International Union of Crystallography

Acta Cryst. (1979). A35, 508

Commission on Journals

Decisions taken at meetings in Warsaw, August 1978

The attention of authors planning to submit papers to *Acta Crystallographica* or *Journal of Applied Crystallography* is drawn to the following actions taken by the Commission on Journals at meetings held in Warsaw, 1–3 August 1978.

Estimated standard deviations

All measured or derived quantities which are of importance either to the conclusions or understanding of the paper, or to use by others, are required to be accompanied by their estimated standard deviations. The value of such quantities without estimated standard deviations is regarded as being sufficiently ill-defined as not to warrant publication.

International symbols for units

The system of units known as SI is to be used, except that the ångström (symbol Å, defined as 10^{-10} m) is preferred to the nanometer (nm) or picometer (pm). When there is good reason for using other units (for example, when a dimension is determined by a standard machine tool or commercial practice) the SI equivalent should follow in parentheses [see *Notes for Authors. Acta Cryst.* (1978), A34, 143–157]. A useful publication on the SI system is *A Guide to International Recommendations on Names and Symbols for Quantities and on the Units of Measurement* (1975) by D. Armstrong Lowe (Geneva: World Health Organization).

Structural data

Routine checking of papers containing structural data, for consistency between the atomic coordinates and lattice constants and the quoted bond lengths, bond angles and torsion angles, is now being introduced by all Co-editors. Since the detection of inconsistency will result in a paper being returned to its authors, care should be taken to ensure that the final tables and results presented in the manuscript correspond accurately to the primary data.

Anisotropic thermal parameters

Anisotropic thermal parameters are to be published only if the table of values is very short, or they are necessary for understanding the paper, or they possess unusual features or cast doubt on the structure but do not lead to rejection of the paper. In all other cases, the table of values is to be deposited: a brief discussion of deposited values should instead be presented, including the maximum and minimum values found and the presence of any nonpositive-definite coefficients determined. In addition, the equivalent values of the Debye–Waller factor should be given for publishing with the list of atomic coordinates.

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (J. H. Robertson, School of Chemistry, University of Leeds, Leeds LS2 9JT, England). As far as practicable books will be reviewed in a country different from that of publication.

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Quantum chemistry of solids: The chemical bond and energy bands in tetrahedral semiconductors. By A. LEVIN. Pp. xii + 249. Moscow: Khimiya Press, 1974 (in Russian); New York: McGraw-Hill, 1977 (in English). Price £14·10, US $24.00.

'All matter is made of atoms'. Richard Feynman, in his famous lectures on physics, regards this statement as the most important and informative piece of present scientific knowledge. If just one sentence could be passed to the next generation, this should be the one, he says. The previous generation still disputed seriously about the real existence of the atom. Now it is a well established fact. We have many means, well known by all crystallographers, that make the detailed atomic structure of matter concretely visible. Still, the quantitative significance of this statement poses some problems.

The idea of atomic constituents of matter involves identification of the basic structural units of matter with free atoms. Of course, we get free atoms when we decompose matter, and matter when we put free atoms together; we can even recognize the atomic species in our density maps. However, a conclusive physical proof of the idea requires derivation or at least understanding of the measurable properties of matter on the basis of the measurable properties of free atoms and of their mutual interactions. This is easy for many mechanical and thermal properties, but as soon as we turn to phenomena, where basic electronic properties enter the scene, difficulties arise.