Electronic Spectra of Benzene

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Practical:

Abstract

The basic understanding of the quantum mechanical nature of systems is generally covered in most Physical Chemistry textbooks and will be undertaken by most students in second or perhaps first year at university. The description of the lab further reinforces these ideas if the students lack some of the background. The practical also illustrates the different magnitudes of some of the transitions possible (electronic versus vibrational).

Quantum mechanical transitions are responsible for many everyday events. The most obvious examples involve the production of light for example in neon signs and lasers such as the diode laser used in CD players.

Knowledge of the quantum mechanical nature of matter is useful in this practical. The lab skills required are very common for most undergraduate students for the absorption part of the experiment. All modern instruments will be computer driven and the operational is quite simple. The laser part of the experiment can be more complicated and students will need a basic introduction to the system but then should be able to collect the data independently.

Duration

Prior to Lab	1 hour
In Laboratory	12 hours
After Laboratory	2 hours

Further comments

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