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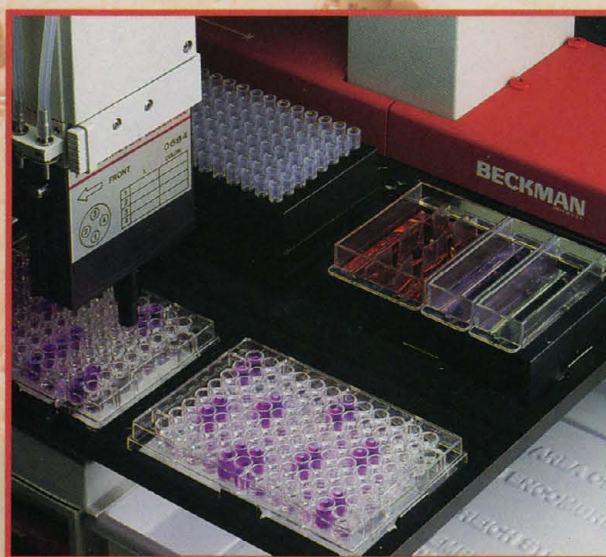
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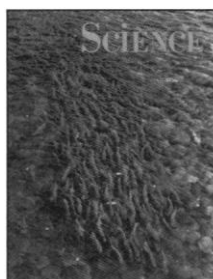
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COVER Sockeye salmon, among the most economically important fish species in the world, migrating from their ocean feeding grounds to spawn and die in freshwater (Adams River, British Columbia). Relative aquatic productivity of oceans and freshwaters has probably played an important role in the evolution of such spectacular movements by fishes. See page 1291. [Photograph by Marj Trim, courtesy of the Department of Fisheries Canada and Douglas & McIntyre Ltd.]

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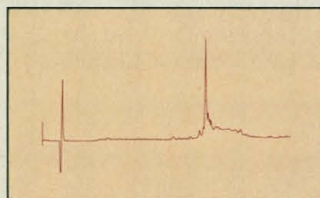
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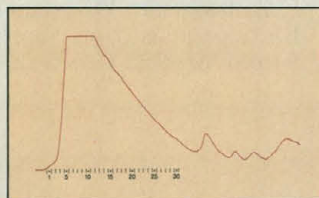
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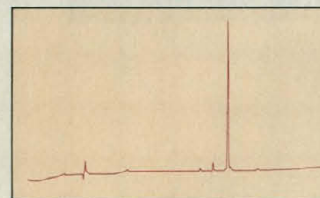
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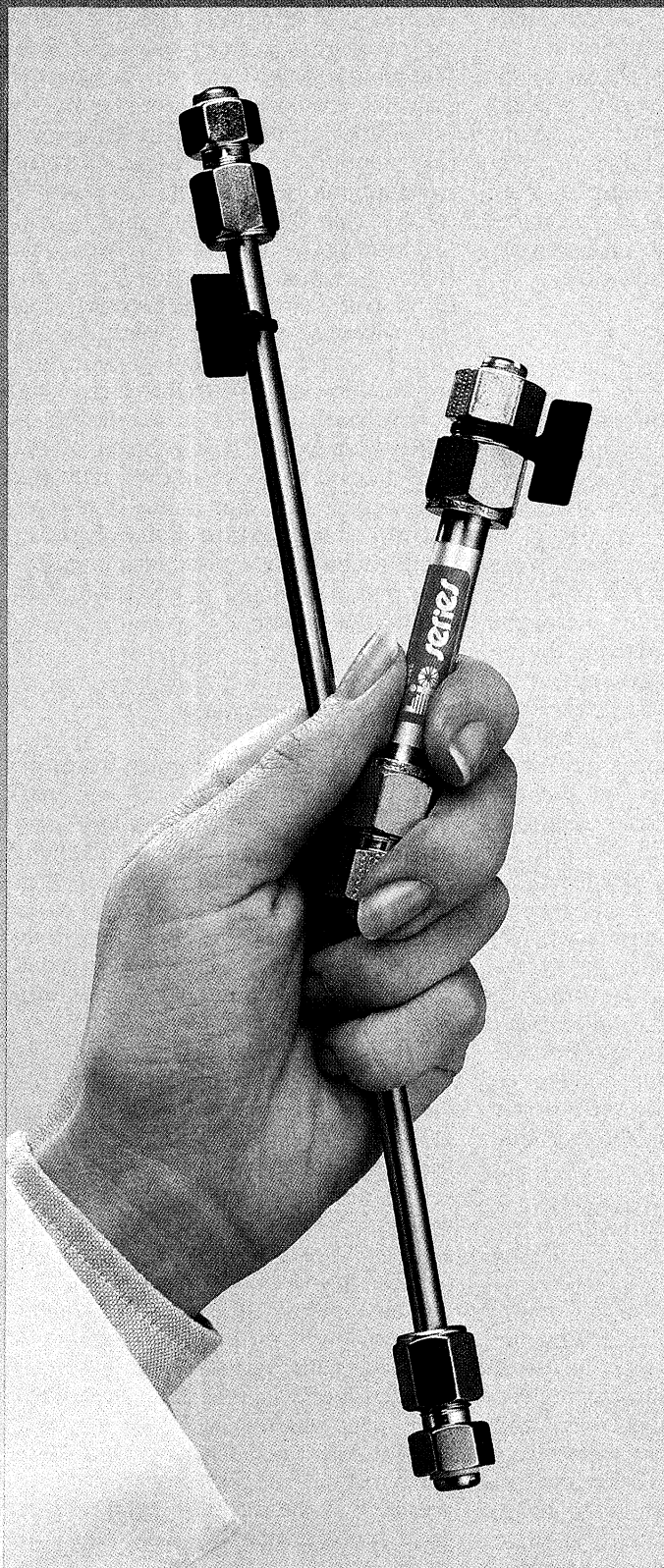
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Judicial Impact Statements

A judge in San Francisco set a \$1-billion bail on a petty offender because she had failed to appear at three appointed court trials. The reason for the absences turned out to be that another judge had decided the jail was too crowded and had ordered the sheriff to release the least dangerous inmates, one of whom was this offender. Nothing illustrates more clearly the chaos in our legal system. Judges and juries are often like the blind men and the elephant, deciding individual cases on narrow grounds.

