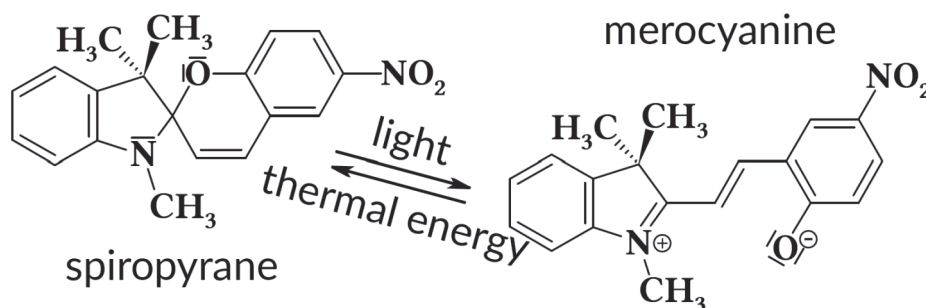


Name: _____ Date: _____

Photoluminescence (Sek. II/upper secondary)
Luminous colours – fluorescence and phosphorescence

Group S: Luminescence within a [s]olution

E2 Dissolve 5 of mg spiropyrane each in three different test tubes in 5 mL of xylene (or n-heptane), acetone, and ethanol, respectively. Irradiate each of the three solutions with the violet LED torch in the dark for one minute. Look at the solutions in the daylight and identify the resulting colours. Note down all your observations.



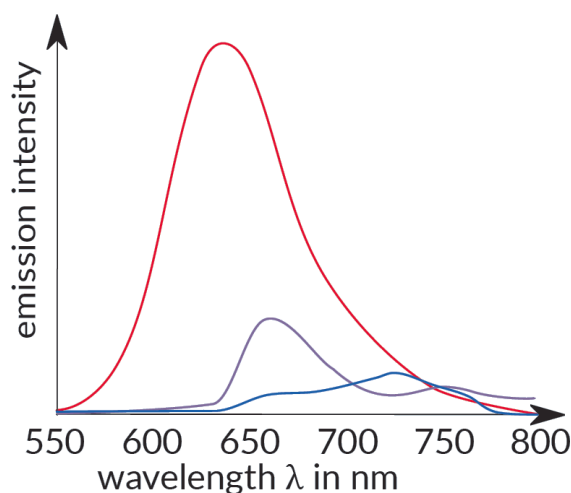
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S1 Describe the diagram. Then Assign the three emission spectra of merocyanine to the three different solvents. Give reasons for your choice.



S2 Draw formulae showing the intermolecular interactions within three different solutions. Name the intermolecular forces between a merocyanine-molecule and the respective solvent molecules.

S3 Conduct some research regarding the concept of 'particle aggregation'. By means of your findings, justify why the three solutions show different fluorescence intensities.

