It was, therefore, decided to withhold full details of the discovery for 2 years, but full information would be released to any French manufacturer who intended to make use of it. . . . As it turned out, secrecy was broken within a year. . . . Bréant's paper finally appeared in the August, 1823, issue of the *Bulletin*." One may speculate that, in spite of the ability to publish, Bréant was asked only to discuss the metallurgy of his Damascus steel discovery in general terms. Thus in his papers, Bréant taught some of the metallurgy of UHC steels but may have purposely avoided teaching the detailed know-how of making a damask in such steels. In contrast, we have taught both the metallurgy and the know-how of Damascus steel-making.

We do not claim that the above discussion of our work represents a complete account of the metallurgy of Damascus swords. On the contrary, it is reasonable to speculate that many different procedures were used to obtain swords with exceptional mechanical properties. For example, steels having a composition identical to Damascus steel can be readily manufactured in such a way that no damask is present. Such steels have been shown to possess excellent formability, strength, and toughness (*1, 2, 10*). Perhaps the best of the Damascus swords, ironically, would have been those that did not possess a damask. This conclusion would be supported by modern metallurgical concepts about the influence of size, distribution, and volume fraction of hard particles on the mechanical properties of crystalline solids.

JEFFREY WADSWORTH
Lockheed Palo Alto Research Laboratories, Palo Alto, California 94304
OLEG D. SHERBY
Department of Materials Science and Engineering, Stanford University, Stanford, California 94305

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7. We were not able to find equivalent statements by Bréant in our review of his work (*6*). Smith's quotation, however, is a summary of his own teachings in 1963 on the processing of Damascus swords (*4*, p. 18). When Smith states that "duplex crystals formed by slow solidification," we believe he is of necessity considering the case for white cast iron of a composition range of between 2.1 and 4.3 percent carbon. For such compositions, eutectic carbides and austenite will be present on solidification giving the "duplex crystals." Bréant, on the other hand, considered principally UHC steels in the composition range from about 1 to 2.1 percent carbon, where no eutectic carbides will form on solidification since only a single phase (austenite) is obtained. In this case, no "duplex crystals" can appear upon solidification. The metallurgy, microstructural features, and mechanical properties of UHC steels and white cast irons are quite dissimilar [J. Wadsworth and O. D. Sherby, *Foundry Met. Treat.* **106**, 59 (1978); J. Wadsworth, L. E. Eiselstein, O. D. Sherby, *Mater. Eng. Appl.* **1**, 143 (1979).
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Synthetic Muramyl Peptides

In the article "Sleep-promoting factor isolated" (Research News, 25 June, p. 1400), Thomas H. Maugh II attributes to me the synthesis of "more than 300 muramyl peptides in a search for immunostimulants that could serve as adjuvants or potency increasers for vaccines."

The work on MDP (muramyl dipeptide) is the result of an extensive collaborative effort of several teams. The identification in 1974 of MDP as the smallest adjuvant active unit of bacterial cell walls was the result of work at the Institut de Biochimie (Université de Paris-Sud, Centre d'Orsay) by Arlette Adam, Rita Ciorbaru, Farielle Ellouz, and Jean-François Petit. The first synthesis of MDP was performed by Pierre Sinaÿ and Claude Merser at the Institut de Biochimie of the Université d'Orléans, who followed our suggestions and used a protected dipeptide prepared by Pierre Lefrancier of Laboratoires Choay, Montrouge. The synthetic muramyl dipeptide being fully active (*1*), Pierre Lefrancier, Jean Choay, and their group have, since 1974, synthesized more than 200 analogs.

The biological properties of these compounds have been extensively studied by Louis Chedid with Françoise Audibert and Monique Parant at the Pasteur Institute in Paris. For recent reviews, see (*2*).

Japanese workers Shozo Kotani and Tetsuo Shiba of Osaka and Ichiro Azuma of Sapporo have also made important contributions to this field.

EDGAR LEDERER
Laboratoire de Biochimie, Centre Nationale de la Recherche Scientifique, 91190 Gif-sur-Yvette, France, and *Institut de Biochimie, Université de Paris-Sud, Centre d'Orsay, 91450 Orsay, France*

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Nuclear Proliferation Concerns

In his discussion (Letters, 17 Sept., p. 1082) of laser isotope separation (LIS), David Albright, while bringing attention to some proliferation concerns, does not mention several important points. France is already a nuclear-weapons state, and West Germany has long had the materials and capability to manufacture nuclear weapons if it so chose. Denial of isotope-separations technology to them would add little toward nonproliferation of nuclear weapons. More to the point is that LIS knowledge should not be transferred to any of the other dozen or so nations that are at the nuclear-weapons threshold and have not agreed to international safeguards under the Non-Proliferation Treaty (NPT). Nuclear-weapons states must rigorously control their own development and export of shortcuts to fissile materials.

Albright also does not note that there are many more potential national actions and self-restraints that would be more effective than technology control in discouraging proliferation. For example, continued development, testing, production, and deployment of nuclear weapons—coupled with the absence of arms-control treaties—give nations such as India excuses for not becoming adherents to the NPT. Termination by the Reagan Administration of comprehensive test-ban negotiations and the lack of Senate ratification of the Threshold Test-Ban Treaty, the Peaceful Nuclear Explosives Treaty, and SALT II are very detrimental to nonproliferation.

A. DE VOLPI
10 B Kingery Quarter, Hinsdale, Illinois 60521

Erratum: In the report "Single-neuron labeling in the cat auditory nerve" by M. C. Liberman (11 June, p. 1239), in lines 24 and 25 of the legend to figure 2 (p. 1240), the words "CF's above 15 kHz" should have been "CF's below 15 kHz."

Erratum: In the report "Hair-cell innervation by spiral ganglion cells in adult cats" by N. Y. S. Kiang *et al.* (9 July, p. 175), in lines 14 and 17 of the legend to figure 2 (p. 176), the unit "mm" should have been "μm."

Erratum: In the article "Alternative energy futures: The case for electricity" by Umberto Colombo (20 Aug., p. 705), the label on the abscissa for figure 4 on page 708 should have read: "Increase in kWh per capita, 1972 to 1978 (%)."