A revealing social and legal experiment was carried out when the Oakland football team decided to move to Los Angeles, a move welcomed by the southern half of the state and opposed by the northern half. Eight lawsuits were initiated, four in northern California and four in southern California, all subject to the same state laws. Interestingly, in the four northern California cases, the side opposing the move prevailed, while in the four southern California cases, those in favor of the move won. This situation illustrates a problem that is a hallmark of the legal decisions of our times: law has become so complicated that there is almost always a technical flaw or a distant precedent that can allow any decision. In a more recent example a judge who was against capital punishment found technical errors in 90 different trials, in each case invalidating a death penalty decision.

Our society is fast becoming a nation of men and not of laws. While one might argue that "it all evens out in the end," some predictability is what is needed if one is to patent an invention, manufacture a new chemical, or create a new industry.

If judges and juries cannot resolve objectively cases involving crowded jails or the relocation of a football team, which do not require technical expertise, how can they judge cases involving complex scientific issues such as toxic waste disposal, genetic engineering, or nuclear power, in which both common sense and technical expertise are required?

To cope with complex problems requiring technology, society has developed organizations such as the Nuclear Regulatory Commission, the Environmental Protection Agency, and the Food and Drug Administration. These agencies, while not perfect, are staffed by individuals who are at least conversant with the technological ambiguities facing them. Yet today they are more and more often overruled in lawsuits in which some party seeks to overturn or delay implementation of their decisions on the basis of minor legal technicalities. Often the original ruling is reinstated after seemingly interminable delays. Society can no longer afford this kind of second-guessing and the lengthy progression of appeals to higher and higher courts.

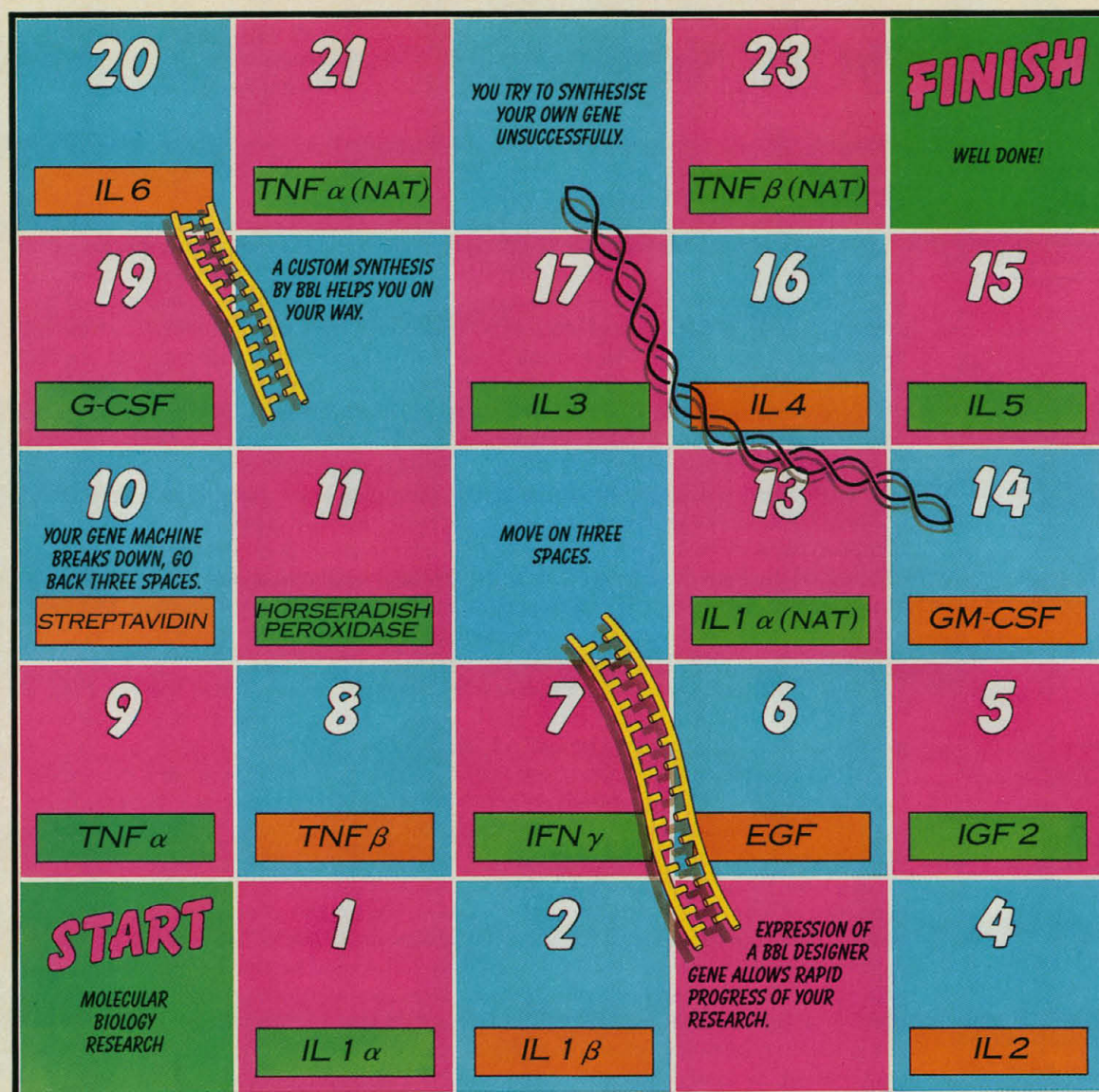
What should be done? The laws currently require those constructing a building, altering a highway, or erecting a dam to prepare an environmental impact statement showing that they have thought through the consequences of the project. The analogy in the judicial process would be a judicial impact statement, which would put the onus on the judge or the jury that overrules an agency or commission to demonstrate appropriate expertise in the field and awareness of the consequences of the judgment. For example, before the field trial of an engineered microbe that has been cleared by all appropriate agencies could be delayed, an understanding of the consequences of further delay, ability to detect faulty logic in the commission's ruling, and possession of the basic scientific knowledge needed to justify the decision and evaluate its consequences would have to be demonstrated.

Such requirements have the advantage that they would discourage but not prevent a proper legal action based on solid grounds and good logic. Commissions should never have absolute power, but a general acceptance that commission rulings are hard to overturn would place more of a spotlight on these commissions and increase the quality of their judgments. Knowing that one is to be second-guessed is an excuse for sloppiness and alibis such as, "This decision is not going to be final, anyway."

