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**Comment on the article ‘Protein crystal lattices are dynamic assemblies: the role of conformational entropy in the protein condensed phase’**

Massimo Nespolo

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## Comment on the article 'Protein crystal lattices are dynamic assemblies: the role of conformational entropy in the protein condensed phase'

**Massimo Nespolo\***

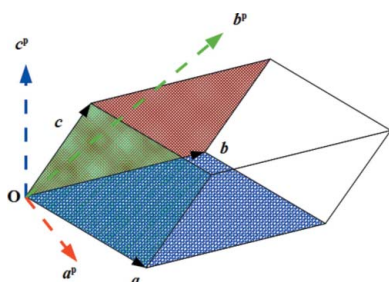
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**Keywords:** protein crystals; crystal lattices

In a recent article by Dimova & Devedjiev (2018), the word 'lattice' occurs 32 times, and the term 'crystal lattice' 23 times. Actually, none of these occurrences concern the *lattice* but the *structure*. The distinction is of paramount importance because a lattice is an abstract mathematical concept that expresses the periodicity of the atomic distribution in the crystal space; the latter is the crystal structure. The confusion between these two fundamental concepts may lead to serious misunderstandings, like the term 'polar lattice' (page 136). A lattice being always centrosymmetric (in an odd-dimensional space), it can never be polar, whereas the crystal structure can. Furthermore, the term 'polar lattice' is used to indicate a completely different concept: the ancestor of the reciprocal lattice (Nespolo & Souvignier, 2010).

### References

- Dimova, M. & Devedjiev, Y. D. (2018). *IUCrJ*, **5**, 130–140.  
Nespolo, M. & Souvignier, B. (2010). *J. Appl. Cryst.* **43**, 1144–1149.



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