

## letters

*Teaching and Learning from the Danforth Foundation. We thank Gerald Holton for the encouragement and assistance he provided in the initial phase of the program.*

### References

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9/30/77

## Delighted reader

The letters to the editor on "Kirkhoff versus Kirchhoff" in November (page 13) were as unexpected a delight as the student who asked me recently to explain "Gesundheit's Law," very carefully.

TED UZZLE

*Cambridge, Mass.*

## Soviet discrimination

We wish to protest the discriminatory practices of the Soviet Union towards Israeli scientists wishing to participate in international scientific meetings held in the USSR.

The Fourth International Meeting on Ferroelectricity (IMF-4) was held in Leningrad during 18-23 September 1977. The meeting was organized by the Academy of Sciences of the USSR under the sponsorship of the International Union of Pure and Applied Physics, the International Atomic Energy Agency, and the European Physical Society. We both had delivered papers at the Third International Meeting on Ferroelectricity in Edinburgh in 1973, and we were looking forward to participating in IMF-4. However, at every stage—soliciting information regarding the meeting; inquiring as to the status of our submitted manuscripts; attempting to obtain any entry visa to the USSR—we, and several other Israeli colleagues, encountered incredible obstacles, which ultimately led to our being unable to attend the meeting. Our individual experiences were as follows:

**Sidney B. Lang:** The abstract of a paper

was submitted on 29 March 1977 to G. Smolensky, Chairman of IMF-4 in Leningrad. Receipt of abstract was never acknowledged, nor was information sent regarding the status of the paper. After seeking the assistance of W. Cochran (University of Edinburgh) and W. J. Merz (RCA, Zurich), we received a letter from Cochran, dated 30 June 1977, stating that he had received a cable from Smolensky that the papers of Lang and Havlin had been accepted. Because of the impossibility of an Israeli receiving a visa to the USSR without first travelling to Western Europe, and lacking any official documentation from the organizing committee that could be used in requesting a visa from Soviet embassies in Europe, Lang was forced to withdraw his paper on 25 August 1977. On 16 September 1977, two days before the meeting opened in Leningrad, Lang received the "Second Circular" about the meeting, mailed from Romania on 30 August 1977. This circular bore no date, but it specified a number of deadlines between 30 April and 18 June 1977! It apparently was sent to the non-Israeli participants early in 1977.

**Shlomo Havlin:** The abstract of a paper was submitted on 7 February 1977 to Smolensky. As in the case of Lang, acknowledgement of the receipt of the abstract, as well as a response to previous letters requesting information regarding IMF-4, was not received. On 8 July 1977 the secretary general of IUPAP, in response to requests for assistance by the Israel Physical Society, cabled that Havlin's paper was included in the meeting program, and that he need only apply to Intourist for an entry visa. On 9 August 1977, Havlin arrived in Paris and on the same day began the procedure for a visa at the local Intourist representatives. For five weeks Havlin waited in the hope of receiving an entry visa. At every visit to the office of the Intourist representatives as well as to the Soviet embassy, he was assured that "tomorrow" his visa would be issued and there was no basis for concern. All that was issued was confirmation from Intourist at the end of August of a hotel reservation in Leningrad. Havlin had also informed the Soviet officials that he wished to leave Paris for Leningrad no later than 8 September. The seemingly sincere promise that the visa would surely be forthcoming led Havlin to remain in Paris beyond that date and during the last week he went to the embassy daily. On 11 September, with no visa yet available, Havlin finally realized that there was no further point in continuing his futile battle and he left Paris. Although the organizers of the Leningrad Meeting had made firm promises to IUPAP, to Cochran, and to Merz, the Soviet authorities refused to issue a visa.

From our experiences, it is obvious that

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## letters

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Israeli attendance at this international meeting was prevented by the Soviet Union.

We suggest the following to our fellow physicists and to the officials of physics organizations:

International organizations should not sponsor meetings in the USSR without firm guarantees from the Soviet government that these meetings will be open to citizens of all nations without exception. Promises from Soviet organizing committees should not be accepted in lieu of official Soviet government commitments. Scientists should write to the officers of the physics organizations to which they belong, demanding that this principle be strictly adhered to.

Scientists should refuse to attend meetings in the USSR unless they are certain the Soviet government has, in fact, guaranteed that the meetings will be open to citizens of all nations without exception.

Letters should be written to the Soviet organizers of IMF-4 protesting the discrimination that was practiced towards Israeli scientists. The organizers were: Chairman:

Professor G. Smolensky  
A. F. Ioffe Physico-Technical Institute

Academy of Sciences of the USSR  
Leningrad, 194021  
USSR

Vice-Chairman:

Professors L. Shuvalov and I. Zheludev

Institute of Crystallography  
Academy of Sciences of the USSR  
Moscow, 117333  
USSR

We believe that the holding of meetings without firm adherence to the above principles is totally incompatible with the international character of science and scientific research.

SIDNEY B. LANG

Ben-Gurion University of the Negev

Beersheva, Israel

SHLOMO HAVLIN

Bar-Ilan University

Ramat-Gan, Israel

11/21/77

## Gamma detectors

The November issue (page 50) contains an article on germanium gamma-ray detectors by Richard Pehl, which I read with some interest. Since it was contained in an issue devoted to the progress in photon counting in general, I was somewhat taken aback by what I thought was an exceedingly glib treatment of other compound semiconductor gamma-ray detector materials (CdTe, HgI<sub>2</sub>, GaAs) that have recently been worked on.

I don't think that a "considerable effort" has been expended on any one of them—at least not over any significant period of time. Whenever a considerable effort was supported for a short time (as for instance for CdTe from 1968 to 1972) considerable progress was indeed made, and HgI<sub>2</sub> has made great strides recently with only the most marginal support.

I assume it is not Pehl's intention though to disparage these efforts; but his way of presenting the facts might well lead to the conclusion that any support for the development of high-Z compound semiconductors is quite useless. I, as a materials scientist, do however not wish to let this impression stand; during my association with the detector field I unfortunately discovered that the people using the detectors had often very little appreciation for the very difficult basic work of the materials people or indeed the amount of sustained support needed for progress in such areas as synthesis, crystal growth, trap control and even contacting.

That lack of appreciation led to an expectation of fast progress in a short time at very low levels of financial support and ultimately to frustration and essential abandonment of practically all detector materials development by the AEC and subsequently ERDA, and thus made the self-fulfilling prophecy that Pehl repeats in his article inevitable.

F. V. WALD

Mobil Tyco Solar Energy Corporation  
11/23/77  
Waltham, Massachusetts

**THE AUTHOR COMMENTS:** I regret any impression produced by my paper that high-Z detector materials should not be supported. However, with the concurrence of the editor of PHYSICS TODAY, the main discussion in my paper was directed toward gamma-ray spectroscopy and the requirement for excellent energy resolution was implied. In my view, it is extremely unlikely that the compound semiconductors will ever satisfy this requirement. For those readers desiring a detailed explanation of why this situation prevails, I recommend the excellent paper by G. A. Armantrout, *et al.*<sup>1</sup>

However, a significant relaxation of the energy resolution requirement may allow the use of high-Z detector materials, particularly if their band gap is large enough to permit room-temperature operation. This is especially true for lower photon energies. Many radiation monitoring applications may be satisfied by such materials.

## Reference

1. G. A. Armantrout, S. P. Swierkowski, J. W. Sherohman, J. H. Yee, IEEE Trans. Nucl. Sci. **NS-24**, 121 (1977).

RICHARD PEHL  
University of California  
Berkeley, California □

12/21/77