

CONTENTS

1. Guidelines for the Selection of Four Optoelectronic Image Detectors for Low-Light Level Applications	1
2. The Silicon-Intensified Target Vidicon Detector: Operation, Characterization, and Application in Atomic Spectroscopy Research	31
3. Wide Dynamic Range Array Detector for Absorbance and Rotation Spectrometry	57
4. Inductively Coupled Plasma-Atomic Emission Spectroscopy with Multichannel Array Detection	75
5. Multielement Emission Spectrometry Using a Charge-Injection Device Detector	117
6. Charge-Injection and Charge-Coupled Devices in Practical Chemical Analysis: Operation Characteristics and Considerations	133
7. Luminescence Measurements with an Intensified Diode Array	155
8. Time-Resolved Resonance Raman Spectroscopy of Radiation-Chemical Processes	171
9. Picosecond Emission Spectroscopy with Intensified Photodiode Arrays	183
10. Picosecond Spectroscopy and Applications to Chemical and Biological Systems	201
11. Data Acquisition System for a Jitter-Free Signal Averaging Streak Camera	221
12. Analytical Chemistry with Spatial Resolution: Obtaining Spectral Images with Multichannel Detectors	233
13. Detection of Extreme UV and Soft X-Rays with Microchannel Plates: A Review	253
14. Multichannel Extreme UV Spectroscopy of High Temperature Plasmas	277
15. Spectrometers for Rocket, Balloon, and Spacecraft Experiments	297