There are those in the present society who are delighted that liberal judges appointed by previous administrations are providing a brake on the decisions of a conservative government. They may not be so happy when the judges appointed by a conservative administration begin to nullify the effects of a future liberal government. Judicial impact statements would elevate the standard of decision-making and remind everyone that fairness to all and efficiency of implementation operate best when laws are applied in a predictable manner.

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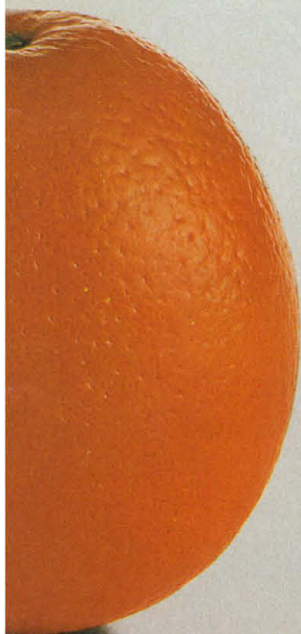
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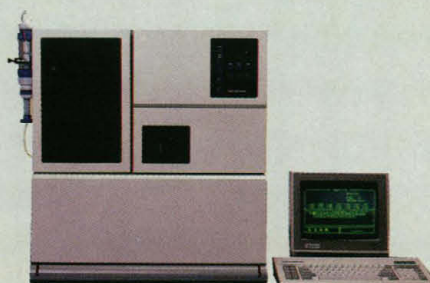
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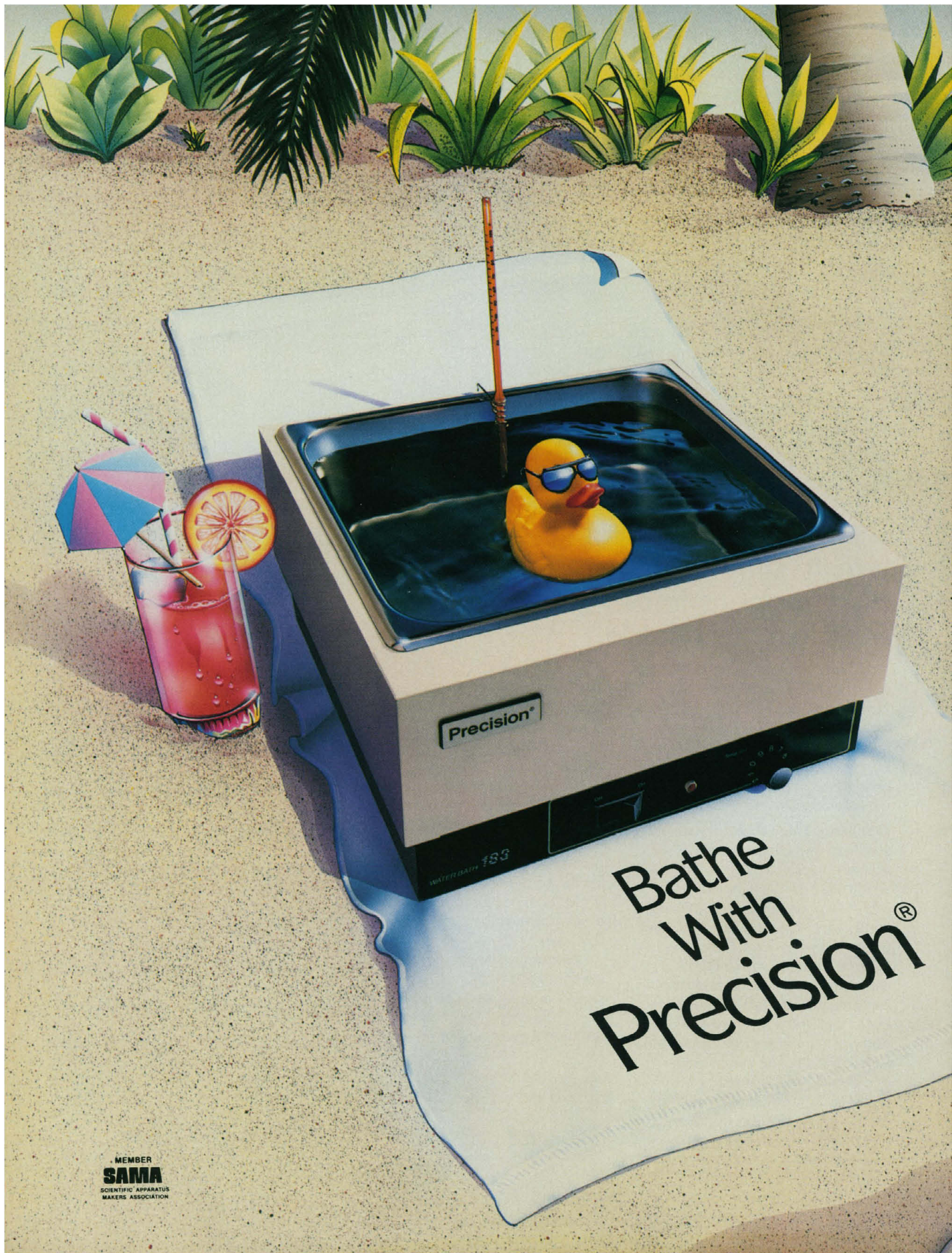
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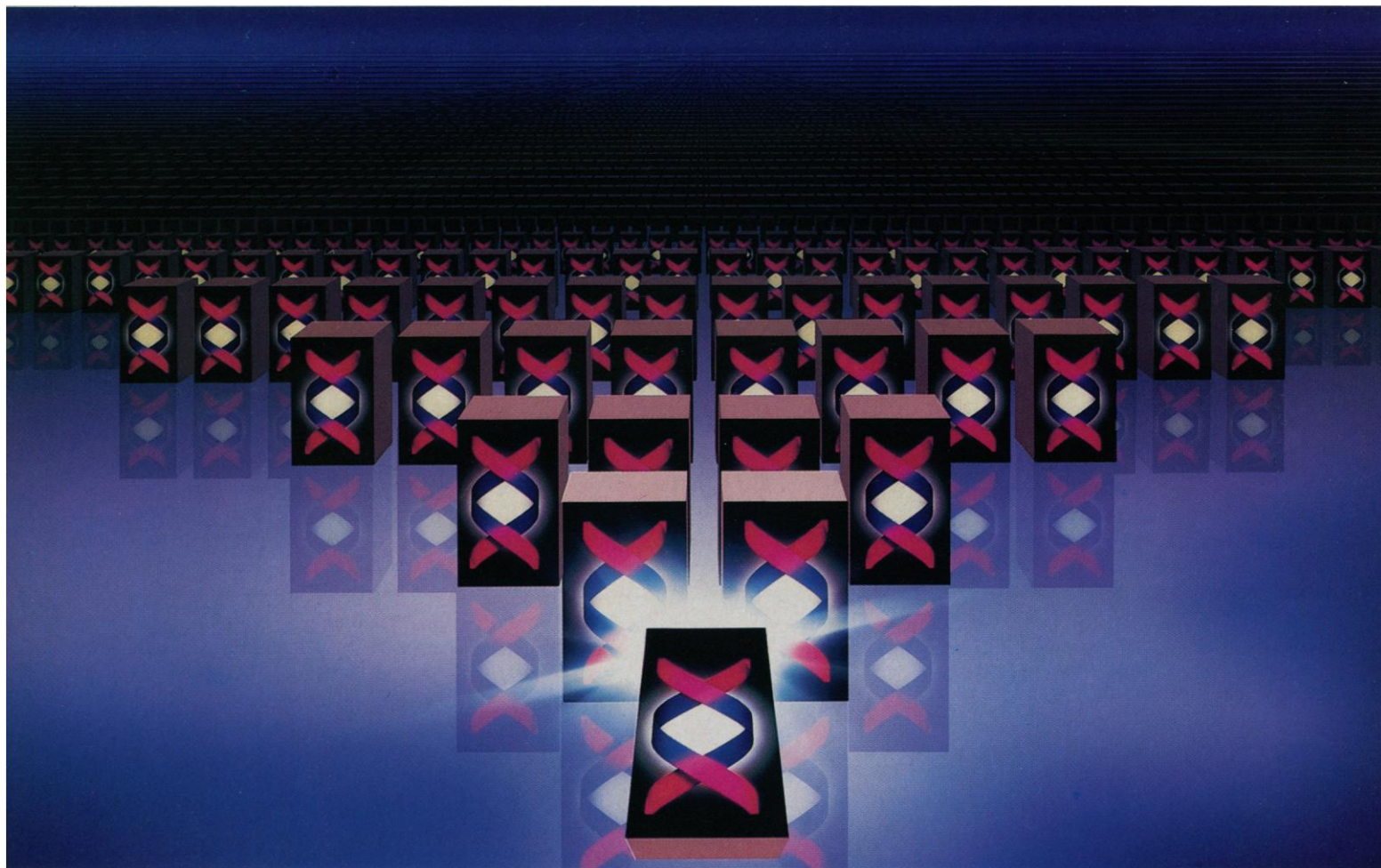
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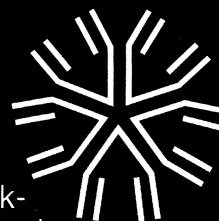
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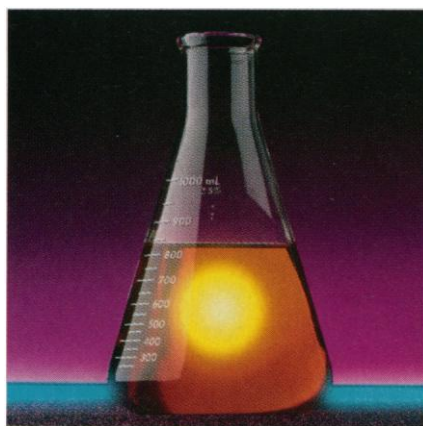
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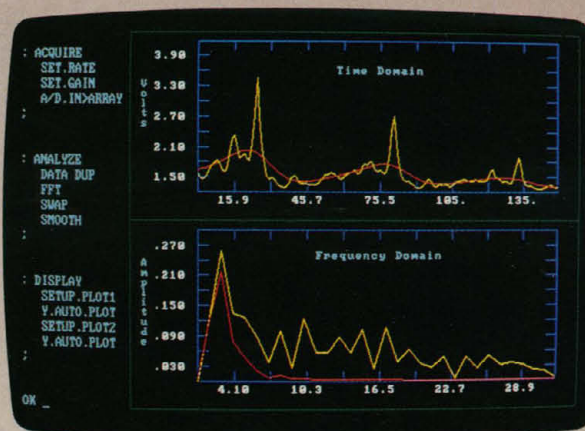
