Spectroscophy Institute Grows in Populatity

Surrounded by the upheaval of Canisius College's remodeling program, the Chemistry Department here gave its Fourth Annual Spectroscopy Institute. From August 8-12, over 50 representatives of industry, education, and medicine were lectured on the notable advances of infra-red spectroscopy and its applications to various fields.

Each year the Institute grows in popularity and acclaim. This year, according to Dr. Szymanski, head of the Department of Chemistry, the local publicity coverage was "the best ever." Both of the area newspapers and their respective television stations gave their cooperation and effort to bring this notable event to the knowledge of the people.

Since its development about fifteen years ago, infra-red spectroscopy has made great strides in becoming the irreplaceable tool in research. Although at first it was expensive and used exclusively for analysis of man-made fibers, the advancement of technology made it possible in 1958 to build a machine capable of the same work for one-third the original cost.

Even at that, though, an installation may cost as much as $15,000 for research. According to those who use it, however, it is worth every penny. Several miracle drugs that are saving countless lives today owe their existence to infra-red spectroscopy. Among these drugs are penicillin, cortisone, and anesthetics.

Cancer research would be tied down if it were not for this workhorse helping to identify the almost untraceable organic substances involved in this area of important research.

The basic theory for such a machine is that a double beam of light passes through the compound to be examined. The amount of light absorbed by the molecules of this compound is registered by a detector on a graph. Examination of the graph will then disclose a combination of elements, each leaving its own "fingerprint" on the graph. The many prints are overlapping, however, and need careful study and research to identify each one and determine its amount with respect to the other elements in the compound.

To hear one of the lecturers during this Institute would clarify many of the problems that shadow this field. One such person was Sr. Miriam Michael Stimson, O.P., Ph.D., Chairman of the Division of Natural Science, Siena Heights College, Adrian, Michigan. Her research has brought her national recognition in the field of organic infra-red research.

She attributes her advances to an important factor in any research. In her own words, "I am free to engage in my own basic research without justifying it in terms of practical applications."

Through its annual Institute, the Chemistry Department hopes to encourage scientists in the use of this machine and to expand its basic uses.