

THE CRYSTAL STRUCTURE OF FeGa₃

LU HSUEH-SHAN(S. S. LU) LIANG CHING-KWEI

(*Academia Sinica*)

ABSTRACT

The crystal structure of FeGa₃ has been determined by means of Debye-Scherrer photographs. The unit cell is tetragonal, with $a = 6.2628 \text{ \AA}$ and $c = 6.5559 \text{ \AA}$ at 20°C. There are four formula units per unit cell. The space group is $D_{4h}^{14} - P4_2/mnm$. The four Fe atoms are situated at the 4(*f*) positions, while the twelve Ga atoms are situated at the 4(*c*) and 8(*j*) positions, the atomic parameters being $x_j = 0.343$, $x_j = 0.157$, and $z_j = 0.264$.

This structure represents a new type of intermetallic compound.