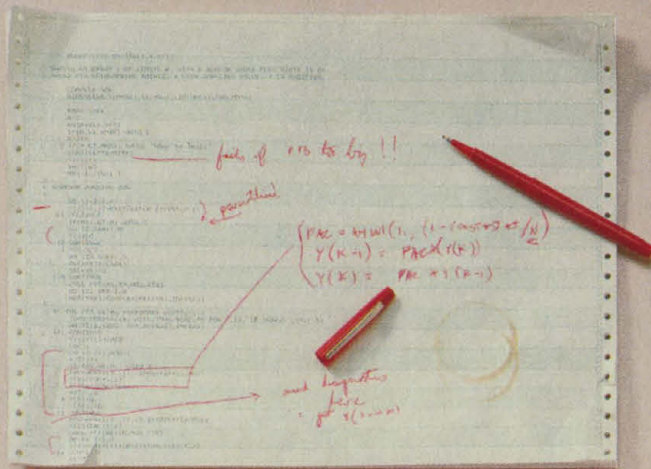
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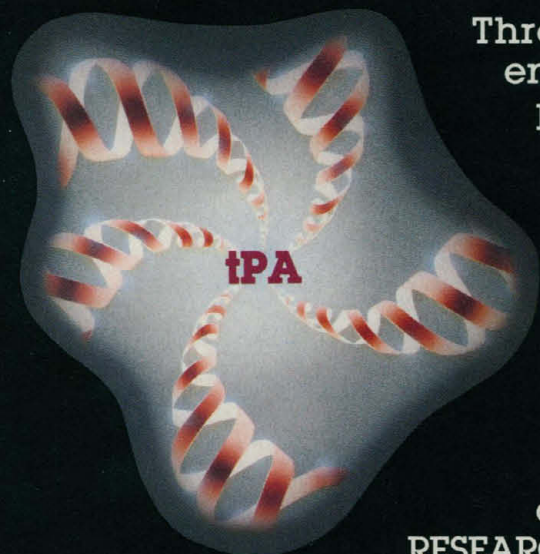
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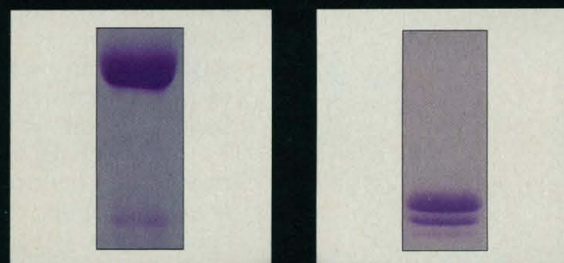
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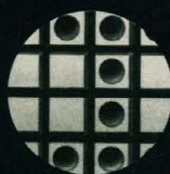
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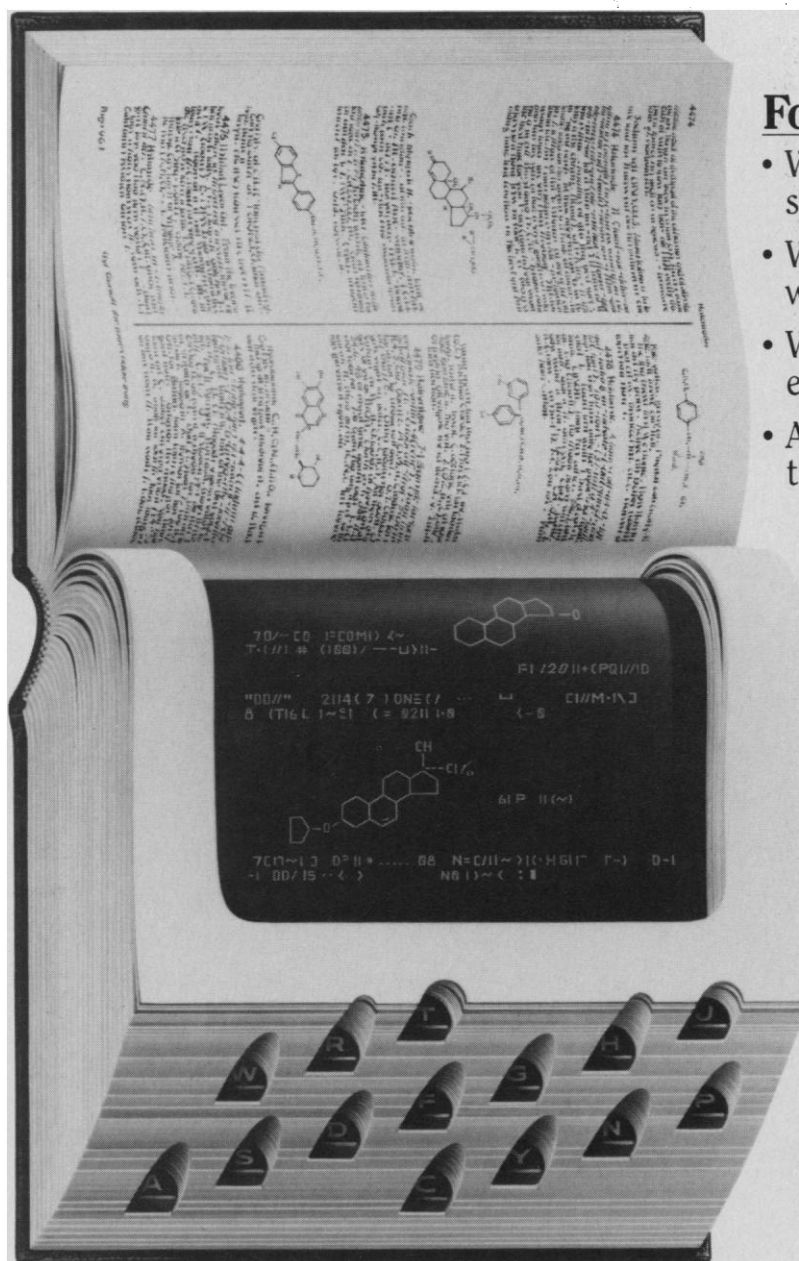
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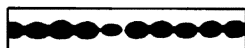


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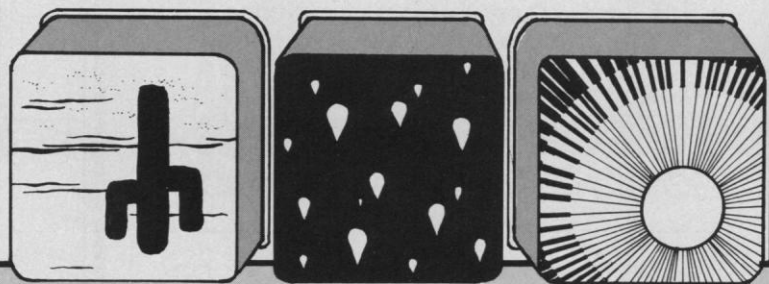
