and skeptical comments which Szilard would certainly have brought to the meetings were sadly missed by the members of the symposium.

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Solvay Conference

The first Solvay conference took place in 1911 in Belgium, and was organized by Ernest Solvay, a Belgian industrialist and philanthropist. The purpose of the first, and succeeding conferences, was to discuss a new scientific theory or development. Attendance is always limited to invited guests plus a small number of scientists at the Université Libre de Bruxelles.

The thirteenth Solvay Conference of Chemistry took place in Brussels during the week of 24 October 1965. The subject of the conference was the reactivity of excited organic molecules. Nine invited papers were presented; the last day was devoted entirely to discussion. Somewhat more than 50 scientists attended this conference.

C. A. Coulson (Oxford, England) discussed the present state of theoretical knowledge of the excited electronic states of molecules. The present model of molecular electronic configuration is that of single molecular orbitals computed, in the most favorable cases, by a Hartree Fock method. Those excited states, well represented by excitation of a single electron from one of the orbitals which are filled in the ground configuration, lend themselves to certain qualitative predictions concerning their nature. For instance, one can frequently predict that their lowest potential configurations will be with certain bonds between constituent atoms either lengthened or shortened, and either weakened or strengthened. Quantitative statements of the extent of these effects are in the distant future, if ever. For certain excited states which consist of a resonance mixture of various single electronic excitations even qualitative predictions are now impractical.

R. Daudel (Paris) reported on the predicted nature of the lowest excited electronic state of various conjugated aromatic molecules. Daudel has made progress in predicting the location of reaction in photoexcited aromatic molecules.

G. Porter (Sheffield, England) discussed theoretical and experimental work on photochemical reactions of aromatic molecules. The usual sequence of events is that first discussed by G. N. Lewis: photoexcitation to an excited singlet state, followed by radiationless conversion to the lower-lying metastable triplet, which may either react, phosphoresce, or be deactivated by a radiationless transition. The primary-excited singlet, in some cases at least, appears to undergo quantitative conversion to the triplet. But even when such simplification exists the possible fates of the excited triplets makes exact interpretation of its reaction rate difficult. However, in individual cases by using a variety of techniques a complete mapping of the various processes has been achieved.

G. O. Schenk (Mulheim, Germany) and George Hammond (Cal Tech) presented papers on similar subjects but with some differences of interpretation. The lowest-excited (triplet), electronic state of ethylene has a minimum energy with a nuclear configuration in which the two CH_2 planes are at right angles, instead of parallel as they are in the ground state. Thus photoexcitation of substituted ethylenes results in transformation of cis to trans configurations and vice versa. The same reaction can be obtained by photoexcitation of an aromatic molecule in the same solution with the ethylenic compound, if the triplet aromatic excitation has equal or higher excitation energy than that of the ethylene derivative. The electronic excitation is then transferred from the aromatic molecule to the ethylene derivative. Many studies of these sensitized-transfer reactions have been made, especially in the laboratories of Hammond and of Schenk. The exact course of the details of some of these sensitized excitations is not completely clear, although my impression was that most of the ambiguity lay in the semantics.

Various photochemical reactions of relatively complicated organic molecular types were discussed by N. C. Yang (Chicago), W. C. Dauben (Berkeley), and E. Havinga (Leiden). The photochemistry of the solid state was reported on by C. M. J. Schmidt (Weizmann Institute, Israel).

To a physical chemist whose training in organic chemistry ceased almost 40 years ago, and whose contact with organic reaction kinetics has been only sporadic since then, the conference was enormously impressive. The detail with which the course of most complicated and diverse reactions are understood is amazing. Many of these reactions involve electronic photoexcitation of one molecule followed successively by internal conversion to a triplet state, transfer of the electronic excitation (and the spin) to a second molecule, and reaction of this molecule involving very great readjustments of atomic configurations and with the participation of other reactants. In many cases, the details of the succession of steps and a fair quantitative understanding of the efficiencies are known.

The proceedings of the conference including the very lengthy and valuable discussion will be published in the near future.

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Forthcoming Events

April

24. Society for **Clinical Ecology**, 1st annual mtg., Chicago, Ill. (T. G. Randolph, Human Ecology Research Foundation, 720 N. Michigan Ave., Chicago 11, Ill.)

24–26. American Assoc. of **Colleges of Pharmacy**, Dallas, Tex. (C. W. Bliven, 1507 M St., NW, Washington, D.C. 20005)

24–27. American Soc. of **Abdominal Surgeons**, Chicago, Ill. (B. F. Alfano, 663 Main St., Melrose 76, Mass.)

24–27. American **Oil Chemists'** Soc., Los Angeles, Calif. (C. H. Hauber, The Society, 35 E. Wacker Dr., Chicago, Ill. 60601)

24–28. **Infectious Pathology**, 4th intern. congr., Stuttgart, Germany. (G. Hoffman, Hugstetterstr. 55, 78 Frieburg im Briesgau, Germany)

24–29. American College of **Allergists**, 22nd annual congr., Chicago, Ill. (J. D. Gillespie, 2141 14th St., Boulder, Colo. 80302)

24–29. American Soc. of **Hospital Pharmacists**, annual mtg., Dallas, Tex. (J. A. Oddis, 2215 Constitution Ave., NW, Washington, D.C. 20037)

24–29. American **Pharmaceutical** Assoc., Dallas, Tex. (W. S. Apple, 2215 Constitution Ave., NW, Washington, D.C. 20037)

25–27. **Antidepressant Drugs**, symp., Milan, Italy. (S. Garattini, Inst. di Richerche Farmacologiche "Mario Negri," Via Eritrea, 62, Milan)

25–27. **National Acad. of Sciences**, 103rd annual mtg., Washington, D.C. (Home Secretary, NAS, 2101 Constitution Ave., NW, Washington, D.C. 20418)

25–27. American Acad. of **Pediatrics**, Montreal, P.Q., Canada. (E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill. 60204)