

This article surveys noteworthy recent advances in and applications of atomic and molecular spectroscopy, touching on their uses in fields such as biomedicine, materials science, ...

Spectrometry has widespread applications, including environmental monitoring. Environmental scientists use visible and ultraviolet spectroscopic methods to detect pollutants in air, ...

Our study confirms the capabilities of the low-configuration spectrometers for far-red SIF retrievals and promotes their deployment over large-scale ground ...

This paper first introduces the miniaturization of Raman devices. It comprehensively reviews the application of miniaturized Raman spectrometers in plant in vivo detection and then ...

This review paper shows the market trend for chip-scale spectrometers and analyzes the key metrics that are required to adopt miniaturized spectrometers in real-life applications.

Real-World Applications of Spectrometers. No longer limited to laboratories, spectrometers (analytical instruments, testing devices) are now widely used in production, ...

The solution for space exploration is through using mass spectrometers which are used to identify miniature particles present in space. ...

Some of the main application areas include: Scientific research: characterization of materials and new substances. Biology and medicine: protein studies, DNA analysis, diagnostics. ...

These spectrometers can have very respectable performance, and can be completely self-contained with battery, display, user controls, sample interface, databases and calibrations.

2.2.4 Applications of IR spectroscopy a. Identification of compounds: IR spectroscopy assists in finding out various chemical compounds and functional groups in organic molecules, such as ali-phatic, ...

both medical and non-medical fields as evidenced by the results of a recent study. This study showed that MS has a wide spectrum of applications in the fields of pain management, transplant medicine, ...

Any application that deals with substances or materials can use this technique for quantitative as well as qualitative analysis. In biochemistry, for example, it is used to determine enzyme-catalyzed reactions.



Applications of First-Stage Spectrometers

The integrated device can be used in narrowband/broadband light reconstruction, in situ hyperspectral imaging, and other diverse applications, such as point-of-care diagnosis and IoT-based...

For high-speed applications, the 2048 pixel CMOS detectors in the AvaSpec-ULS2048CL-EVO from the StarLine are normally the best options. For low-light ...

Leaf spectrometers are essential to developing a data-driven understanding of plant stress. Here we explore 6 vital applications of the technology.

Fourier Transform Spectrometer FT spectrometers are highly flexible and can be implemented on computers if we can fully digitally sample the voltage time series

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