

GOOCH



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VISIT TO I.C.I. DYESTUFFS DIVISION

The visit to Dyestuffs Division of I.C.I. on 28th November was notable for the renowned I.C.I. hospitality. After dallying for 1½ hours over sherry and then lunch we were shown a short film on colour and the importance of dyes in everyday life. This was followed by a tour of the research department and plant.

A prominent feature of the research department was an electron microscope, used for studying the fibre and the grain structure of materials and dyes. In the comprehensive library, which was the envy of many, we learned that a years trial subscription was taken out for any new journal of possible interest.

We then visited the plant dealing with the testing of new dyes, the latest of which are actually combined with the molecules of the fabric. Finally in the pilot plant we were treated to an entertaining lecture on the hazards of chemistry given by a little man hiding behind a gas mask.

This report is the result of choosing two chemists least likely to have any recollection of the visit, due, it is said, to an enjoyable evening spent afterwards at the 'Rose and Crown' in Gilberdyke.
C.A. and W.F.

PROFILE—DR. GRAY

Stating the obvious, Dr. Gray is a Scot. He was born in Edinburgh, later moving to near Stirling where he completed his early education.

In 1943 he commenced studying chemistry at Glasgow University; needless to say the war was not without effect. The normal four year course was cut to three—which necessitated working through the long summer vacations. Enemy bombing of the City made fire-watching a compulsory weekly duty for undergraduates, and one was obliged to join the Officers' Training Corps (or the Air Squadron). These activities left little spare time, but in his first year, Dr. Gray managed to find time for soccer, and he represented the University during this period.

He left Glasgow in 1946, having obtained his first degree, and came to Hull as an assistant lecturer. In 1949 he became a lecturer. The work for his London Ph.D. was carried out at Hull, and concerned the properties of liquid crystalline systems; he supervised research on allied subjects at the same time. The title of his thesis (which was presented in 1953) was "A Study of the Synthesis and Mesomorphism of Certain Aromatic Carboxylic Acids."

This line of research, which attempts to correlate molecular structure with the tendency of a compound to form liquid-crystalline phases, has been the subject of the bulk of Dr. Gray's published work. In 1959 he was invited by the publishers, Academic Press, to write a monograph on the subject. This work, "Molecular Structure and the Properties of Liquid Crystals" was completed at the beginning of 1962. However, in Dr. Gray's view, further rationalisation in this field requires the treatment of the physicist and the mathematician, and for this reason his research activities in this direction will now be limited.

The subject provides us with an example of one thing leading to another in research. Most of the work on mesomorphic systems was carried out with biphenyl compounds. An interesting offshoot which has led from this is the current study of the transmission of electronic effects through the biphenyl ring system.

Dr. Gray's main research interest now lies in the field of bacterial cell wall chemistry (the work being carried out in conjunction with Reckitt & Sons Ltd.). Interest in this has arisen because certain bacteria which are immune to antibiotics, such as penicillin, are also resistant to commercial germicides and are free to multiply in the absence of competition from the more sensitive species. The problem is being attacked by studying the chemical composition of the bacterial cell walls and it is hoped to correlate this knowledge with the resistance shown by the bacteria to the germicides. In this way, means of sensitising the organisms may become possible.

Dr. Gray runs the departmental infra-red service and a part of his research is closely connected with this. The properties of some desoxybenzoin are being studied in an attempt to understand why their carbonyl bands split, a property shared by a few other carbonyl compounds.

In 1958 the Chemical Society held a symposium, on steric effects in conjugated systems, in Hull. Dr. Gray not only read a paper at this gathering of internationally famous scientists, but organised it, and edited the resulting book. He has always taken an interest in the Chemical Society and its activities, and as local representative for Hull from 1954 to 1960 he promoted keen interest among undergraduates. With Dr. Barker he was jointly responsible for writing the General Methods section in the Chemical Society Annual Reports on the Progress of Chemistry for 1961 (they will again share the task for 1962).

Dr. Gray's main recreation is gardening and he possesses a fine collection of cacti and succulents. His partiality to a pint of beer at the local will not surprise many, indeed, he will long be remembered for his performance at the Chemical Society Social in 1959 when he drank alongside Professor Chapman in the Staff boatracing team! His active participation in sport is now limited to a few games of tennis, although he enjoys watching soccer.



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He was promoted to senior lecturer in 1960.

In 1963 (or 1964) an international symposium on liquid crystals is being held at Kent State University, Ohio, and Dr. Gray has been invited to read a paper there.

During his 16 years in Hull, Dr. Gray has become very much attached to the University and the Department. Throughout these years he has seen the latter grow and develop and he believes that this will continue. We hope it does.

M.G.R.

**FREE RADICAL REACTIONS INVOLVING
BRIDGE PLAYING SPECIES**

We are told by psychiatrists that we all have complexes and repressions. There is hardly one for which Bridge does not provide some temporary relief. With this in mind an attempt is being made to promote an inter-year bridge competition at N.T.P. using alcohol as catalyst. This article is to persuade the bridge players within the department to sacrifice an evening's hard study for an enjoyable evening playing bridge.