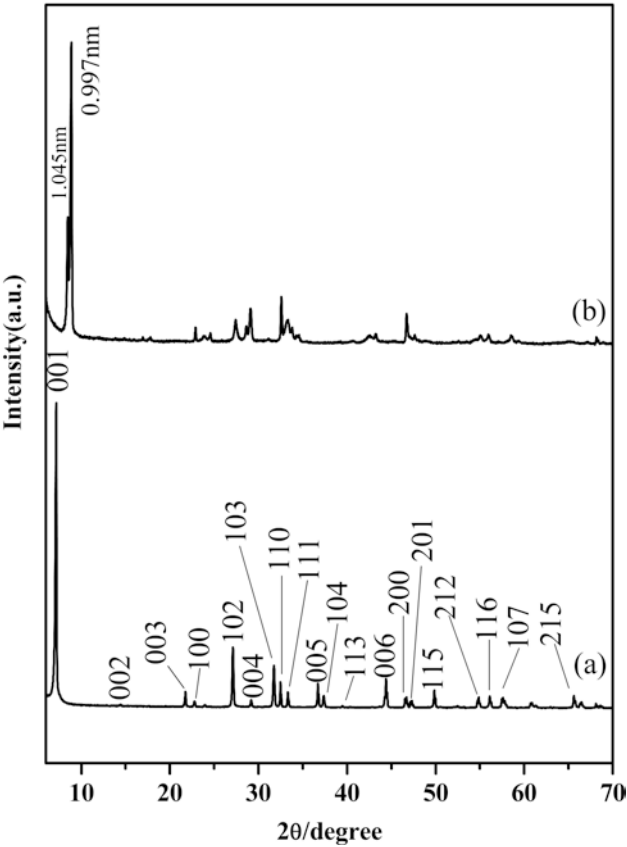
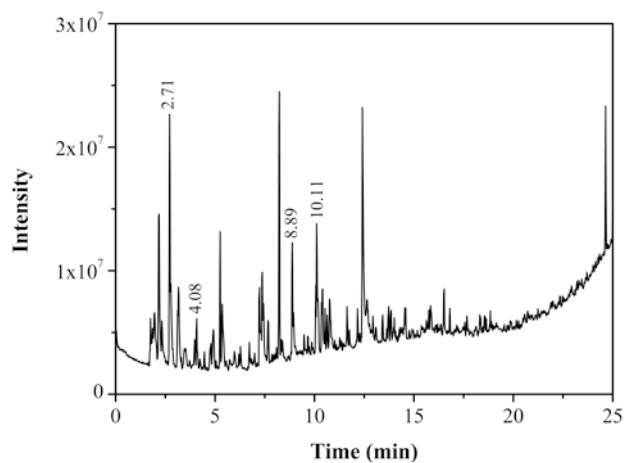
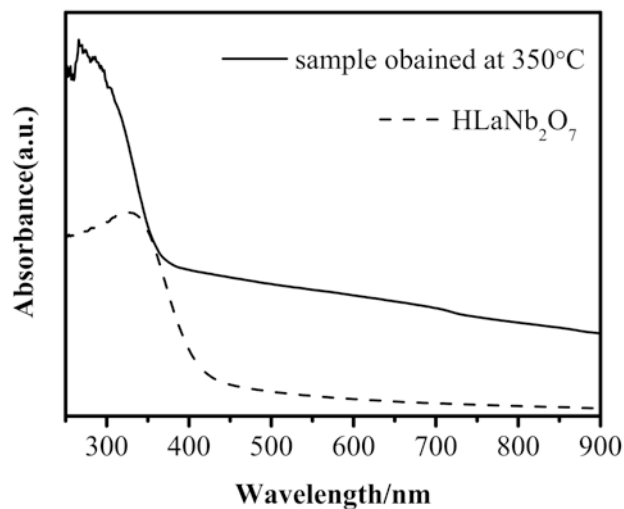


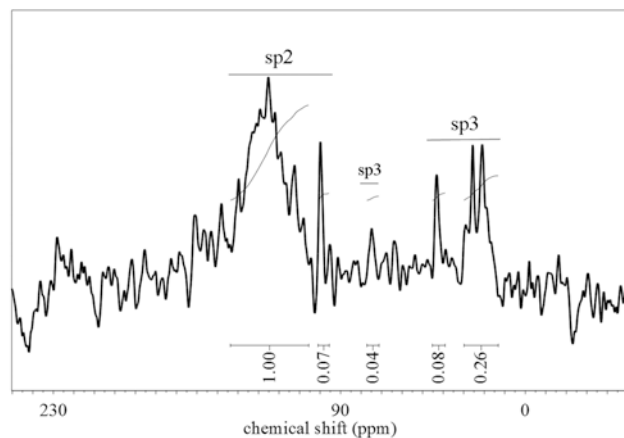
Figure. S3 XRD patterns of (a)  $\text{HLaNb}_2\text{O}_7 \cdot x\text{H}_2\text{O}$ , (b) the product prepared by annealing  $\text{HLaNb}_2\text{O}_7 \cdot x\text{H}_2\text{O}$  at  $300^\circ\text{C}$ .



**Fig. S4** The ion chromatogram from fast pyrolysis. 2-Methyl furan (RT = 2.71), Furfural (RT = 4.08), 2-Cyclopenten-one (RT = 8.89), 5-Methyl furfural (RT = 10.11)



**Fig. S6** UV-Visible diffusive reflectance spectra the sample obtained at 350°C and HLaNb<sub>2</sub>O<sub>7</sub>.



**Fig. S5** Integration of the <sup>13</sup>C NMR spectrum of carbon-HLaNb<sub>2</sub>O<sub>7</sub>.

**Table. S1** carbon contents of D-glucopyranose-HLaNb<sub>2</sub>O<sub>7</sub> and carbon-HLaNb<sub>2</sub>O<sub>7</sub>.

sample name	carbon contents (%)
D-glucopyranose-HLaNb <sub>2</sub> O <sub>7</sub>	5.21
carbon- HLaNb <sub>2</sub> O <sub>7</sub>	4.69