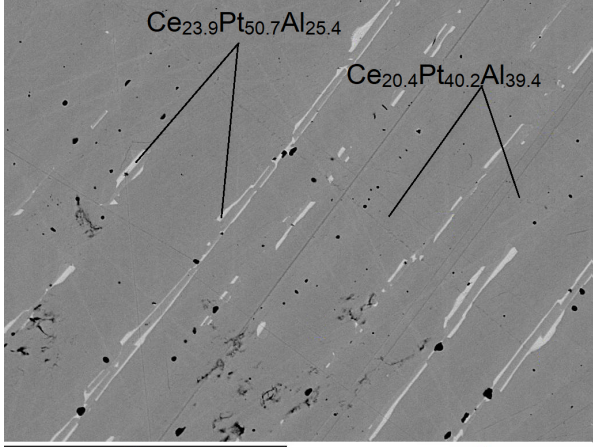
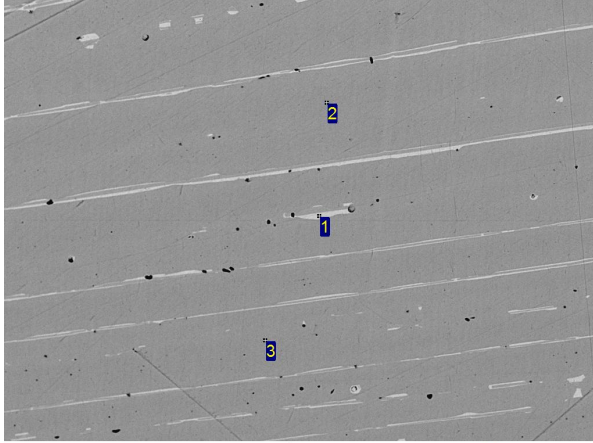
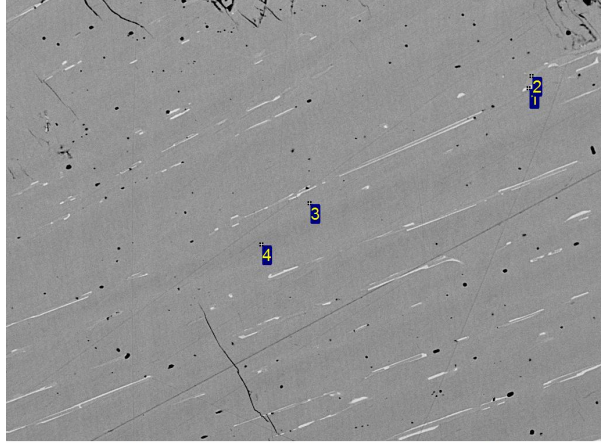
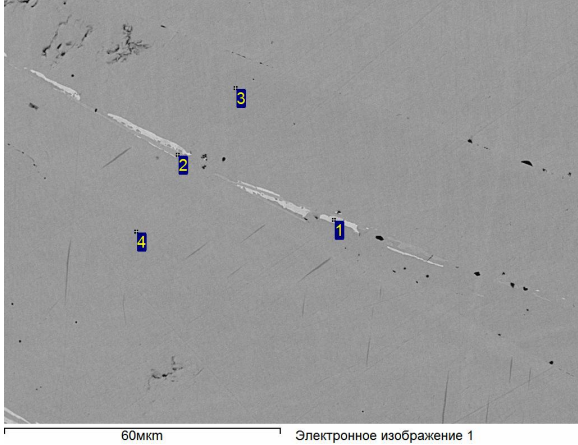
