

## BIO-RAD SERVES THE GLOBAL SPECTROSCOPY AND SEMICONDUCTOR MANUFACTURING

markets with high quality general purpose and specialty instruments. Bio-Rad also has a leading position in spectral reference libraries, software for spectroscopy and chemistry publishing, spectral data management and interpretation.

The Analytical Instruments segment is a leading worldwide supplier of Fourier Transform Infrared (FT-IR) Spectrometers such as the new Stingray™ system, with powerful general purpose FT-IR platforms for emerging analytical requirements in chemical and material identification and characterization. Applications include biomedical, forensic and material analysis, art restoration and agriculture. Results are generated up to 10,000 times faster than conventional systems. Bio-Rad also recently introduced the Excalibur™ series of FT-IR spectrometers with high performance, ease of use and reliability at an economical price.

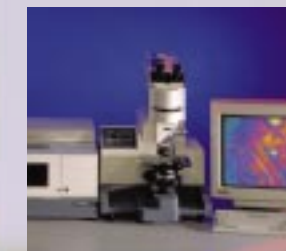
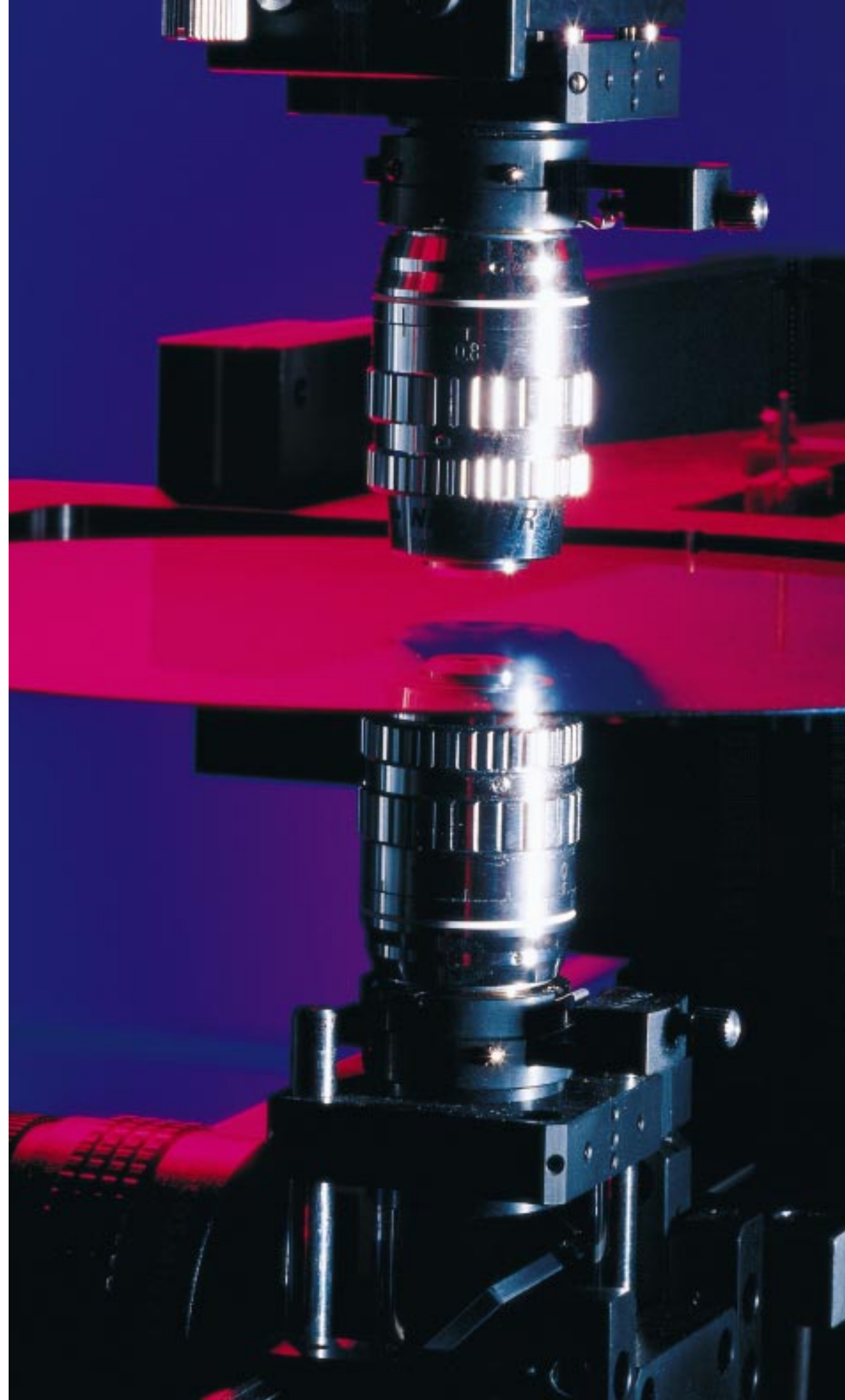
Bio-Rad also maintains its commitment to serve the unique needs of semiconductor wafer manufacturers. The Company is at the forefront of the development of advanced systems for the metrology and characterization of 300-mm (12 inch) silicon wafers used in the manufacture of leading edge microprocessors, memory devices and chips. Equipment introduced for the production qualification of optoelectronic materials includes applications in solid-state blue laser fabrication.

The Sadtler Database collection contains over 300,000 Infrared, Nuclear Magnetic Resonance, Ultraviolet and Raman spectra used by chemists and spectroscopists throughout the world to identify the composition of chemical compounds. Bio-Rad has expanded in this area with the recent introduction of Sadtler Suite™ software that makes it possible to combine information from a wide range of laboratory instruments.

The Analytical Instruments segment is well positioned for profitable growth going into the next millennium.

## Analytical Instruments

This segment of the business is at the forefront of characterization of 300-mm silicon wafers. The OPP-300 system (opposite page) is used for profiling electrically non-active microdefects.



The Stingray system for rapid infrared imaging and chemical analysis features solid-state infrared array detection technology that delivers microscopic chemical information about almost any type of heterogeneous sample.



The RPM-2000 system rapidly provides whole wafer photoluminescence maps to monitor each production run of optoelectronic materials.



The Sadtler Suite software package offers chemists a complete software environment for retrieving, interpreting, comparing and presenting chemical and spectral data.