believe these values to be accurate to ~3% for the K shell. For germanium they give $g_K = 1{\cdot}29$. In addition the previously measured value of the linear absorption coefficient μ of germanium at Mo $K\alpha$ was employed ($\mu = 325{\cdot}5$ cm^{-1}). We believe this value to be accurate to 1%. The L and M shell contributions to the absorption coefficient and dispersion corrections are small and we have employed the oscillator strengths of Cromer in the procedure suggested by Parratt & Hempstead (1954). The total L and M contribution to the linear absorption coefficient of germanium at Mo $K\alpha$ was taken to be 44 cm^{-1} extrapolated from the measured linear absorption of germanium at Cu $K\alpha$ (352 cm^{-1}) believed accurate to ~1½%. By assuming the wavelength dependence of the absorption coefficient of the K shell to be proportional to $\lambda^{2+\delta}$ we employed the value of g_K calculated by Cromer and the measured value of the absorption coefficient at Mo $K\alpha$ (corrected for L and M shell contribution) to determine δ from

$$g_K = \frac{\mu_K A (\lambda_K/\lambda)^{2+\delta}}{\pi \varrho a (e^2/mc^2) \lambda_K (1+\delta)} \qquad (1)$$

where μ_K is the linear absorption coefficient of the K shell at wavelength λ, ϱ the density, a Avogadro's number, A the atomic weight and λ_K the K absorption edge. We obtain $\delta = 0{\cdot}63$ for germanium. The respective K, L and M contributions to $\Delta f'$ are thus calculated to be

$$\Delta f' = -4{\cdot}8 \pm 0{\cdot}15(K) + 0{\cdot}21 \pm 0{\cdot}08(L) + 0{\cdot}03 \pm 0{\cdot}02(M) = -4{\cdot}56 \pm 0{\cdot}25\,,$$

in good agreement with the experimental value of $\Delta f' = -4{\cdot}66 \pm 0{\cdot}3$. It appears that even under the best of conditions $\Delta f'$ can only be measured (or calculated) to an error of ~5%.

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Cell dimensions and space groups of some olefin–Pt(II) complexes.

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In connection with investigations in our laboratories concerning the stereochemical features of olefin–transition metal complexes, an X-ray analysis of some dihalogenoplatinum compounds was undertaken (Paiaro & Panunzi, 1964, 1965). Besides the determination of conformational parameters such as bond lengths, valence angles and internal rotation angles, the purpose of the work is the assignment of the absolute configuration of the olefin ligand, based upon that of α-phenethylamine (Eliel, 1962), and the correlation of the absolute configuration found with the observed rotations.

Single crystals of:

(I). *trans*-Dichloro(*cis*-2-butene)(*S*)-(α-phenethylamine)Pt(II)
(II). (−)*trans*-Dichloro(*trans*-2-butene)(*S*)-(α-phenethylamine)Pt(II)cyclohexane
(III). (+)*trans*-Dichloro(*trans*-2-butene)(*S*)-(α-phenethylamine)Pt(II)
(IV). (−)*cis*-Dichloro(*trans*-2-butene)(*S*)-(α-phenethylamine)Pt(II)

were obtained by slow crystallization from suitable solvents. Space groups and lattice constants (Table 1) were determined from Weissenberg photographs about the b axis and from precession photographs around the c axis; densities were measured by flotation methods.

Table 1. *X-ray data*

	Compound			
Cell constants	(I)	(II)	(III)	(IV)
a	15·64	15·59	8·87	12·55
b	10·42	14·72	12·21	6·65
c	9·16	9·36	6·92	8·88
β	90°	90°	99°	102°30′
Space group	$P2_12_12_1$	$P2_12_12_1$	$P2_1$	$P2_1$
d_{exp} (g.cm^{-3})	1·98	1·62	1·99	1·99
d_{RX}	1·97	1·64	1·99	2·03

Complete structure determinations of the compounds (I), (III) and (IV) have been started.

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