

CLV

Chopped Light Voltammetry



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1. Startup


Chopped light voltammetry (CLV) is easily activated by using the pull down menu as shown in Fig. 1. To open the pull down menu click onto the Z-icon  in the title bar of the Thales window.



Fig. 1 Start of CLV using the pull down menu

After initialization of the potentiostats, the main window of CLV is displayed (see Fig. 2).



Fig. 2 Main screen of CLV

2. Light Source Control

Clicking the torch light icon opens the light source control menu (Fig. 3). Use the open calibration data entry to load the calibration file of the light source used. Now intensity of the illumination phases can be directly set in W/m^2 .



Fig. 3 Light source control

3. Cell Control

Cell control (Fig. 4) can be used to access the testsampling of the cell potentiostat (internal potentiostat of Zennium / IM6). The cell potentiostat is automatically switched on in potentiostatic mode at the beginning of a voltage scan. Therefore it is not necessary to configure it before starting a scan. At the end of a scan the cell potentiostat remains active at the end potential of the voltage scan.



Fig. 4 Cell Control

4. Voltage Scan Parameters

Use voltage scan parameters (Fig. 5) to configure the settings of the scan. Potential is swept from the 1st edge potential to the 2nd edge potential with the given scan speed. The number of samples / s defines how many data points are recorded. Light period time is considered the sum of illumination time and dark time.

Voltage Scan Parameters	
1. Edge Potential	0.000 V
2. Edge Potential	0.500 V
Scan Speed	20m V/s
# Samples / s	10
Light period time	1 s

Fig. 5 Voltage Scan Parameters

5. Save and Export Data

After a voltage scan data can be reviewed using the Last scan button (Fig. 6 left hand side). Data can be saved in Zahner binary format or exported to an ASCII list containing columns of elapsed time, voltage, current and light intensity.

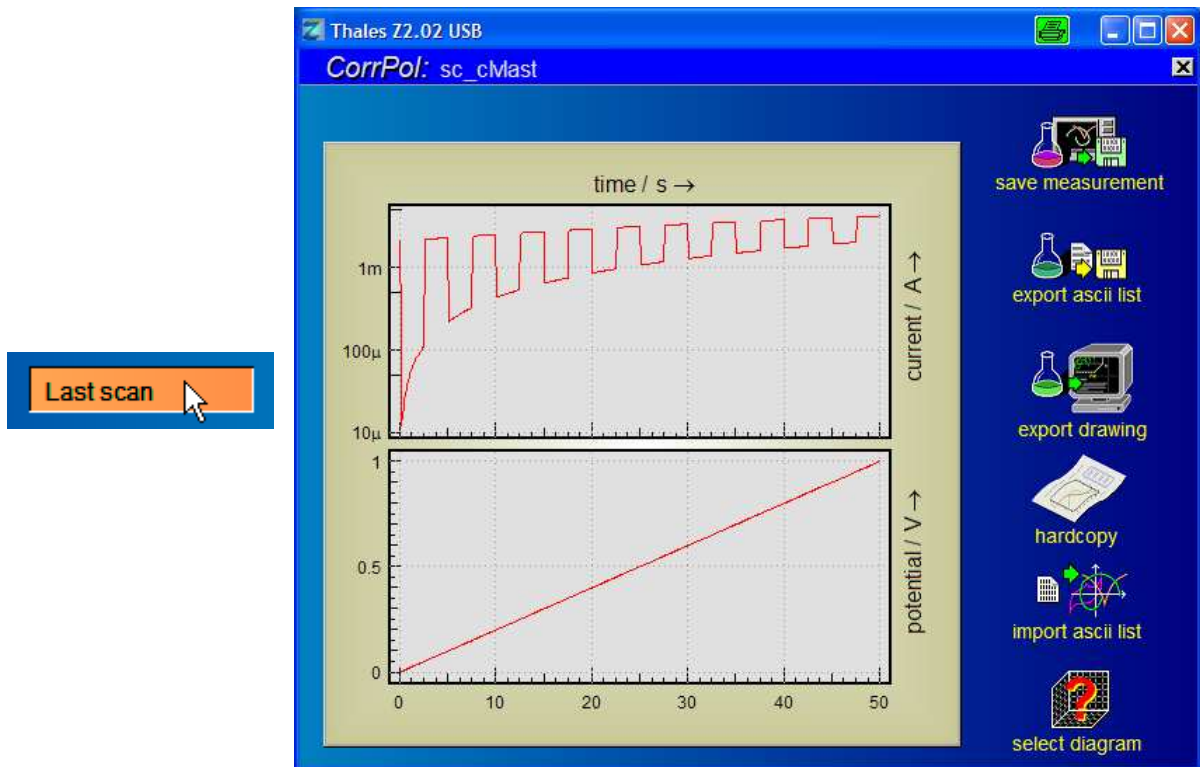


Fig. 6 Saving and exporting data