

High-pressure dielectric studies of a novel hydrogen-bonded ferroelectric (NH₄)₂H₂P₂O₆.

Autorzy

M. Zdanowska-Frańczek

Z. J. Frańczek

Przemysław Szklarz

Ryszard Jakubas

Rok wydania

2012

Czasopismo

Journal of Physics and
Chemistry of Solids

Numer woluminu

73

Strony

953-956

DOI

10.1016/j.jpcs.2012.03.006

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The hydrostatic pressure effect on the dielectric properties of (NH₄)₂H₂P₂O₆ ferroelectric crystal was studied for pressures from 0.1 MPa to 360 MPa and for temperatures from 100 to 190 K. The pressure–temperature phase diagram obtained is linear with increasing pressure. The paraelectric–ferroelectric phase transition temperature decreases with increasing pressure with the pressure coefficient $dT_c/dp = -5.16 \times 10^{-2}$ K MPa⁻¹. Additionally, the pressure dependences of Curie–Weiss constants for the crystal in paraelectric (C₊) and ferroelectric (C₋) phases are evaluated and discussed. The possible mechanism of paraelectric–ferroelectric phase transition is also discussed.

Słowa kluczowe

C. High pressure, D. Phase transitions

Adres publiczny

<https://doi.org/10.1016/j.jpcs.2012.03.006>

Strona internetowa wydawcy

<http://www.elsevier.com>