

## Course Announcement

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**The Open University: June 23 - 26, 1986**

### **Royal Society of Chemistry Residential School: Photochemistry in Organic Synthesis**

This is a teaching school directed primarily at graduate and postdoctoral chemists who have some experience of organic synthesis and who want to expand their synthetic armoury to include a wide range of photochemical transformations.

Organic photochemistry has grown rapidly over the last two decades, and in principle it offers a range of reactions as broad as those encountered in "ordinary" thermal chemistry. Many photoreactions are quite different from thermal reactions of the same substrates, different selectivities can be achieved and fairly complex molecular skeletons can often be assembled in a single reaction stage. Increasingly a photochemical reaction proves to be a key stage in a successful target synthesis.

The aim of the residential school is to provide a broad account of organic photochemical reaction types, with a strong bias towards those of potential value in synthesis. There are three strands to the programme: a survey of reactions based on major functional classes of substrate, a selection of reaction types that are particularly relevant in the synthesis of certain product groups and a description of practical aspects of conducting photochemical reactions both in the laboratory and on a larger scale. It is intended that demonstrations of equipment will be provided by one or more manufacturers.

The teaching staff are from industrial and academic laboratories. Lecture notes will be circulated before the course and lecturers will be available throughout the course to allow as much informal discussion as possible with the course participants. There will be a number of seminar sessions in addition to the lectures and demonstrations. One afternoon will be free for a visit and the course dinner is planned to be held at Woburn Abbey.

Hotel-style residential accommodation will be provided in the very comfortable Burroughs Education Centre, which is about 2 miles from the central campus of The Open University.

#### **Lecture topics**

Basic principles

Practical photochemistry: general considerations

Carbonyl compounds:  $\alpha$  cleavage

Carbonyl compounds: hydrogen abstraction  
Steroid syntheses  
Carbonyl compounds: cycloaddition  
Enone and dienone rearrangements  
Alkenes: isomerization and rearrangement  
Alkenes: cycloaddition  
Alkenes: photo-oxidation  
Terpenoid syntheses  
Aromatic compounds: isomerization and cycloaddition  
Reactive intermediates from azo, diazo and related compounds  
Practical photochemistry: scale-up  
Aromatic compounds: substitution and cyclization  
Alkaloid syntheses  
Photoinitiated free-radical chain reactions

## Personnel

### *Course organizers*

Dr. J. D. Coyle (The Open University)  
Dr. P. G. Taylor (The Open University)

### *Course secretary*

Dr. A. D. Ashmore (Royal Society of Chemistry)

### *Teaching staff*

Dr. H. A. J. Carless (Birkbeck College, University of London)  
Dr. J. D. Coyle (The Open University)  
Dr. A. Gilbert (Reading University)  
Dr. W. M. Horspool (Dundee University)  
Dr. J. Hutchison (Electricity Council Research Centre, Chester)  
Dr. R. F. Newton (Glaxo Group Research, Ware)  
Dr. K. H. Pfoertner (Hoffman-La Roche, Basle)  
Dr. P. A. Wender (Stanford University, CA)

Further information can be obtained from

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