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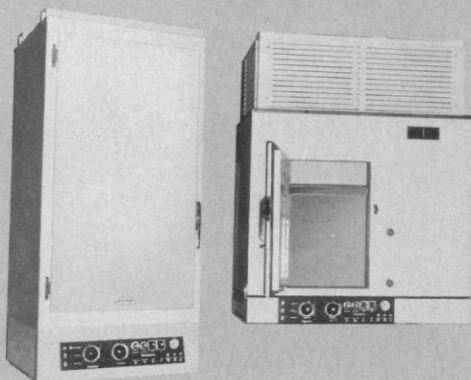
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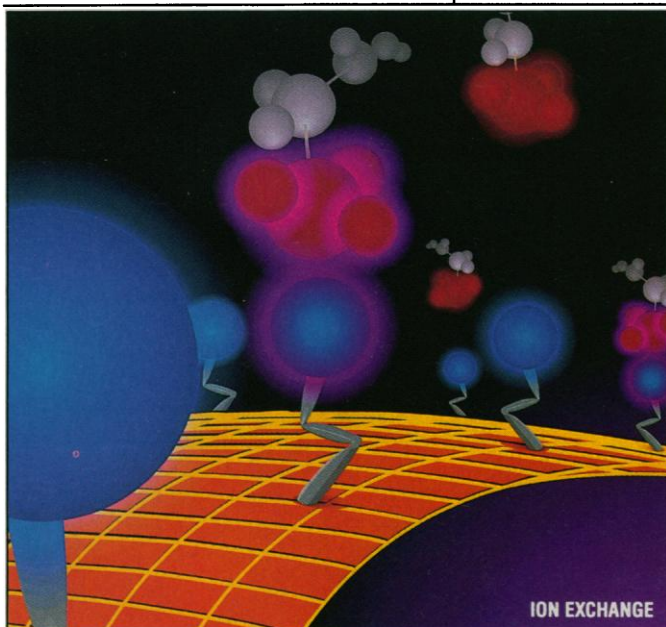
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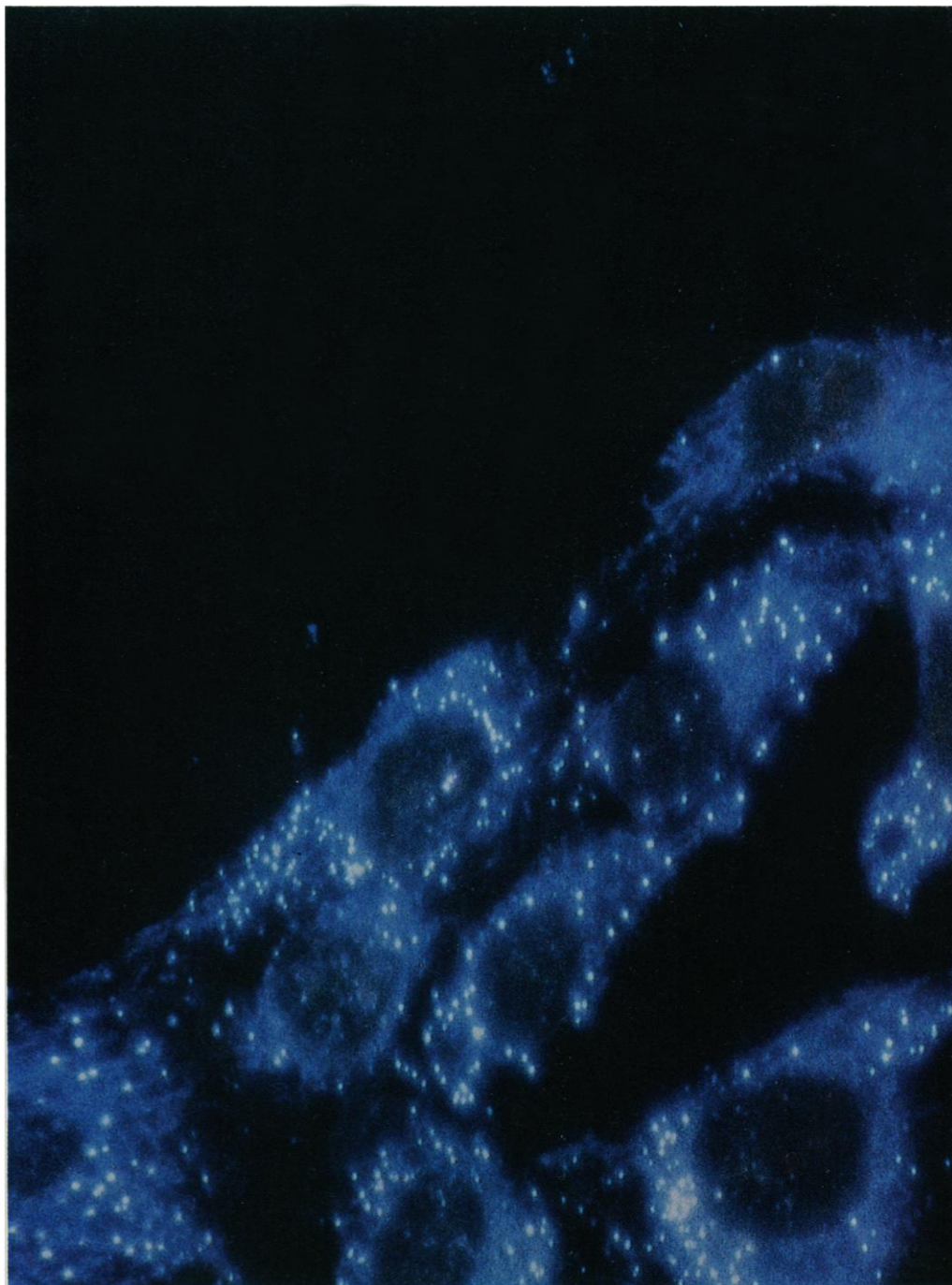
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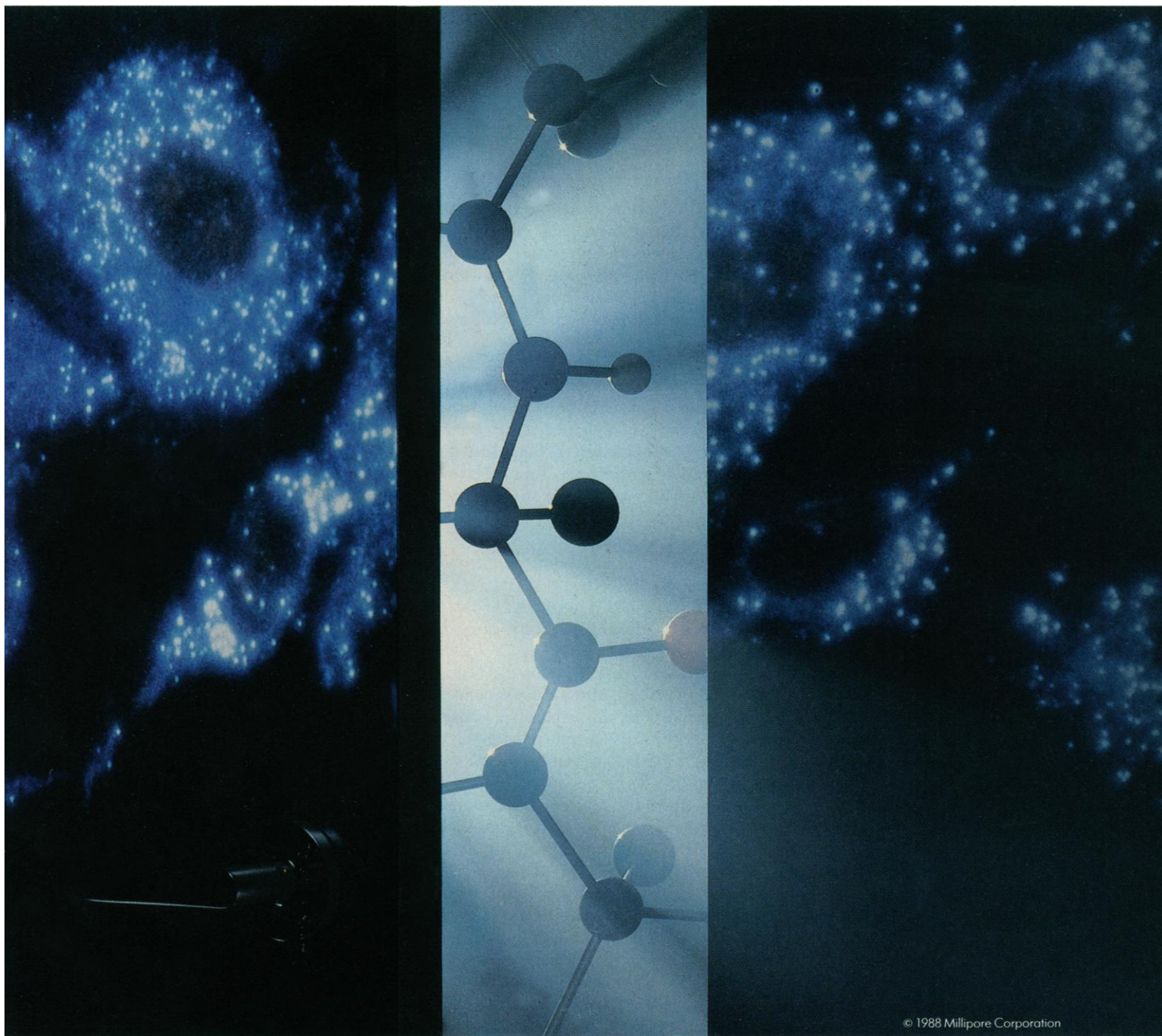
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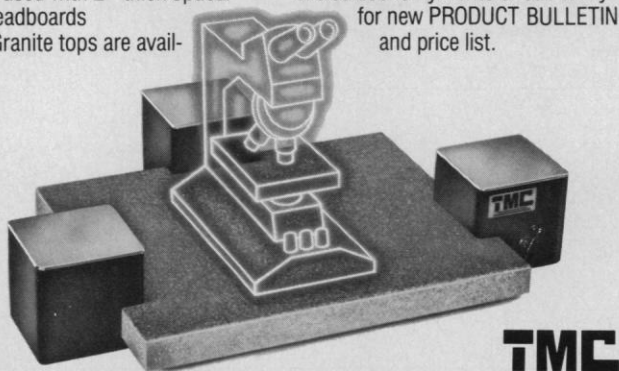
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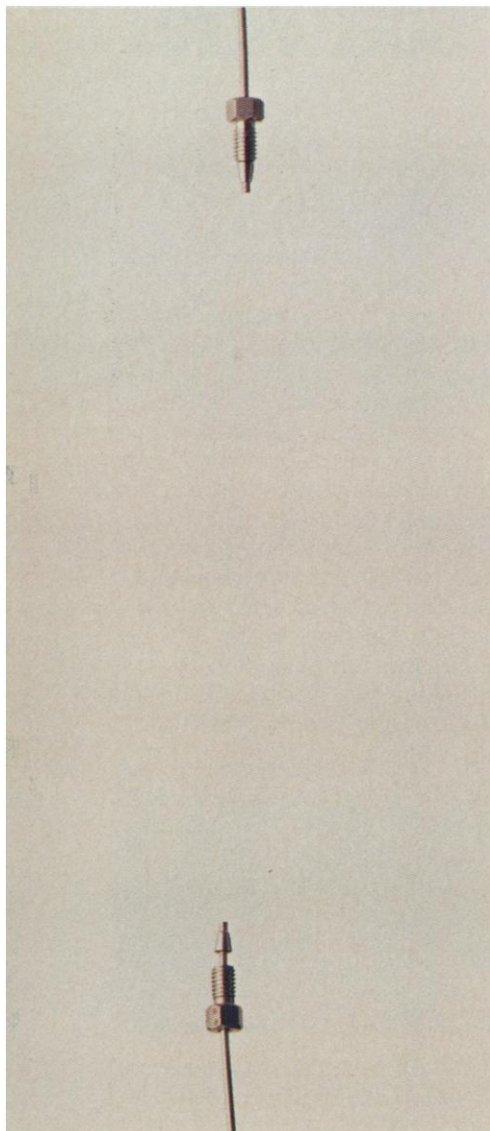
