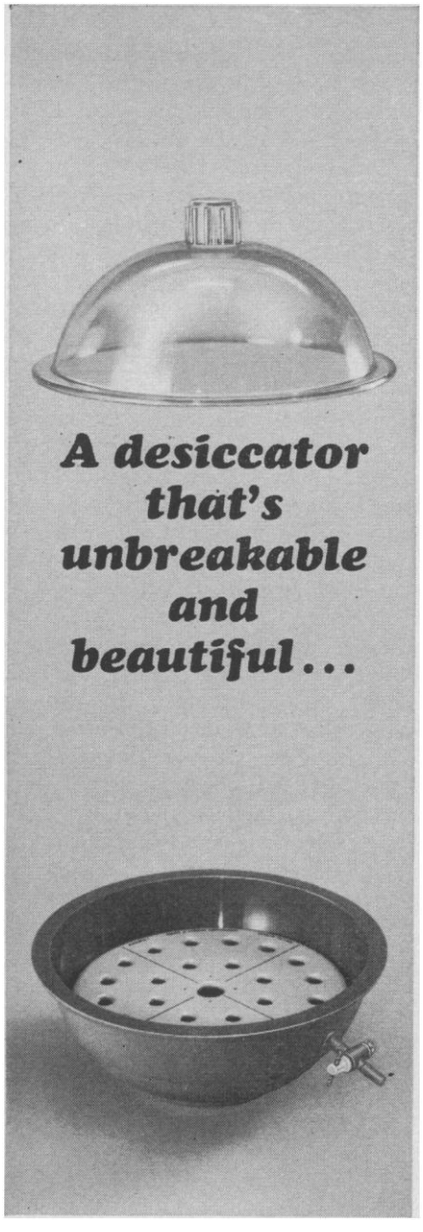

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Electroluminescence Seen in 1907

H. C. Gatos in "Electronic materials and applications" (11 Apr., p. 137) states that "Electroluminescence was discovered in 1937, 10 years before the transistor." Electroluminescence in zinc sulfide was first observed by G. Destriau (*1*) in 1936 (*2–4*), not 1937. However, it has been known for a long time that electroluminescence in silicon carbide (also referred to by Gatos) had been seen as early as 1923 by Lossew (*5*). Furthermore, I recently reported (*6*) that similar observations on silicon carbide were made as long ago as 1907 by Round (*7*). Electroluminescence thus predates the transistor by 40 years, not a mere 10 years.

I would also like at this time to correct a misleading statement made in my reference 6. At the time Round published his results on silicon carbide, he was residing in New York City as stated. However, it has been pointed out to me (by P. C. Newman of Northampton, England) that Round was an English citizen and one of the pioneers of "wireless" in that country. Furthermore, in 1966 he was still alive and had attained the age of 85.

HENRY F. IVEY
Westinghouse Electric Corporation,
Churchill Boro.,
Pittsburgh, Pennsylvania 15235

References

1. G. Destriau, *J. Chim. Phys.* **33**, 587 (1936), **34**, 117 (1937); *Trans. Faraday Soc.* **35**, 227 (1939).
2. ——— and H. F. Ivey, *Proc. IRE* (*Inst. Radio Engrs.*) **43**, 1911 (1955).
3. H. F. Ivey, *J. Electrochem. Soc.* **104**, 740 (1957).
4. ———, *Electroluminescence and Related Effects* (Academic Press, New York, 1963).
5. O. W. Lossew, *Telegrafia i Telefonia*, No. 18, 61 (1923); *Wireless World* **15**, 93 (1924); *Phil. Mag.* **6**, 1024 (1928).
6. H. F. Ivey, *J. Electrochem. Soc.* **113**, 140C (1966); *IEEE Spectrum* (June 1966), p. 146.
7. H. J. Round, *Elec. World* **49**, 308 (1907).

Relevance of Research to Students

In general, I find myself in strong agreement with Stephen J. Tonsor's speech of 1 April to the education committee of the National Association of Manufacturers which was endorsed by President Nixon (*1*). In particular, his proposal that the student exercise the choice in the placement of the funds supporting his or her education is the strongest possible reinforcement of diversification and, ultimately, relevance of an education.

