Here and There in the Trade Literature

THE *Dupont Magazine* (E. I. du Pont de Nemours & Company, Wilmington, Delaware) goes in for microfilm in its August number, with a title, "It's a small world on microfilm." How chemistry helps to increase our food supply is the main point to a discussion of the use of insecticides. Elsewhere, cellophane and its contributions to the war are discussed, and another article, on plastics—principally Lucite—brings out some new applications, such as headlight lenses.

The *Pure Oil News* (Pure Oil Company, Chicago 1, Illinois) for August contains an excellent contribution by the chief chemist of the Toledo refinery entitled, "Old man corrosion at the refinery." It is practical and not highly theoretical.

Vinylite plastics are now being widely used for phonograph records. This application is described in some detail in the July *Bakelite Review* (Bakelite Corporation, 30 East 42nd St., New York 17, New York) with some excellent illustrations showing how commercial records are "cut" and processed for reproduction. In another place it is told how luminescent pigments are now being incorporated in plastics for some new effects. It is projected that the earliest use of fluorescent plastics —for instrument panels and other equipment in planes —will lead to many civilian uses.

Parke, Davis & Company (Detroit 32, Michigan) devotes its August *Therapeutic Notes* almost entirely to the clinical aspects of vitamins, both the fat-soluble and the water-soluble variety. Each of the two articles is accompanied by a short bibliography and should be seen by anyone interested in this nutritional field.

The July *Natural Gasser* (Warren Petroleum Corporation, Tulsa 2, Oklahoma) has two readable little articles on natural gasoline and on the chemical utilization of natural gas.

A pictorial article in the July *Shell News* (Shell Oil Company, 50 West 50th St., New York 20, New York) describes the periodic "cleanout" of a cracking unit in a refinery. It is often remarked that the industrial chemist or the chemical engineer must be 50 per cent pipefitter. If so, this is what he does.

The current Howe and French *Technical Announcer* (Howe & French, Inc., 99 Broad St., Boston 10, Massachusetts), no. 45-6-19, tells us some things we didn't know before about "Common forms of sulfur in the world markets." For example, we didn't know that sulfur is actually produced in Japan, Java, and South America.

The industrial development of our Southern states is a project near to the hearts of many, among whom is Senator Walter F. George, who is the author of an

article, "Smokestacks for the land o' cotton," in the July number of *Service* (Cities Service Company, Colorado Building, Washington 5, D. C.). It discusses the recently organized Southern Research Institute where new products and industries are being incubated that promise a broader economy and higher living standards in the South.

El'Chem (Electrochemicals Department, E. I. du Pont de Nemours & Company, Niagara Falls, New York), for August, has a feature article on the production of sodium cyanide. It also contains the second number of its series of "Adventures in chemistry," which is this time entitled "The iconoclast." It is a brief biographical sketch of Paracelsus.

Some of the latest uses of paraplex resins for caulking and sealing compounds, notably for sealing the pressurized cabins of the B-29, are revealed in the July *Resinous Reporter* (Resinous Products & Chemical Company, Philadelphia, Pennsylvania).

Some new uses for X-rays are said to have been discovered. Changes in some of the physical properties of solids such as quartz crystals are among these. This is the basis of a new method for standardizing crystals for radio frequency control. Another effect is said to be a modification of the rate of solution and the chemical reactivity of crystals, and a whole new field of X-ray photochemistry is possibly opening up. This is discussed briefly in a short item in the *Aminco Laboratory News* for July (American Instrument Company, 8030 Georgia Ave., Silver Spring, Maryland).

What's New (Abbott Laboratories, North Chicago, Illinois), no. 93, leads off with the question "Which solution?" the title of an article discussing the several different transfusion liquids now available: plasma, whole blood, amino acids, blood substitutes. The usual collection of striking color reproductions of Military Medicine is included.

From the August *Westinghouse Newsfront* (Westinghouse Electric & Manufacturing Co., Pittsburgh, Pennsylvania) we quote the following, on "Mighty film":

"One of the tremendous trifles of America's war in the air is a chemical film so thin that 2000 layers of it would barely equal the thickness of this sheet of paper. Yet if this film disappears while a bomber is in flight and storage batteries are drained of power, the plane's radio, gun turrets, and other vital auxiliaries cannot operate.

"The microscopic film acts as a lubricating buffer between the copper commutator of a generator and the carbon brushes that pick up power and relay it to the plane's electrical system. Without this buffer, the brushes soon grind themselves to powder against the commutator and stop the flow of electricity.

"When early in the war high-flying aircraft experienced trouble caused by rapid wear of brushes, the difficulty was traced to the absence of this vital film. Especially at high altitudes, where the air is extremely dry and low in oxygen content, the film sometimes disappeared in a few minutes.

"This serious problem was tackled by many scientists, among them Dr. Howard M. Elsey, consulting chemist at the Westinghouse Research Laboratories. After numerous experiments and tests, conducted in special chambers simulating high altitude, Dr. Elsey developed a chemical treatment that increases by 50 times the high-altitude life of carbon brushes for airplane generators.

"Dr. Elsey's treatment involves impregnating the carbon brushes with one of the metallic halides. All members of this family give beneficial results, but the outstanding performer is lead iodide. This ingredient very conveniently becomes a lubricant when the brushes are pressed against the revolving copper commutator, providing a satiny-smooth film that prevents harmful friction even in the very thin, dry air of high altitudes.

"Under severe laboratory and flight tests, the new treatment proved so successful that today all heavy-duty electric generators going into America's high-altitude bombers are equipped with carbon brushes containing one of these metal halides as an anti-dusting agent."

The *Standard of California Bulletin*, summer, 1945 (225 Bush St., San Francisco, California) tells how "Natural gas fires the furnaces of war." The recovery of "natural gasoline" from "wet" natural gas is a sizable part of the petroleum industry. Incidentally, as a California publication should, it contains some attractive scenic color photographs of various parts of the state.

The July-August number of *Our Sun* (Sun Oil Company, Philadelphia, Pennsylvania) is an anniversary number in honor of the Toledo, Ohio, refinery which has just completed 50 years of service. Several articles, however, are of general chemical interest: "Rubber from oil" continues the question of the relation of petroleum to the synthetic rubber industry; "Kerosene to gasoline to fighting fuel" should be read by everyone who wants to know what the simultaneous development of the gasoline motor and of petroleum technology has really meant in the last 50 years of our history. To quote a few sentences:

In the side-whisker days of 1895, however, the Machine Age was only a husky infant, straining to be weaned from the beef tallow and whale oil lubricants that held it friction-bound. The groans and wheezes of the machines that were rapidly increasing the productivity and lifting the standard of living of the American worker had to be quieted, and better lubricants provided to break the shackles that held inventive genius from devising even more complex mechanisms for the creation of wealth. Here was one of the first urgent needs facing the oil industry.

"The fallacy of prophecy" is a pictorial page of the summer number of the *Imperial Oil Review* (Imperial Oil, Ltd., 56 Church St., Ontario, Canada). Its point is to show how pessimistic prophecies of the imminent failure of our petroleum resources, from 1914 to 1934, have repeatedly failed to come true. As a result, we are not so agitated over this possibility now as we were 30 years ago.

Oil-Power ("Socony-Vacuum's magazine of industrial romances") (Socony-Vacuum Oil Company, 26 Broadway, New York, New York) devotes its July-August number entirely to "Television in your home." More than a summary of general principles, it goes into the technique of producing studio plays and other features of television programs.