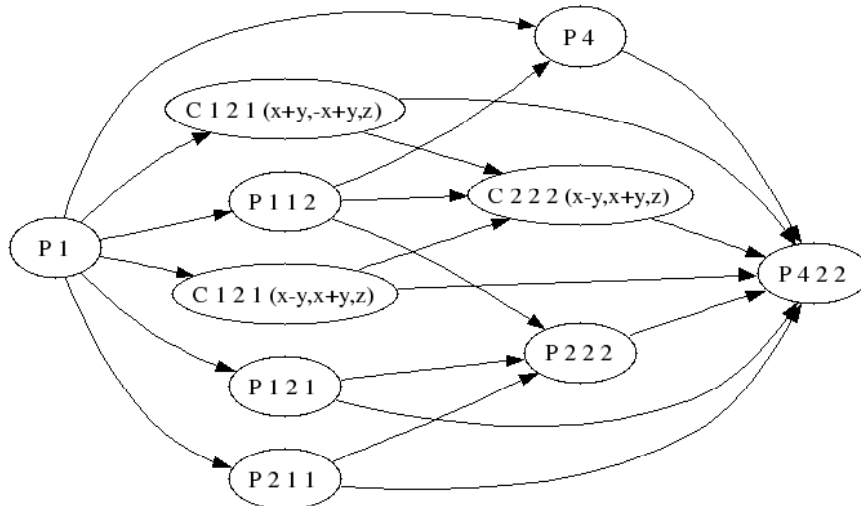


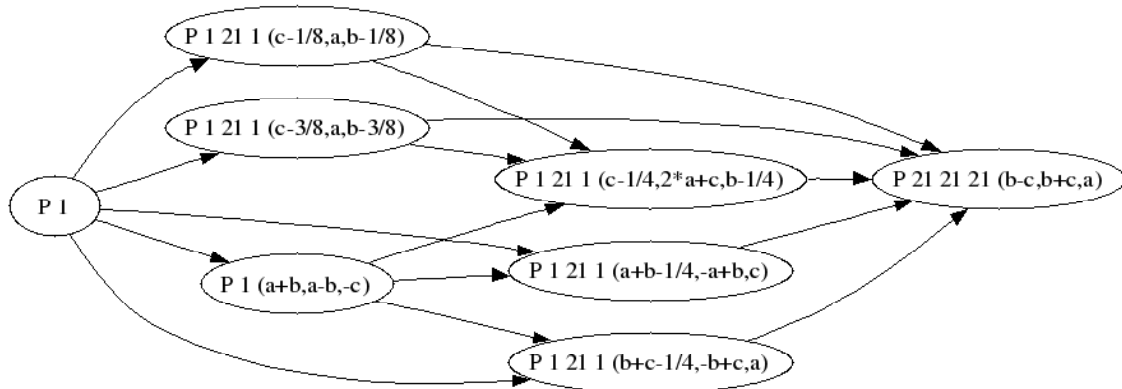
Supplementary information

Fig. 1: A point group graph with all subgroups of $P422$.



Only point groups $P4$, $P222$ and $C222(x - y, x + y, z)$ have twin laws of order 2 and are prime candidates as target space groups for symmetry reduction.

Fig. 2: A space group graph indicating the all possible subgroups of space group $P2_12_12_1(b - c, b + c, a)$.



$P2_12_12_1(b - c, b + c, a)$ is the space group of $1jkk$ in a setting in which it has unit cell parameters matching the Niggli (Krivý & Gruber, 1976) setting of $1eix$. The subgroups $P12_11(c - 1/8, a, b - 1/8)$ and $P12_11(c - 3/8, a, b - 3/8)$ are the only two groups that have a crystallographic screw axis in the same position as observed in $1eix$ in its Niggli setting. These two space groups are thus the only two possible subgroups that describe the symmetry of $1eix$ in relation to $1jkk$.

Krivý, I. & Gruber, B. (1976). *Acta Cryst.* A32, 297-298.