

oranges, greens, purples and yellows. There were more continental exhibitors than previously and most of the West European countries were represented, as well as East Germany. The overall impression given by the display, however, was of general development rather than revolutionary innovations.

Manufacturers are constantly seeking new pigments soluble in volatile solvents for fast drying inks, and some of these were shown. There has also been a general improvement in the stability and colour retention of resins, solventless corrosion resistant coatings for marine applications and low odour compounds for interior decorating. The relatively new "chloride" process for the manufacture of titanium dioxide—the whitest white pigment—gives a purer, whiter product than the old "sulphate" process and the applications now range from paints, plastics and printing inks to leather, cosmetics and artists' colours.

One interesting device on show was a combination of spectrophotometer, data-transfer system and computer which measures the reflectance of a dyestuff on a substrate at sixteen spectral points and stores this information. This enables colour matching and prediction of dye recipes to be accomplished very easily. Other exhibits included a particle size disk centrifuge and the usual selection of viscometers, tackometers, mixers, mills and grinders. Also on show is the cabinet developed by the Paint Research Station for testing the fungicidal activity of paint films. This cabinet can be adapted to simulate fungal attack in the tropics or inside breweries, for example, and should be useful in the study of the disfigurement of painted surfaces by biological attack.

The brightest stands were, of course, those exhibiting daylight fluorescent pigments. Fluorescent colours are about four times as easy to see as the nearest and brightest non-fluorescent colour and are available in a range of hues with such picturesque names as "saturn yellow", "sunset orange" and "rocket red". The chief uses for these brilliant colours are in paints, PVC and paper and textile printing. Several interesting new colour stylings for cars were also to be seen; a range of gold shades produced by mixing a new pigment called "Gold Powder Lake" with aluminium powder was particularly pleasing.

#### PROFESSIONS

### Women in Chemical Engineering

ON March 24, the third week of Women in Engineering Year was marked by a conference held by the Institution of Chemical Engineers at University College, London. Professor J. F. Richardson, chairman of the institution's careers committee, provided the theme for the conference by saying that the task of attracting more women to chemical engineering needs to be tackled in the schools. The conference seemed to agree that opportunities for study and employment are apparently available in plenty if only girls would take advantage of them.

Dr J. W. Mullin pointed out the value of flexibility in chemical engineering courses. At University College, London, where Dr Mullin teaches, there is, as well as the three year course in chemical engineering, a one year diploma course for graduates in chemistry or other engineering subjects. Girls in particular seem

often to be encouraged to study chemistry rather than chemical engineering, so that conversion courses can help to save them for chemical engineering.

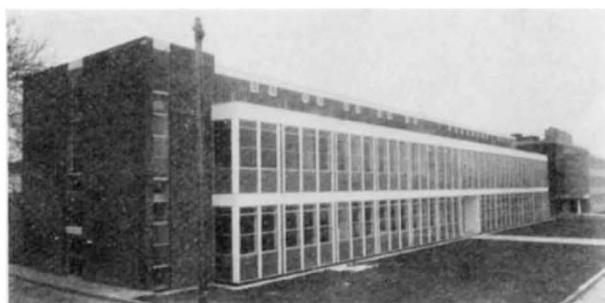
The MSc and diploma courses in biochemical engineering—covering topics such as enzyme kinetics, metabolic regulation and immunochemistry—and the joint honours course in chemical engineering and microbiology beginning at Swansea next September, should help to attract girls. When twenty-eight sixth form girls attended a week's course last summer at Swansea, the response was apparently most encouraging, and some university departments do seem to be prepared to follow flexible policies on admissions.

Dr M. Guter, managing director of CJB (Projects) Ltd, saw no barriers to the employment of women as chemical engineers, except perhaps in the commissioning and operating of plant abroad—sites such as those in Algeria on which his company is now working, for example. The general opinion of industrialists present was that there would be no prejudice against women in chemical engineering if only they were available to be considered for jobs. Raising families was not seen as a great problem for, as Mr C. S. Windebank, past president of the institution, said, the turnover of female staff to be expected as a result of marriage is equalled by the turnover of men, which merely reflects the modern attitude to employment. Dr P. Eisenklam of Imperial College, London, made the telling point that employers expect a positive creative contribution from chemical engineers early in their career, so that the loss of married women should be insignificant.

#### ARCHITECTURE

### Laboratory at Porton Down

A NEW laboratory costing £207,000 was opened at the Chemical Defence Establishment at Porton Down on March 21, by Mr J. Morris of the Ministry of Defence. The building has been specially designed for work on



aerosols and air cleaning techniques, and will house the physicists at the establishment. Critics of research on chemical warfare will no doubt rejoice at the lack of architectural distinction.

#### FOUNDATIONS

### A Cosy World

IN spite of being closed to visitors for two months for building work, the Ciba Foundation managed its usual range of business in 1968. According to its