

Spectrophotometer chopper



Overview

An optical chopper is a device which periodically interrupts a light beam. Three types are available: variable frequency rotating disc choppers, fixed frequency tuning fork choppers, and optical shutters. A rotating disc chopper was famously used in 1849 by Hippolyte Fizeau in the first non-astronomical measurement of the speed of light. Use in science laboratories Optical choppers, usually rotating disc mechanical shutters, are widely used in science labs in combination with. The chopper is used to modulate the intensity of a light beam, and a lock-in amplifier is. Choppers were widely used in early systems, and in this role are sometimes known as "reticle seekers". The earliest uses were on. A photocell sensitive to is positioned.



Article Content

Apr 07, 2026

Chopper for double-beam spectrophotometer

In order to solve the above problems in the background art, the present invention provides a chopper for a dual-beam spectrophotometer.

Sep 05, 2025

Accessories for High-energy Spectroscopy | McPherson

The chopper housing provides three beam path ports, one straight through and the other deviating 90 degrees (reflected.) This accessory is routinely used in

Aug 12, 2025

Optical Chopper Measurement

In order to make this a bit more interesting, James shows in the following video how to easily set up an experiment that makes use of 2 different choppers

Jan 29, 2026

Chopper layout for spectrometers at long pulse neutron sources

We analyze the acceptance diagrams of the various choppers used at the spectrometer to determine the time and wavelength, at which the source emits neutrons that pass through the chopper system.

Jun 09, 2026

Optical Choppers

The most common form of optical chopper is the rotating disc chopper. Its central part is a chopper disc (also called chopper blade) which is typically made of a

Apr 14, 2026

US3901601A

An atomic absorption spectrophotometer incorporating discrimination against ""background"" absorption, i.e., absorption not caused by the resonant line absorption by the element being measured. The

Jun 22, 2026

Reflectometer-spectrophotometer system. The components are a

Reflectometer-spectrophotometer system. The components are a glow G, chopper C, Cassegrain collimator unit M1 and M2, plane mirrors M3 and M4, sample S, Cassegrain condenser unit M5 and

Sep 10, 2025

Double-Beam Spectrophotometer | Image and Video

A chopper directs the source's radiation, using a transparent window to pass radiation to the sample and a mirror to reflect radiation to the blank. The

Sep 29, 2025

Spectrophotometry

Thursday, January 30, 2014 Spectrophotometry - IR Spectroscopy - Instrumentation In the earlier post, we have tried to understand the basic concepts and a little theory about the infra-red (IR)

May 07, 2026

Spectrophotometer

A spectrophotometer is defined as an instrument that measures the intensity of transmitted radiation at specific wavelengths, utilizing components such as a source of radiation, collimators, prisms or

Nov 18, 2025

10.3: UV/Vis and IR Spectroscopy

A chopper directs the source's radiation, using a transparent window to pass radiation to the sample and a mirror to reflect radiation to the blank. The

Nov 02, 2025

easyCHOP

The modular chopper unit can be conveniently installed anywhere in the beamline setup. The controller uses a phase-locked loop motor speed control with chopping frequencies up to 10kHz. A variety of

Feb 09, 2026

6.3B: Interferences of Flame Noise

Can you design a feature that could be incorporated into a flame atomic absorption spectrophotometer to account for flame noise? We can account for flame noise and changes in the flame noise by using

Aug 03, 2025

Spectrophotometer: Principle, Parts, Types, and Uses

Spectrophotometer: Principle, Parts, Types, and Uses Principle of Spectrophotometer
A spectrophotometer is based on the Beer-Lambert law,

Feb 07, 2026

Optical Chopper | Precision, Speed & Versatility in Optics

Explore the importance of optical choppers in enhancing precision, speed, and versatility in optics, covering their applications and technological

May 12, 2026

spec sheet HP easyCHOP

modular and compact chopper unit installation anywhere in the beamline large selection of chopping wheels

Jun 10, 2026

How is a double beam spectrophotometer different from a ...

In the chopper version of a double beam instrument the above beam splitter is replaced by a rotating segmented wheel. The chopper disk (above) is made up of a number of different segments. Those in

Jul 30, 2025

Role of Chopper in AAS

This video is for Science/ Engineering students of UG and PG classes and discusses about Role of Chopper in Atomic Absorption Spectrophotometer

Apr 29, 2026

experimental physics

What are Chopper Spectrometers and how are they different from Triple-Axis Spectrometers? I've been reading about inelastic neutron scattering

Jun 08, 2026

How does a beam chopper work?

First, the chopper spins at 60 Hz so that a complete cycle of sample, reference, and dark current occurs every 16 milliseconds (that's 60 times a second). This cycle

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