# SCIENCE NEWS LETTER



THE WEEKLY SUMMARY OF CURRENT SCIENCE



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# Kodak reports on:

nobility from Stuttgart...cheating one's biographer of a little color...the answers an infrared photoresistor buyer is expected to know

### If only you needed a camera



From our Stuttgart factory we are now importing these *Kodak Retina Reflex Cameras*. They sell for \$215 with the basic 50mm f/2 Retina Xenon-C 6-element coated lens. Interchangeable 6-element components are available to provide a focal length of 35mm for wide angle or 80mm for telephoto work. There must be a good reason why noble optical equipment should be named after a noble gas. German engineers never do anything illogical.

With f/2 and the remarkable film sensitivity now obtainable, surprisingly many pictures will be made with no auxiliary light at all. For the rest, the camera provides synchronization with all popular flashbulbs and discharge lamps at speeds up to 1/500 second.

For a happy-moments camera employed occasionally in a bat cave the coupled split-image range-finder of the *Retina Reflex* would suffice. This camera extends itself beyond aim-and-fire applications. For technical work, as in photomicrography with the *Kodak Retina Microscope Adapter Kit*, *Type C*, the other and larger aspect of its character comes into play.

The rangefinder split-field is but the center of a truthful preview of the entire picture, seen upright and laterally correct. This image is formed at full lens aperture by the taking lens itself, so that even at only six inches film-to-subject distance (as with one of the *Kodak Retina Close-Up Lens Sets* instead of a microscope) the boundaries of the 24mm by 36mm picture inevitably coincide exactly on the ground glass as on the film. Since the entire picture may be examined on its

extrafine surface, the focusing may be adjusted to favor any portion thereof without re-aiming—a simple point worth remembering when comparing cameras of this type.

Phone a camera shop and check whether they have yet received a Kodak Retina Reflex Camera you can examine. If we had known you were interested, we would have left room here for details on the built-in photoelectric exposure meter, the mechanical linkage of shutter speed to diaphragm setting, and the way the instant before exposure it stops down to the aperture chosen.

### **Glucosamine**

Because of an item we read in the Wall Street Journal recently, a copy or abstract of which we refuse to supply, we predict that this year will see an upsurge of interest in the biochemistry of glucosamine.

This amino sugar is easy to prepare. The classical starting material is chitin, and the essence of the method is acid hydrolysis. Chitin can be obtained in several ways. Perhaps the most efficient of these is to go around to the back door of the most prosperous sea food restaurant within easy reach and talk to the official in charge of the garbage cans about a deal for his vacant lobster shells. A slower method is to put shrimp on the family menu as often as necessary and save the peelings. Investigators with a distaste for sea food can get their chitin at this season of the year by putting a corps of small boys to work hunting June bugs.

For those who shun behavior tending to mark them as colorful scientific personalities, there is still another alternative. They can purchase ready-purified D-Glucosamine Hydrochloride as Eastman 644. Foreseeing the demand from the shy ones, we have laid in a stock of clean chitin that looks like breakfast food or perhaps fingernail clippings.

Each one of the 3600 or so Eastman Organic Chemicals available from Distillation Products Industries, Rochester 3, N. Y. (Division of Eastman Kodak Company) has its own story.

## Lead selenide in the open

Lead selenide photoresistors can

This is another advertisement where Eastman Kodak Company probes at random for mutual interests and occasionally a little revenue from those whose work has something to do with science now be discussed without checking clearance at the door.

The purchase order will read Kodak Ektron Detector (Lead Selenide), Type R2. The exact size of sensitive area (minimum dimension, 0.25mm) and its configuration (anything from a square to as intricate a multiple array as you can afford) will have been worked out in correspondence with Eastman Kodak Company, Military and Special Products Division, Rochester 4, N. Y. This is the freedom you get with a chemically deposited photoresistor.

Lead selenide,  $Type\ R$ , responds well out to  $4.5\mu$  at room temperature, with a time constant less than 10 microseconds.\* Cooled with dry ice, it goes out to  $5\mu$ , but the time constant doubles or triples.

Of course, you don't want lead selenide at all unless you need the long wavelength response and the short time constant. To a 500°K source, for example, chopped at 90 cycles, you can get 35 times more response with lead sulfide, as in the Kodak Ektron Detector, Type N. Its time constant, though, is characteristically in the range of 500 to 1000 microseconds.

We have two other kinds of lead sulfide depositions besides Type N. In respect to 500°K, 90-cycle radiation, they lie between Type N and Type R. There is Type O, with around half the time constant of Type N and two-thirds its response. The other one is Type P, with a time constant near 100 microseconds and a 500°K response about one-quarter that of Type N. You can get beyond  $3\mu$  with it at room temperature, and beyond  $4\mu$  by cooling it. That was the best we could do for you on long wavelength response till they let us start selling lead selenide.

In the infrared business one doesn't dare quit racing one's engine.

Price stated includes Federal Tax and is subject to change without notice.



<sup>\*</sup>For the instruction of the young, that's how long it takes response to drop off to 1/e what it was before the radiation was turned off. e is the base of natural logarithms and is worth around 2.72.