



Discover  
Autolab  
Spectro

# One-stop-shop for spectroelectrochemistry

Autolab supplies the complete spectroscopy setup as well as the electrochemical instruments with total flexibility in choice of potentiostat, all controlled from the NOVA software package.

Timing is of the essence and executed from the Autolab potentiostat, accurately synchronized between electro-chemistry and spectroscopy signals.

Opens new possibilities for more complete analysis of electron transfer processes and complex redox reactions, characterization of reaction products and intermediates, optical and electrochemical processes investigated simultaneously.

## Key features

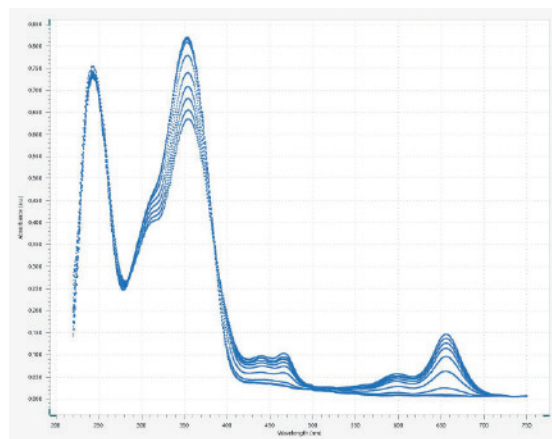
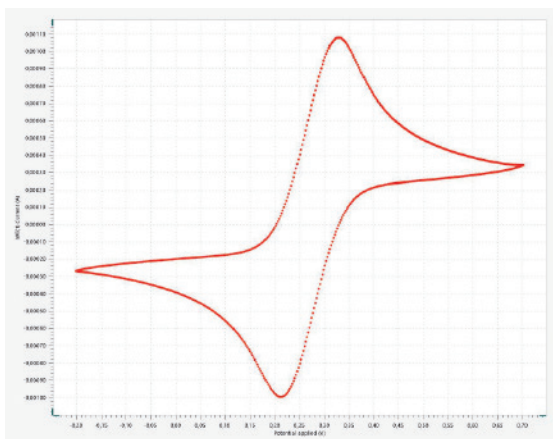
- One integral software package
- Synchronized electrochemical signals and spectra
- Dark and blank spectrum subtraction
- Absorbance and transmittance calculations
- Real time spectra
- Automatic and manual shutter control
- Flexible and programmable methods
- Selectable integration time

3 year  
instrument warranty

## Applications

- Bioelectrochemistry
- Organometallic reactions
- Redox polymer processes
- Organic electrochemical processes

 **Metrohm**  
Autolab



Data and analysis: spectroelectrochemical analysis of Methyl 5-methyl-3-phenyl-1-p-tolyl-4,5-dihydro-1H-pyrazole-5-carboxylate.

### Package

- Any Autolab PGSTAT instrument
- Autolab Spectrophotometer UA or UB (optional)
- Autolab Light Source
- Autolab Optical Fiber
- Dedicated spectroelectrochemical cell

### Experimental method

- Dark spectrum collected with the light off
- Reference spectrum collected in supporting electrolyte with light on
- Electrochemical measurement with spectra collected at user defined intervals (i.e. CV or LSV)
- Data represented as overlay of absorbance or transmittance spectra and electrochemical signal
- Observe changes in spectra as a function of electrochemical environment

### Specifications

Autolab Spectrophotometer UA

- UV/VIS/NIR
- Wide wavelength range 200–1100 nm

Autolab Spectrophotometer UB

- UV/VIS
- Wavelength range 200–850 nm, higher resolution

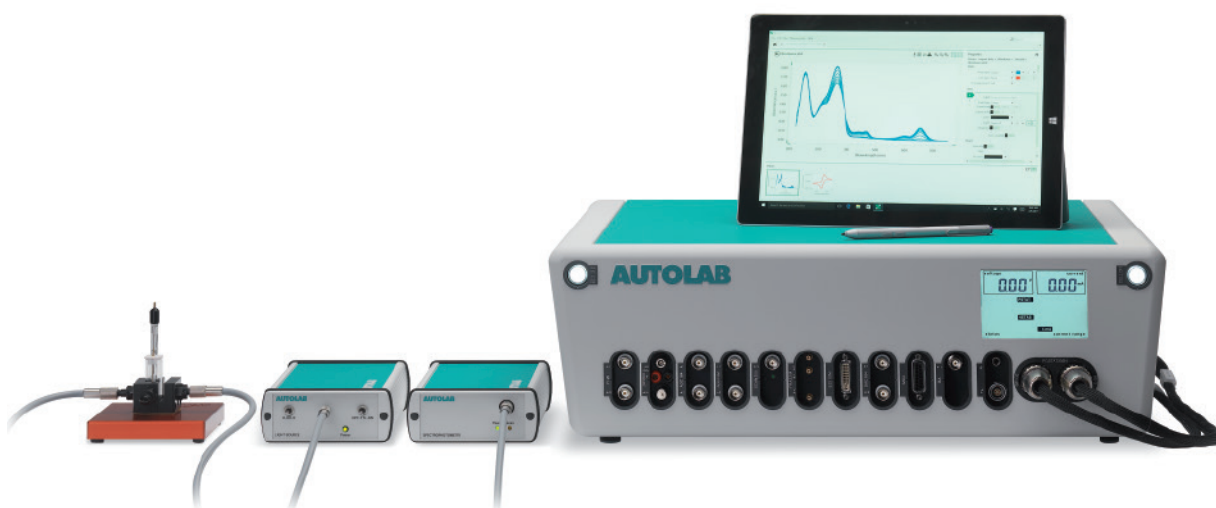
Autolab Light Source

- Deuterium 200–400 nm
- Halogen 400–2500 nm

### Reference

<http://www.metrohm.com/applications>

- **AN-EC-009** – Spectroelectrochemical measurements



**Dedicated to research**

[www.metrohm.com](http://www.metrohm.com)

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