Optical Spectrometer

Introduction

An optical spectrometer (which can be either a spectrophotometer, a spectograph, or a spectroscope) is a device used to meausre properties of light over a specific portion of the electromagnetic spectrum. It is used in spectroscopy for producing spectral lines, in order to measure their wavelenghts and intensities[1].

Working principle

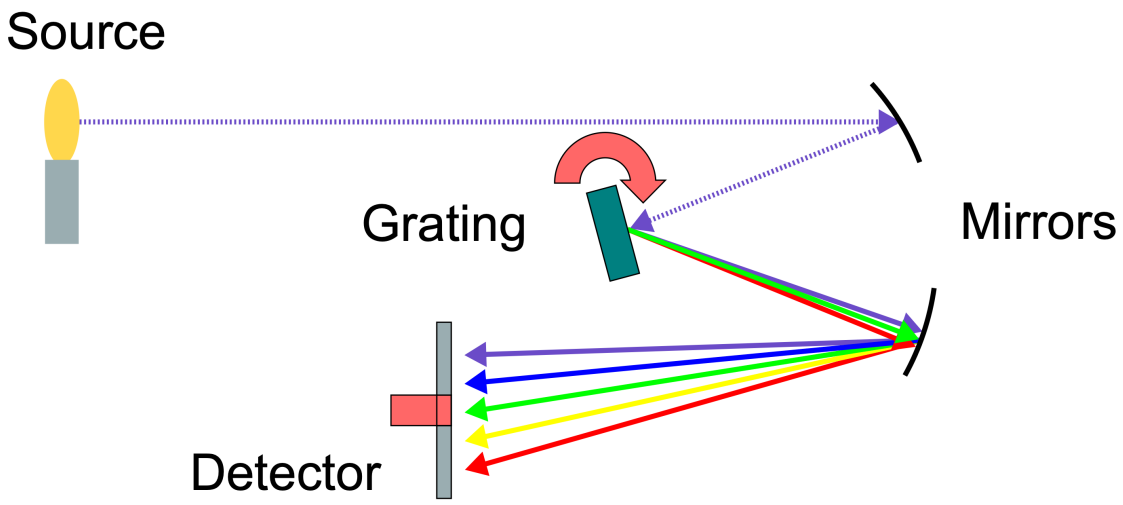

Figure 1: Optical spectrometer scheme[1].

As illustrated in Figure 1, a spectroscope generally uses a movable slit, some mirrors, and a diffraction grating. Through the slit it is possible to regulate the amount of light which is

getting inside the device, which is then reflected by a first mirror on the diffraction grating. At this point the second mirror is adjusted such that only the radiation which the desired wavelength reaches the device.

1. Wikipedia. Optical spectrometer.