

letters

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11/23/77

Electron microscope center

Several letters and articles have appeared in recent issues on the subject of high-resolution electron microscopy, but so far no one has pointed out that a national facility involving participation of several groups (Arizona, Stanford, et al.) is under consideration and has been for several years. In fact a workshop on the subject of atomic-resolution electron microscopy (ARM) was sponsored by ERDA and held at Berkeley in October of 1976. Copies of the report of this meeting are available upon request (LBL #5722).

ARM facilities are already well under way in several foreign countries—notably Japan, France, Germany and the United Kingdom. It would be absurd if the United States were not to develop such capabilities independently in the immediate future. The technology is here and the cost (approximately \$10⁷) is moderate compared to many similar projects in the basic sciences. We anticipate that in fields such as atomic and solid-state physics, chemistry, materials science and biology (although the restriction on resolution here is mainly due to irradiation damage not instrumentation) the availability of ARM will see an explosion of new scientific information sorely needed to solve many critical problems.

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11/16/77

Second-hand abstracts

For a few years recently I have been watching with anxiety the gradual change in style of *Physics Abstracts*. For quite a long time the abstracts published in PA were simply reprinted from the originals submitted by the authors together with their published papers—the only responsible way of doing this job. Lately, however, there is an increasing tendency to print second-hand abstracts, or abstracts-of-abstracts, written by hired persons. Of course I can trust that they are serious and reliable persons very carefully chosen by the editors. But to be able to read with full understanding and

abstract appropriately 10 to 20 articles every two weeks is a job that would require a giant genius.

The initials under the abstracts suggest that all the articles from one field in a particular journal are all abstracted by the same person. Usually those papers are connected only in a very wide sense (for example, all papers on general relativity) and have very little in common. One cannot expect a single man to be able to have a sufficient grasp of such a variety of problems, and so the second-hand abstracts are simply written on the basis of the authors' abstracts and convey a very superficial and insufficient understanding of the genuine content of the article. As a result, the abstracts give too little information or simply falsely represent the article. I know this from personal experience since this sort of thing happened to the abstract of my own article that appeared in *J. Math. Phys.*

I make intensive use of PA to make sure that no important paper from my field of research (theory of relativity) has been overlooked because it was published in a little known journal or hidden under a misleading title in one of the main journals. I think many other scientists do the same. To be successful in our attempts we must have full confidence in the information published by the PA. If the editors of the PA think the authors' own abstracts are too long, then the solution is very simple: produce a new instruction for the authors, and attach it to the papers that everyone obtains from editors of journals after submitting his paper. No one is able to abstract a paper more appropriately than the author himself.

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11/17/77

Character error

In our discussion of which way electron charge "flows" upon formation of interstitial compounds (September, page 34) we inadvertently listed Engel-Brewer theory as predicting Ti^+C^- ionic character for the compound TiC . It is well known^{1,2} that this theory makes the opposite prediction. We regret any confusion this error may have caused.

References

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 2. N. N. Engel, in *Development in the Structural Chemistry of Alloys* (B. C. Giessen, ed.), Plenum, New York (1969).
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10/19/77

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