

Information Sheet for Optical (UV-vis + Fluorescence) measurements

General description of your sample:

1. We provide each group with 5 batches of 1.0 mL of CdSe NP solutions.
2. The 5 vials with the CdSe solutions that you are given at the beginning of the project must be used for all three experiments of this project. Be careful when you handle these solutions. We will not refill them!
3. If needed, you can dilute the solutions with hexane. Do not mix the original sample with the diluted one, store them in separate vials/eppendorfs. Do not dilute the solutions too much. You will not be able to reconcentrate them.
4. Operate the NP solutions only in the fume hood.

For optical experiments, we will provide:

1. Two 1 cm*1 cm*4 cm cuvettes made of quartz (Price: > 150 CHF per cuvette).
2. Two Agilent Cary 60 UV-Vis spectrometers (one per group).
3. Two Agilent Cary Eclipse Fluorescence Spectrometers (one per group).

Tips:

1. Always consider the concentration. Does concentration matter? You might want to dilute the solution and test again.

Location: CH B0 374

TA: Ray Cowen

Information Sheet for DLS measurements

General description of your sample:

1. We provide each group with 5 batches of 1.0 mL of CdSe NP solutions.
2. The 5 vials with the CdSe solutions that you are given at the beginning of the project must be used for all three experiments of this project. Be careful when you handle these solutions. We will not refill them!
3. If needed, you can dilute the solutions with hexane. Do not mix the original sample with the diluted one, store them in separate vials/eppendorfs. Do not dilute the solutions too much. You will not be able to reconcentrate them.
4. Operate the NP solutions only in the fume hood.

For DLS experiments, we will provide:

1. Two 1 cm*1 cm*4 cm cuvettes made of quartz (Price: > 150 CHF per cuvette).
2. Two DLS spectrometers, Malvern Zetasizer Pro and Nano-ZS .

Tips:

1. Always consider the concentration. Does concentration matter? You might want to dilute the solution and test again.

Location: CH B0 374 and CH C0 392

TA: Sara Bassetta

Information Sheet for TEM measurements

General description of your sample:

1. We provide each group with 5 batches of 1.0 mL of CdSe NP solutions.
2. The 5 vials with the CdSe solutions that you are given at the beginning of the project must be used for all three experiments of this project. Be careful when you handle these solutions. We will not refill them!
3. If needed, you can dilute the solutions with hexane. Do not mix the original sample with the diluted one, store them in separate vials/eppendorfs. Do not dilute the solutions too much. You will not be able to reconcentrate them.
4. Operate the NP solutions only in the fume hood.

For TEM experiments, we will provide:

1. 5 carbon-coated copper TEM grids.
2. LVEM 5 benchtop electron microscope (the two groups will work on the same microscope, one after the other)

Tips:

1. Always consider the concentration. Does concentration matter? You might want to dilute the solution and test again.

Important:

The TEM sample preparation is done one week before the TEM experiment session. Bring your lab coat and goggles. During the brainstorm session preceding your TEM session, the brainstorm TA will let you know when you should go to the preparation room (CH B0 374) where you will prepare the grids under the supervision of one of the TAs.

Location: CH A0 398

TA: Moritz Tritschler