However, I strongly disagree with

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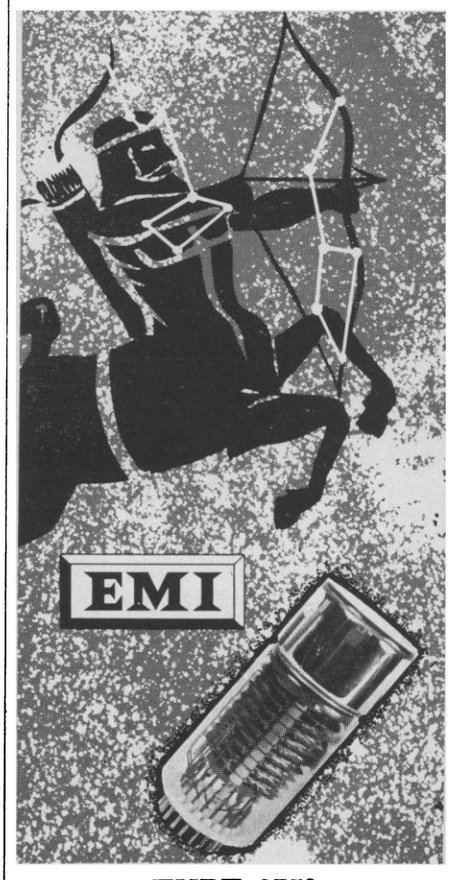

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his general condemnation of research at universities. He contends that research leads to disengagement between students and faculty as if the only engagement is the classroom relationship. This is a mistake—both the implication that the only relevant engagement should be the classroom and, most important, that university faculty and administration should allow research to grow without ensuring a major and relevant relationship with students. The tragedy and mistake is that universities have allowed research to grow without demanding and ensuring a continuing student, and particularly undergraduate student, involvement. This involvement should take the form of part-time jobs—recognizing and forcing cognizance of the necessary so-called "inefficiency." Indeed, part-time student help requires considerably more time and effort on the part of the faculty member, but this is just the so-called inefficiency that should, and must, be demanded. Undergraduate student employment in research at New Mexico Tech (60 percent of all undergraduate students) goes a long way toward achieving the student-faculty involvement that is so desperately needed at this time.

STIRLING A. COLGATE
New Mexico Institute of Mining and Technology, Socorro 87801

Reference

1. For partial text, see *Chronicle of Higher Education* (1424 16th St., Washington, D.C., 5 May 1969), p. 3.

Misinterpretation

A policy of not replying to reviews is overridden in this case by unwillingness to let obviously false statements stand. In his review (9 May, p. 697) of my *Languages of Art*, Rudolph Arnheim writes: "This neatness entices Goodman to assert that a work of music is its score, just as he believes that a work of literature is its text." I quote from page 210 of my book: "Thus in the different arts a work is differently localized. . . . In music, the work is the class of performances compliant with a character. In literature, the work is the character itself."

The quality of the review may be judged from this sample.

NELSON GOODMAN
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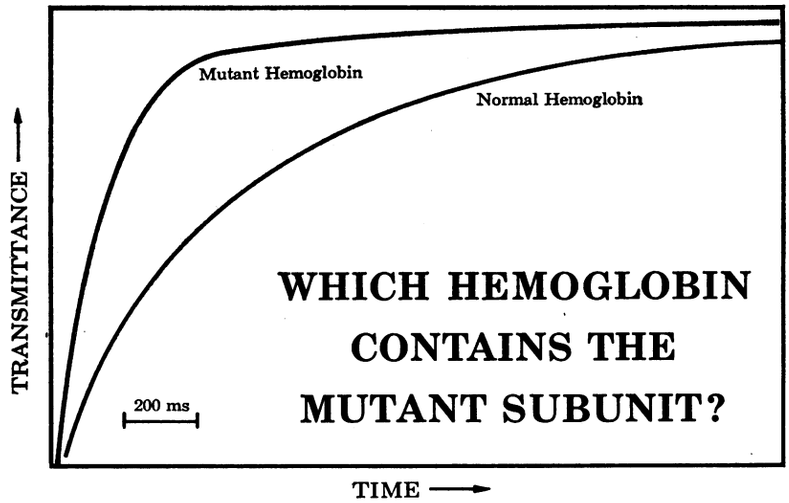
CHEMICAL PROFILES ... drawn by Durrum



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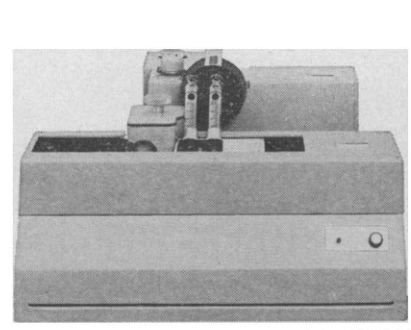

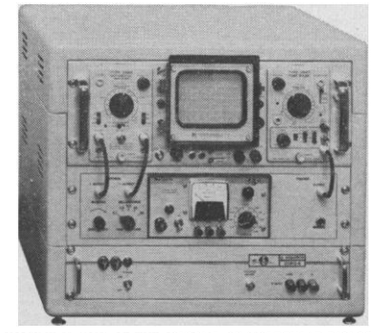

*AS REPORTED BY HENRY F. EPSTEIN AND LUBERT STRYER IN VOLUME 32 (1968) OF THE JOURNAL OF MOLECULAR BIOLOGY.

DURRUM

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