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News from the world of modulated intermetallics

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The number of modulated structures with more than one modulation vector is small, and such structures often pose special problems in solving and refining. This talk will be concentrated on three such cases; The 3+4 dimensionally modulated cubic structure of digenite, the 3+2 dimensionally modulated structure of Cu3ln2, the 3+2 dimensionally modulated structure of AuZn3 and the 3+2 dimensionally modulated structure of Se(Sn4)2K10. The three former cases are interesting because they are relatively weakly ordered structures where modelling is straight-forward, but the model itself is less than obvious to understand while the latter case appears highly ordered, but presents formal modelling difficulties. From these and previously known multi dimensional cases it would appear that higher order modulations are very prone to disorder. The image shows the hk0 layer from Se(Sn4)2K10.



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