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Christof Koch	<i>Neural Networks and VLSI Chips</i>
David Rumelhart	<i>Parallel Distributed Processing</i>
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David Van Essen	<i>Visual System Models</i>
Fred Guedry	<i>Vestibular Systems Overview</i>
Charles Oman	<i>Semicircular Canal Biophysics</i>
A.J. Hudspeth	<i>Transduction in Hair Cells</i>
Manning Correia	<i>Peripheral Vestibular Synaptic Function</i>
Jay Goldberg	<i>Neural Coding</i>
Stephen Highstein	<i>Comparative Aspects of Vestibular Projections</i>
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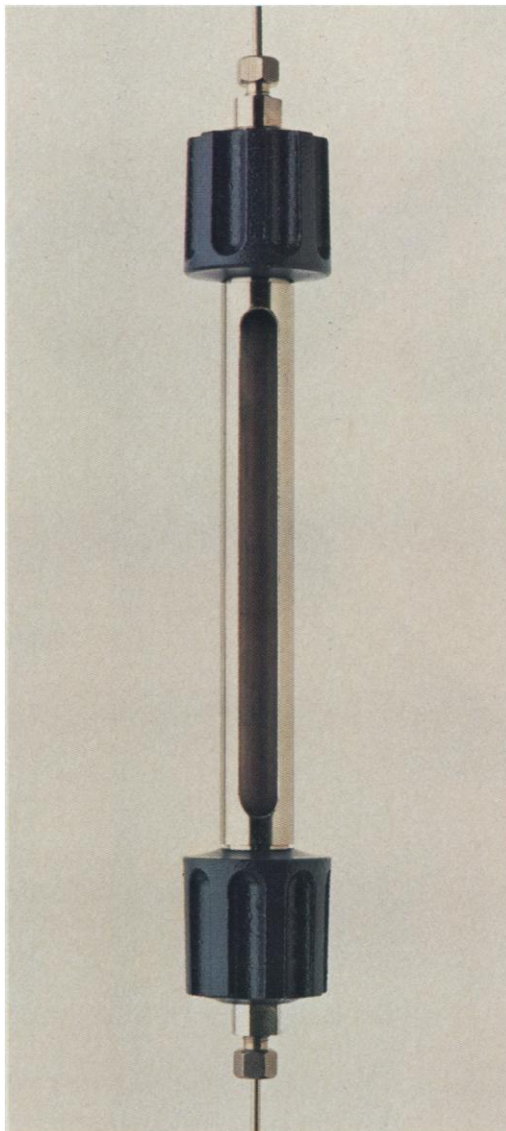
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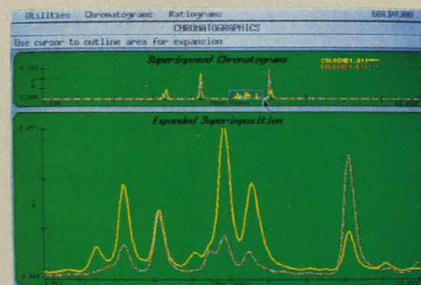
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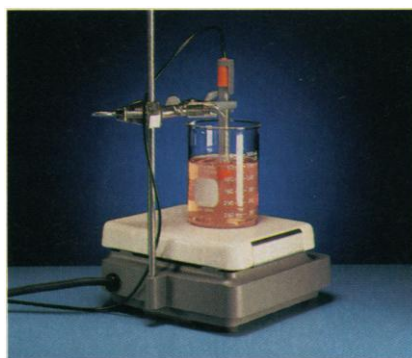
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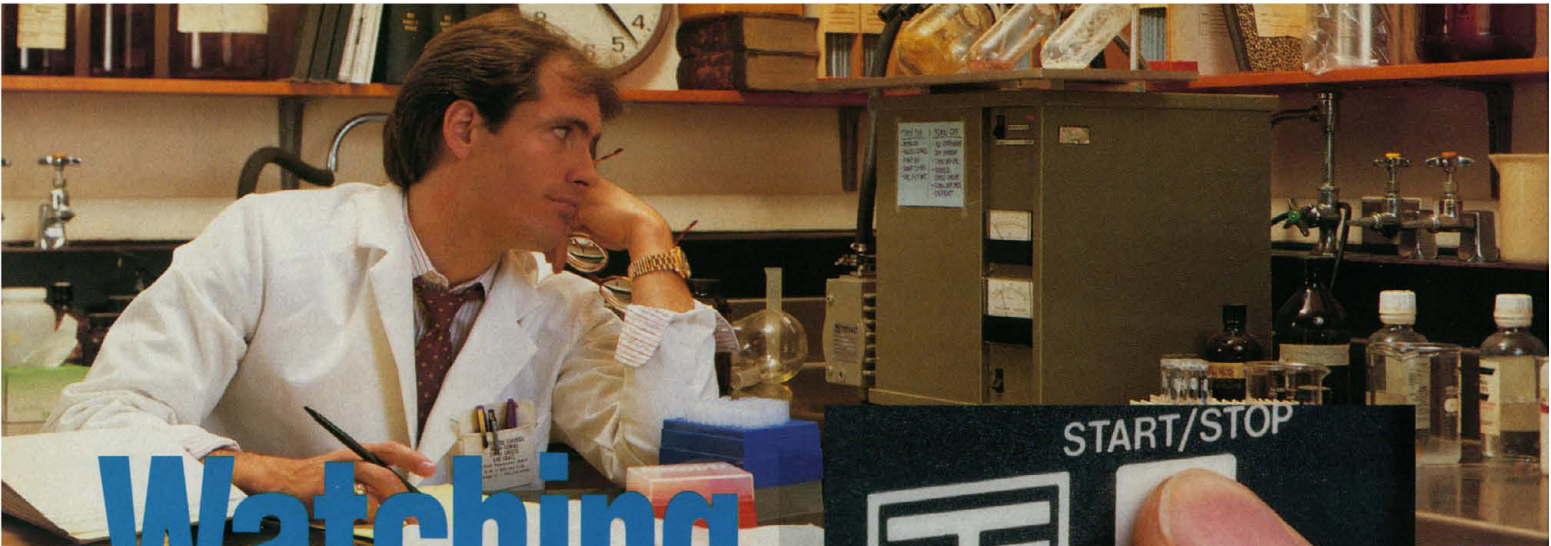
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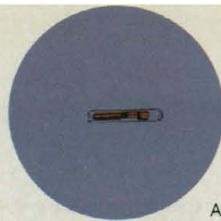


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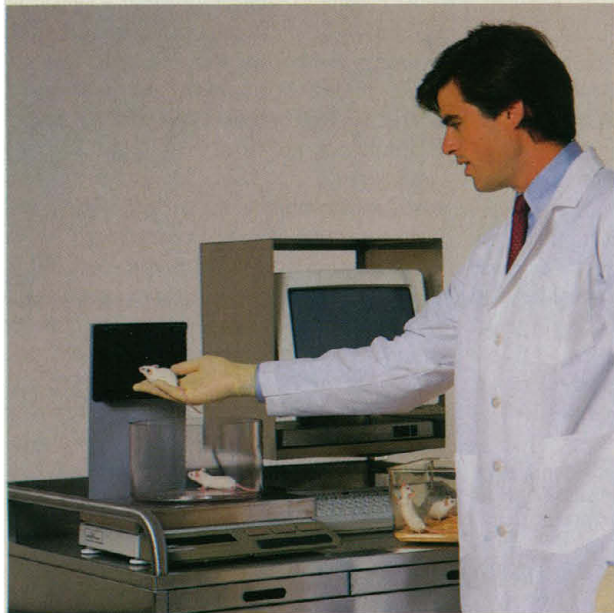
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