

## Coordination in materials research and teaching

From Professor D. G. Tucker

Sir,—In your editorial of 10 December, you argue that a university should have a single department of materials science and suggest that the reluctance of universities to create such departments is due to the human difficulties of persuading existing departments to "merge their identities". I would suggest that you may be mistaken in thinking that a single department of materials science is desirable.

In the new universities, of course, it is permissible to try the experiment of having such a department; but in existing universities, most of us are opposed to the proliferation of departments. Moreover, very few existing departments are concerned solely with materials and most of the interest and work on materials is in engineering and science departments which are concerned at least as much with the applications as with the materials themselves. We at Birmingham are very much against the concept of a department of materials science, which in our view would become narrow or develop interests divorced from applications. The existing engineering and science departments are clearly better able to judge the needs for new materials and to discover applications for both the existing and the new. Furthermore, we doubt very much whether a satisfactory undergraduate course in materials science could be given, since the subject is too wide to permit a full coverage with reasonable depth; and to limit the coverage would be much worse than to leave things as they are.

It seems clear that what is needed in materials science and technology is coordination of effort and most certainly not isolation. There is, however, one difficulty in having materials teaching and research dispersed through several departments, even when well coordinated, and that is the impracticability of providing each department with adequate equipment of the larger and more expensive kind. It is hoped that this difficulty is being overcome at the University of Birmingham, where numerous departments are already deeply involved in such research and teaching, through the creation of a Centre for Materials Science as an

inter-departmental collaborative facility.

The Centre is having its own accommodation in a new building and is being equipped with a good range of the equipment needed for materials fabrication and research. It will have some permanent staff of its own to look after the equipment, to undertake research in new techniques, and to give certain instructional courses concerned with techniques. It has been developed and will be managed by a committee of the Faculty of Science and Engineering representing seven collaborating departments—physics, electronic and electrical engineering, physical metallurgy, chemistry, electron physics, minerals engineering, and mathematical physics.

The committee is sponsoring research projects based on collaboration between departments and the Centre, but the actual conduct of the research will be the responsibility of the departments rather than the Centre. The accommodation and main permanent equipment is being provided by the University and the UGC, but the finance for all research projects is coming, and must continue to come, from outside bodies.

It is believed that the strengthening of materials science and technology in this way will lead to much better results than the isolation of the work in a separate department.

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Chairman.

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