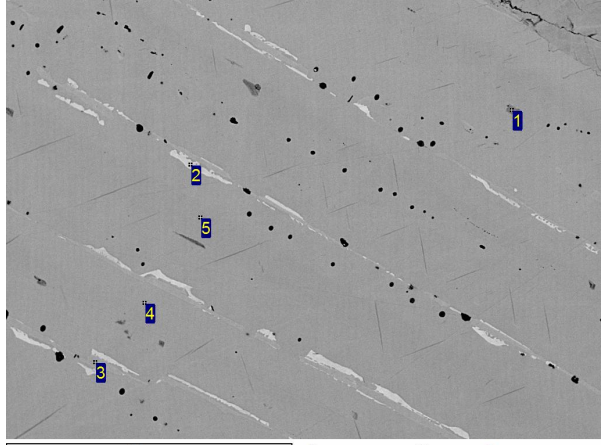
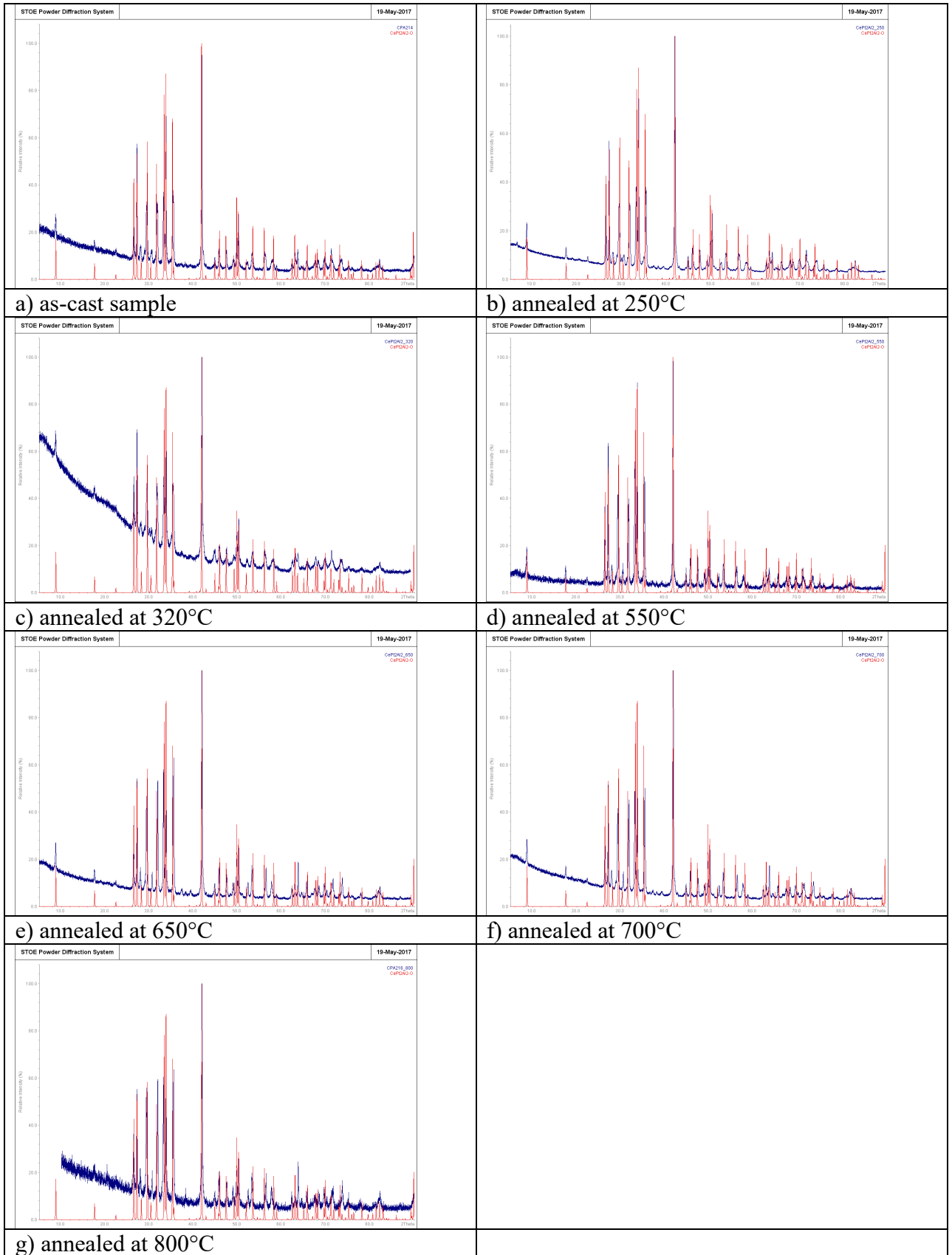
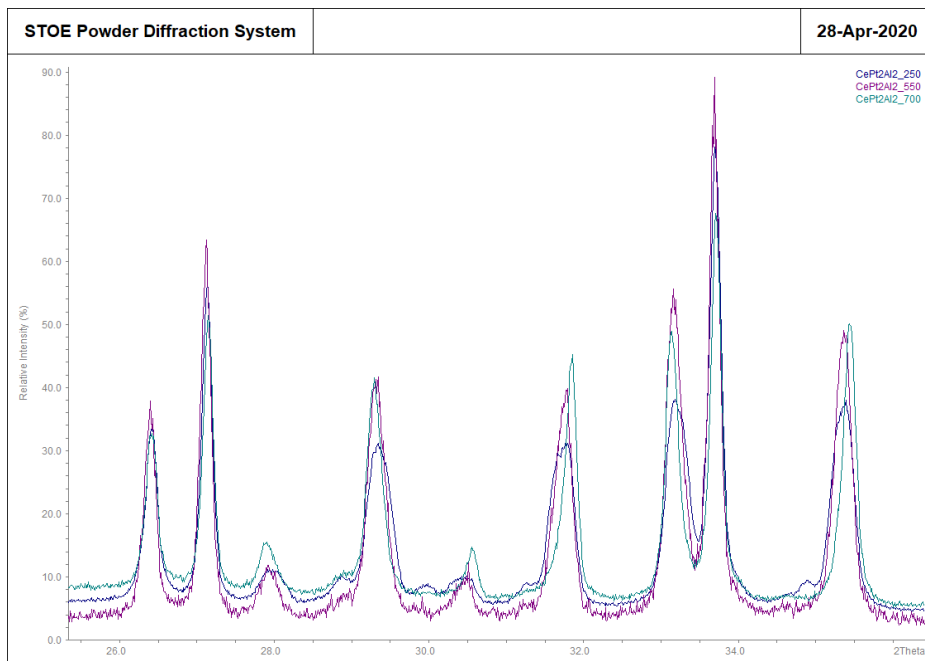


