S-, X-, Q- und W-Band-Pulver-EPR-Untersuchungen an Tetra-*n*-butylammonium-bis(1,2-dicyanoethen-1,2-dithiolato)aurat(II), $[(n\text{-}C_4H_9)_4N]_2[Au^{II}(mnt)_2]$

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Professor Dirk Walther zum 60. Geburtstag gewidmet

Z. Naturforsch. **54 b,** 597–602 (1999); eingegangen am 2. März 1999

Gold(II) Complexes, Dithiolenes, Powder-EPR

Powder-EPR studies at T = 295 K and T = 12 K on the unstable gold(II) complex $[(n\text{-}C_4H_9)_4N]_2[Au^{II}(mnt)_2]$ diamagnetically diluted by the corresponding Ni^{II} complex are reported. Due to (i) the small anisotropy of the **g** and the ^{197}Au hyperfine tensor $\mathbf{A}^{Au}$, and (ii) the large ^{197}Au quadrupole interaction the powder spectra possess a very complex pattern. Using different EPR frequencies – S band (2.4 GHz), X band (9.5 GHz), Q band (35 GHz) and W band (94 GHz) – the spectra could be analyzed successfully. All spectra were simulated with a computer program which diagonalizes the spin-Hamiltonian matrix exactly.