Over 25 years ago LKB was designing and building instruments for nuclear research. In fact, one of the earliest instruments developed for advanced work in the nuclear field was LKB’s 200 million electron-volt synchrocyclotron, installed at Uppsala University in 1947.

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A verbal montage of the state of science in the 70's

"Science is a constantly changing series of approximations," a scientist-philosopher pointed out.

Thus, each of the 36 interviews between scientists and journalists is a snapshot of a particular science at a particular time. But, summed up, these interviews offer a verbal montage of the state of science in the early seventies: progress in genetics, the difficulties of finding technological answers to natural disasters such as earthquakes, volcanoes, and hurricanes; the pulsating need to explore the worlds beyond—Mars, cosmic puzzles such as pulsars, the oceans. We continue to probe ourselves—the basis of our violent behavior, our evolution, the nurturing of our young...

Each of these interviews—like fragments of a jigsaw puzzle—tells little. Assembled, they give a panorama of science that is revealing of its depth, its breadth, and its dynamic state.

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This dye can now be ordered as EASTMAN 14014.* A report in *Nature New Biology* 241: 159 (1973) tells how a group at Yale stained giant axon from squid with it, illuminated at 540 nm, and recorded fluorescence redward of 590 nm in response to electrical stimuli. The fluorescence lagged the action potential by less than 50 μsec. With good linearity found between the fluorescence intensity and the potential as measured with an internal electrode in the axon, optimism is expressed that electrodes may no longer be needed to pick up membrane potential spikes. We hope this is no flash in the pan.

**What happened**

Contact was initiated by L. B. Cohen, Department of Physiology, Yale University School of Medicine. He had heard that at the Kodak Research Laboratories new dye molecules are constantly being designed and constructed. According to the tales one hears, we have been putting together a few new dyes each working day for the past 50 years. Suspecting that such tales are not altogether apocryphal, Cohen told the Kodak Research Laboratories what he wanted a dye to do and asked that it be provided to him. Just like that.

Inexplicably, a warm, cordial letter informing Doctor Cohen that the Laboratories do not operate that way failed to go out. Instead, our D. W. Heseltine, a leading molecular architect, found himself contemplating Cohen's request. To which he responded thus:

```
\[
\begin{align*}
\text{O} & \quad \text{(CH}_2\text{)}_3 \quad \text{O} \\
\text{C} & \quad \text{CH} \quad \text{CH} \quad \text{CH} \quad \text{CH} \\
\text{S} & \quad \text{C} \\
\text{Na} & \quad \text{(CH}_2\text{)}_3 \quad \text{CH} \\
\end{align*}
\]
```

Just like that. Zap. Call it Merocyanine 540. After a decent interval, dark crystals of Merocyanine 540 arrived in New Haven, where Cohen in company with H. V. Davila, B. M. Salzberg, and A. S. Waggoner got it into their seawater at a final dye concentration of 0.05 mg/ml, with 1% ethanol and 0.025% surfactant polyol.

There is reason to brag. The spike of intensity increase above resting fluorescence is five times larger than the authors had seen with any of over 150 dyes before Merocyanine 540. There is also reason to be modest: that great spike represents a change in resting fluorescence of about one part in 10^5. Perhaps if Heseltine had worked harder, that 10^5 might have been 10^2, or 5% or even 20%. The thought nags.

Perhaps a better fluorochrome than Merocyanine 540 might turn up in a large paper bag of hundreds of little vials of dye samples from Heseltine's shelves. Reasons why a business executive, accountant, or lawyer might turn down a neurophysiologist's request for such a bag would not be well understood by the neurophysiologist. For screening at the seashore by the great axon of *Loligo pealii*, Cohen et al want many more dyes than the mere 15 Heseltine sent after Merocyanine 540. None of them was as good. Like Merocyanine 540, they had been designed for another purpose. Now the purposes of the neurophysiological laboratory interest Heseltine.

Since long before molecular biology turned on the light of fluorescence to see by, we have been marketing biological stains. With changes in the textile-dye industry, we have had to start making many a dye that we formerly were able to buy and have certified for laboratory use. As a result, quality is up. We do seek opportunity to put our competence with dyes at the service of the life scientist. Inquiries should impart nothing confidential, should be directed to G. S. Grau, Dept. 742B, Kodak, Rochester, N. Y. 14650 (not to the Kodak Research Laboratories!), and might say something like, "Your EASTMAN XXXXX is fine as far as it goes, but what I and my buddies really want to buy for money is [ ]"

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*From a lab supply house, or at $38.50 for 1 g from Kodak, Organic Chemical Sales, Rochester, N. Y. 14650. Price subject to change without notice.*