

Positive Temperature Dependence of Quadrupole Splittings in Mössbauer Spectra of $\text{Fe}_{1.33}\text{Nb}_{2.67}\text{Se}_{10}$

Takashi Suzuki and Noriaki Okubo

Institute of Physics, University of Tsukuba, Tsukuba, 305-8571 Japan

Reprint requests to T. S.; E-mail: suzuki@ri-center.tsukuba.ac.jp

Z. Naturforsch. **57 a**, 627–630 (2002); received April 4, 2002

Presented at the XVIth International Symposium on Nuclear Quadrupole Interactions, Hiroshima, Japan, September 9-14, 2001.

The Mössbauer effect in the low-dimensional compound $\text{Fe}_{1.33}\text{Nb}_{2.67}\text{Se}_{10}$ has been examined between 78 and 414 K. An unusual positive temperature dependence of the quadrupole splittings was found above 250 K. As a possible origin a mechanism due to π bonding is suggested.

Key words: Low-Dimensional Compound; $\text{Fe}_{1.33}\text{Nb}_{2.67}\text{Se}_{10}$; Mössbauer Effect; Quadrupole Splittings; π Bonding.