

FeRh₂Se₄ 결정내에서의 철이온의 에너지 분열에 관한 연구

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(1982년 6월 7일 받음)

A Study on the Energy-Level Splittings of the Iron Ions in FeRh₂Se₄

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(Received : June 7, 1982)

Mössbauer spectra of FeRh₂Se₄ consist of a quadrupole doublet down to liquid-nitrogen temperature. Analysis of temperature-dependence of the quadrupole splitting shows that the T_{2g} level of Fe²⁺ splits into a singlet and a doublet, with the doublet at a lower energy than the singlet by an energy separation of 2.7λ. The rhombic crystal field is found to be negligible compared to the axial crystal field.