

## 54. Study of Plant Physiology by Synchronous Luminescence Spectroscopy

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### ABSTRACT

In this technique the fluorescence signal is recorded by simultaneously scanning both the excitation and emission wavelengths at same speed with a fixed wavelength interval between the excitation and emission wavelengths. Since it takes the advantage of the absorption as well as emission properties of the molecules, it leads to considerable amount of simplification in the measured fluorescence spectral profile. In the present attempt we are going to use the synchronous luminescence spectroscopy for the study of plant health and classification. As per our information the type of measurements made by us is the first report of this kind. It is seen that more information can be obtained from the analysis of synchronous luminescence spectra of the plant leaves.

**Key words:** Photosynthesis, Deuterium/Halogen source, SL spectra.