S1. Microstructure of $\text{Ce}_{20.0}\text{Pt}_{40.0}\text{Al}_{40.0}$ (at.%) samples annealed at 250°C, 320°C, 550°C, 650°C, 700°C

 <p>$\text{Ce}_{23.9}\text{Pt}_{50.7}\text{Al}_{25.4}$ $\text{Ce}_{20.4}\text{Pt}_{40.2}\text{Al}_{39.4}$</p> <p>60 μm</p>	
<p>(250°C)</p>	
 <p>60 μm Электронное изображение 1</p>	 <p>60 μm Электронное изображение 1</p>
<p>(320°C) Point 1 - $\text{Ce}_{23.7}\text{Pt}_{50.3}\text{Al}_{26.0}$ Points 2,3 - $\text{Ce}_{20.6}\text{Pt}_{40.5}\text{Al}_{39.1}$</p>	<p>(550°C) Point 1 - $\text{Ce}_{21.1}\text{Pt}_{50.3}\text{Al}_{28.6}$ Points 2,3,4 - $\text{Ce}_{20.2}\text{Pt}_{40.4}\text{Al}_{39.4}$</p>
 <p>60 μm Электронное изображение 1</p>	 <p>60 μm Электронное изображение 1</p>
<p>(650°C) Point 1 - $\text{Ce}_{23.0}\text{Pt}_{50.4}\text{Al}_{26.6}$ Points 2,3,4 - $\text{Ce}_{20.2}\text{Pt}_{40.0}\text{Al}_{39.8}$</p>	<p>(700°C) Point 1 - $\text{Ce}_{16.2}\text{Pt}_{35.4}\text{Al}_{48.4}$ Point 2 - $\text{Ce}_{22.1}\text{Pt}_{50.0}\text{Al}_{27.9}$ Points 3,4,5 - $\text{Ce}_{20.2}\text{Pt}_{40.5}\text{Al}_{39.3}$</p>

S2. XRD patterns of $\text{Ce}_{20.0}\text{Pt}_{40.0}\text{Al}_{40.0}$ (at.%) samples annealed at different temperatures (a-g). XRD patterns in the 25.5 – 36.5 2θ range showing dependence of FWHM on the annealing temperature (h).

