

## Phase transition of the novel hydrogen bonded ferroelectric $(\text{NH}_4)_2\text{H}_2\text{P}_2\text{O}_6$ studied by specific heat measurements.

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The first precise measurements of specific heat changes have been performed for a novel ferroelectric material,  $(\text{NH}_4)_2\text{H}_2\text{P}_2\text{O}_6$  by means of an ac calorimeter. The paraelectric–ferroelectric phase transition at about 177.5 K of second order type is revealed and described by the Landau model using specific heat and linear birefringence data. Thermal parameters (such as the excess enthalpy ( $\Delta H$ ) and the excess entropy ( $\Delta S$ )) of the continuous phase transition were estimated and discussed. The calorimetric measurements indicate a complex mechanism of the ferroelectric transition, both a displacive and order–disorder contributions are suggested.

### Słowa kluczowe

ferroelectric, phase transition, ac calorimetry, Hipodiphosphate

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