be $B_N > B_C > B_{Co}$, but because of the limited sensitivity of this experiment to temperature effects it seems that $B_C = B_{Co}$.

The prototype of this structure elpasolite, K_2NaAlF_6, was originally studied by powder techniques (Menzer, 1932; Frondel, 1948; Steward & Rooksby, 1953). According to these workers the crystal belongs to the $Pa3$ (T_h^6) space group. However, more recently Helmholz (1959) and Helmholz, Guzzo & Sanders (1961) assigned to this crystal the $Fm3m$ (O_h^5) space group, after a single-crystal study. There are now available several more examples of members of this isostructural family, *e.g.* K_2NaGaF_6 (Helmholz, 1959), K_2NaCrF_6 and K_2NaFeF_6 (Knox & Mitchell, 1961), K_2NaTiF_6 (Bright & Wurm, 1958) and the current work on $Cs_2LiCo(CN)_6$, all having the $Fm3m$ space group. In addition, the e.p.r. studies of FeF_6^{3-} and CrF_6^{3-} doped in K_2NaGaF_6 (Helmholz, 1959; Helmholz, Guzzo & Sanders, 1961) and $Cr(CN)_6^{3-}$ in $Cs_2LiCo(CN)_6$ (to be published) showed no evidence of any distortion of the octahedral complexes. Evidence of a reversible transition, which could be ascribed to misalignment of the complex axes with respect to those of the unit cell, were found in our e.p.r. work on $Cr(CN)_6^{3-}$ in $Cs_2LiCo(CN)_6$ at about 70°K. We feel that this work should be emphasized since it seems that the remarks of Helmholz, Guzzo & Sanders (1961) on the elpasolite structure have been overlooked.

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Crystallographic data for carbazole, indole and phenanthridine.

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Carbazole, indole and phenanthridine are shown to be orthorhombic with four molecules in the unit cell. The first two have space groups $Pna2_1$ (or $Pnma$) and $Pna2_1$ (or $Pnma$), and the last one $P2_12_12_1$.

As part of a series of studies of the electro-optic properties of some heterocyclic molecules we have determined crystallographic constants (Table 1) for carbazole, indole and phenanthridine. The X-ray data were obtained from oscillation and Weissenberg photographs with Cu $K\alpha$ radiations. The densities were determined by flotation; the instrument produced by Crystal Structures Ltd was used to test for the piezoelectric effect. In the cases of indole and carbazole the non-centrosymmetric space group $Pna2_1$ is preferred to the alternative centrosymmetric possibility $Pnma$ despite the lack of any detectable piezoelectric effect since the symmetry requirements imposed by $Pnma$ would lead to improbable packing arrangements. All cell dimensions are accurate to about 0·4%. No further crystallographic studies of these compounds are contemplated.

This work forms part of the programme of the Division of Molecular Science at the National Physical Laboratory.

Table 1. *Crystallographic data for carbazole, indole and phenanthridine*

	Carbazole	Indole	Phenanthridine
Empirical formula	$C_{12}H_9N$	C_8H_7N	$C_{13}H_9N$
Molecular weight	167·21	117·15	179·21
Solvent	Ethanol	Cyclohexane	Cyclohexane and ethanol
Habit	Thin plates	Thin plates	Flat needles
Piezoelectric effect	Nil	Nil	Nil
Crystal system	Orthorhombic	Orthorhombic	Orthorhombic
Systematic absences	$0kl$, $k+l \neq 2n$ $h0l$, $h \neq 2n$	$0kl$, $k+l \neq 2n$ $h0l$, $h \neq 2n$	$h00$, $h \neq 2n$ $0k0$, $k \neq 2n$ $00l$, $l \neq 2n$
Space group	$Pna2_1$ (or $Pnma$)	$Pna2_1$ (or $Pnma$)	$P2_12_12_1$
Molecules per unit cell	4	4	4
Cell dimensions			
a (Å)	5·73	14·89	11·72
b (Å)	19·27	7·87	16·41
c (Å)	7·82	5·64	4·97
V (Å^3)	825·3	660·7	955·9
Density (observed)	1·285	1·188	1·19
Density (calculated)	1·30	1·19	1·24