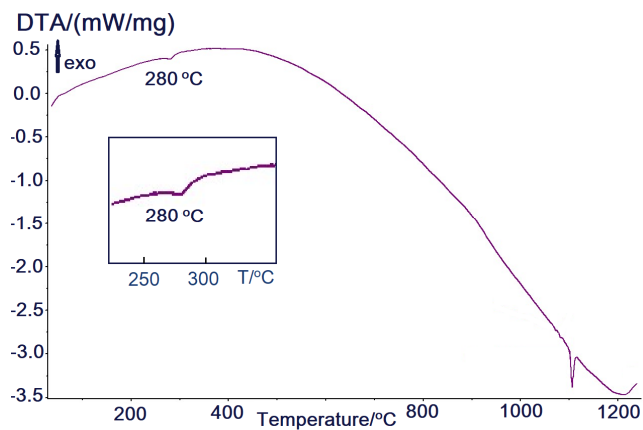




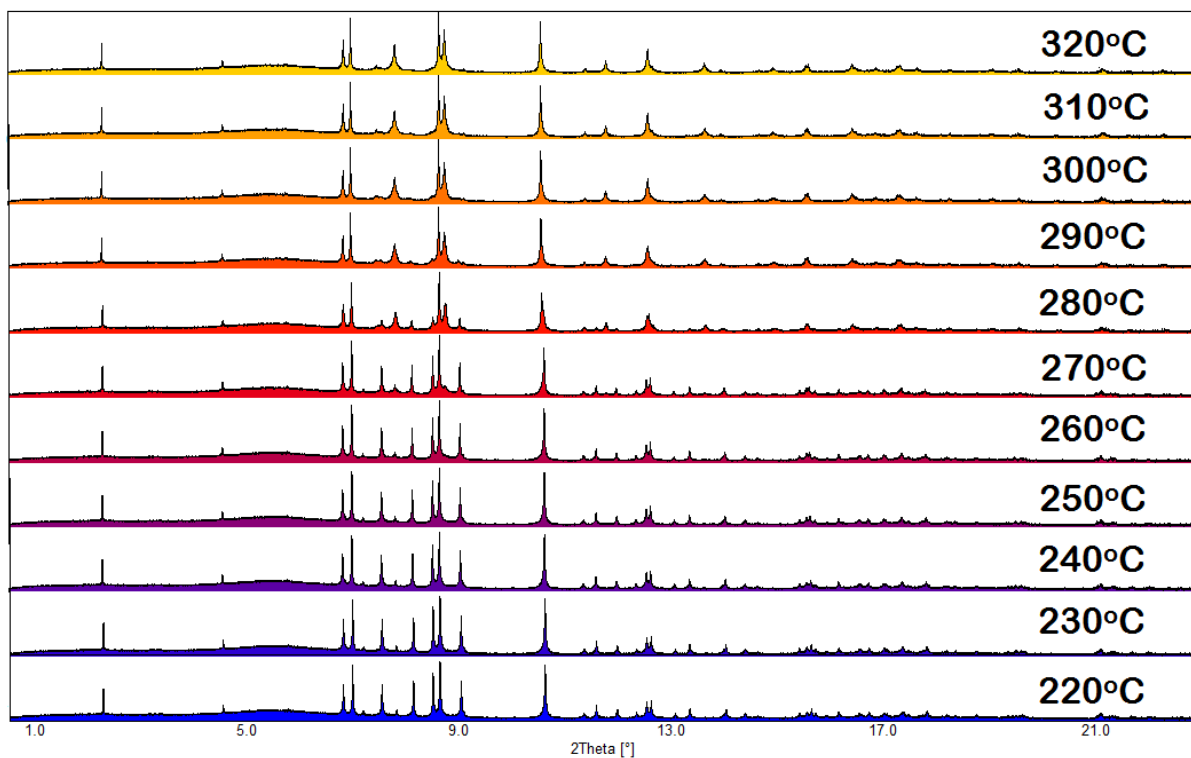
h)

S3.

Heating DTA thermogram of CePt₂Al₂ sample annealed at 550 °C.



S4. Structural transition of the low-temperature orthorhombic CePt₂Al₂ to the high-temperature tetragonal modification. XRD patterns at 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320 °C (a); a projection of XRD patterns (b).



a)

Projection of XRD patterns at 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320°C(b).

