

reactions between ligands and metal ions, the effects of paramagnetism and other typically inorganic problems to which NMR studies are applicable are given considerable attention.

Nuclear quadrupole resonance (10 pages) and Mössbauer spectroscopy (9 pages) are given far less extensive treatment, presumably because much less work has been done with them. Instrumentation for NQR is not discussed but reference is made to the text of Das and Hahn. No general reference is given in the text to Mössbauer instrumentation, but the reader of this review is referred to a review of "Mössbauer Effect Methodology," Vol. I, edited by I. Gruverman in JAOCS, this issue. While NMR is applicable largely to the fluid states, NQR and Mössbauer are limited to the solid (or at least a highly viscous) state. All three techniques produce much the same type of information.

Electron paramagnetic resonance spectroscopy is given considerably more extensive treatment; with good coverage of basic theory, hyperfine splitting, factors affecting the magnitude of the *g*-values, unpaired electrons in metal complexes, Kramers' degeneracy, nuclear quadrupole interaction, and solid state EPR. The coverage appears to be quite adequate for the purposes of the book.

The final chapter on mass spectrometry is very short (13 p) for a technique which has proved so useful for both identification and structure determination of organic compounds and promises to be equally useful for covalent inorganic compounds. The treatment of this technique is not up to the standard of most of the rest of the book.

Each chapter is followed by a list of references and by a set of exercises which should prove very valuable in learning the details of the techniques covered.

There seem to have been few attempts in the past to gather together knowledgeable discussions of the physical methods which can be applied to inorganic systems. This text does an excellent job in presenting those methods which are available and discussing their applications and limitations. Inasmuch as the techniques described can derive severally analytical and structural information from a wide variety of systems, organic and inorganic, it cannot fail to be useful to almost any chemist interested in this type of information. It should therefore prove to be a valuable text in almost any chemist's library.

The text is well printed on good paper. The index seems somewhat slim, but most of the topics covered can be found in the table of contents.

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Perfumery and Cosmetic Exhibit in Barcelona

The II Semana de Química Cosmética y Perfumería will take place in the Palacio de las Naciones of Barcelona (Spain) from Sept 18-25, 1966, under the auspices of the Sociedad Española de Químicos Cosméticos. This Society is a founding member of the International Federation of the Societies of Cosmetic Chemists.

The Semana is a monographic exhibition of raw materials, machinery, packaging and all other things related to cosmetic industry, as well as of the finished products of cosmetic and perfumery firms.

The Asociación Española de Aerosoles (AEDA) has arranged for the European Federation of Aerosols (FEA) to hold the annual meetings of its Directive, Technical and Public Relations Committees in the Palacio de las Naciones during the II Semana de Química Cosmética y Perfumería.

Several sessions have been planned: a Symposium, Aerosols, Dermatology and Microbiology applied to the cosmetic industry; a short Marketing course, in charge of members of the Sales Directives Club, an Assembly of the Asociación Nacional de Químicos de España and a meeting of the Asociación Nacional de Fabricantes de Perfumería y Afines.

Pittsburgh Group Plans Inclusive '67 Conference

The Eighteenth Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Inc., sponsored by the Spectroscopy Society of Pittsburgh and the Analytical Chemistry Group of the Pittsburgh Section of the American Chemical Society, will be held at the Penn-Sheraton Hotel in Pittsburgh, March 6-10, 1967.

The following symposia are now being arranged: 1) Laser Excitation Raman Spectroscopy; 2) Information Retrieval and Data Handling; 3) Biomedical Applications of Gas Chromatography; 4) Coblenz Symposium: Where Does Infrared Spectroscopy Go from Here; 5) Analytical Chemistry in Air and Water Pollution; 6) Computer Applications in Analytical Chemistry; 7) X-Ray Analysis of Light Elements; 8) Analytical Techniques in Nonaqueous Systems; 9) Carbon-13 NMR Spectroscopy; 10) Emission Spectroscopy in the Vacuum Ultraviolet.

A program of activities for the wives and lady attendees of the Conference is also being arranged.

Correspondence regarding papers should be submitted in duplicate to: Dr. G. L. Carlson, Program Chairman, The Pittsburgh Conference, Mellon Institute, 4400 Fifth Avenue, Pittsburgh, Pa. 15213.

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