

Name: \_\_\_\_\_

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**Analytical Chemistry II – Quiz (12<sup>th</sup> April, 2022)**

- 1) Explain the difference between a fluorescence emission spectrum and a fluorescence excitation spectrum. Which more closely resembles an absorption spectrum?

In a fluorescence emission spectrum, the excitation wavelength is held constant and the emission intensity is measured as a function of the emission wavelength. In an excitation spectrum, the emission is measured at one wavelength while the excitation wavelengths are scanned. The excitation spectrum yields those wavelengths that are responsible for fluorescence emission which are those that absorb radiation.

- 2) What is chemiluminescence? What instrumentation do we need to measure chemiluminescence?

Chemiluminescence is produced when a chemical reaction yields an excited species that emits light. Instrumentation for chemiluminescence detection is simple. The main part is typically photomultiplier tube, while monochromator is not required.