

This book presents the invited papers from the Third International Meeting on Botanical Microscopy, held in York in July 1985 under the auspices of the Royal Microscopical Society. Leading experts provide a 'state of the art' review of plant ultrastructure research, which has been revolutionized by exciting developments in the techniques available. Large machines, the scanning and transmission electron microscopes, continue to improve—as does the handling of the data they produce. Light microscopy has seen spectacular developments, and image enhancement techniques are bringing many new opportunities, such as the use of laser Doppler to obtain information on dynamic processes in living cells. Fluorescence has taken on a new importance, especially immunofluorescence which allows labelled molecules to be used to identify specific cell components. Microinjection of fluorescent molecules is also used as an increasingly important technique for determining the continuity of a cell with its neighbours.

The application and research potential of these techniques is very great indeed, thus this contemporary account should be of interest to a wide range of plant and cell scientists.