

البحث رقم (1)

Published in: **Z. Naturforsch.** 55a, 595 – 604 (2000)

Authors: M.F. Mostafa, S.S. Arafat

Impact factor: 1.079 , Q3

ISSN / EISSN: 2510-1560 (Print) 2510-1579 (Online)

عنوان البحث:

Dielectric Dispersion of New Ferroelectric Cobalt Halide of Dimers:

Bis-ethanolammonium- hexahalocobaltate, $(C_2H_8NO)_2Co_2X_6$, X = Cl/BrZ.

Abstract:

The AC conductivity in the frequency range 5.0 Hz - 10.0 kHz, the magnetic susceptibility in a field of 14.7 and 17.8104A/m, and differential thermal analysis at 78 K up to room temperature for bis-(ethanolammonium)Co₂X₆, X = Cl and Br are reported. The bromide dimer undergoes an order-disorder transition at 302 K and a displacive type ferroelectric transition at T ~ 220 K. The chloride dimer shows two transitions, the first being in a displacive ferroelectric one at T ~ 210 K showing critical slowing down. The second phase transition, occurring at 282 K, is found to be inactive in the electric measurements.