544.6 ASTM 1959

CONTENTS

Introduction	1
Challenges in Atomic Spectroscopy	3
Discussion	25
Spectroscopy of Radioactive Materials	26
Communications in Spectrochemical Analysis	34
Application of X-Ray Spectroscopy to Unsolved Problems in Geochemistry	47
The Future of X-Ray Fluorescence Instrumentation	55
Discussion	62
Spectroscopy in the Region 175 to 200 mµ	63
Analytical Flame Photometry: New Developments	73
Special Problems in the Determination of Tetraethyllead in Gasoline by Flame Photometry	157
The Unpaired Electron via Electron Paramagnetic Resonance Spectrometry	165
Maser Applications and Traveling-Wave Techniques for Magnetic Resonance Spectroscopy	172
Band Nomenclature for the Ultraviolet Spectra of Conjugated Organic Compounds	176
Some Comments Concerning Quantitative Infrared Spectroscopy	185
Discussion	189
A Technique for Preparing Solid Organic Samples for Infrared Analysis	190
The Combination of Methods in the Analysis of Complex Hydrocarbon Systems	195
Molecular Spectroscopy in the USSR	215
Ultraviolet Spectroscopy: Aromaticity of Carbonaceous Materials: Absorption Errors	218
The Application of Some Spectrographic Techniques to the Analysis of Water-Formed Deposits	227
Discussion	243