

AUTOLAB

NOVA

Advanced

Electrochemical

Software

**DEDICATED
TO RESEARCH**

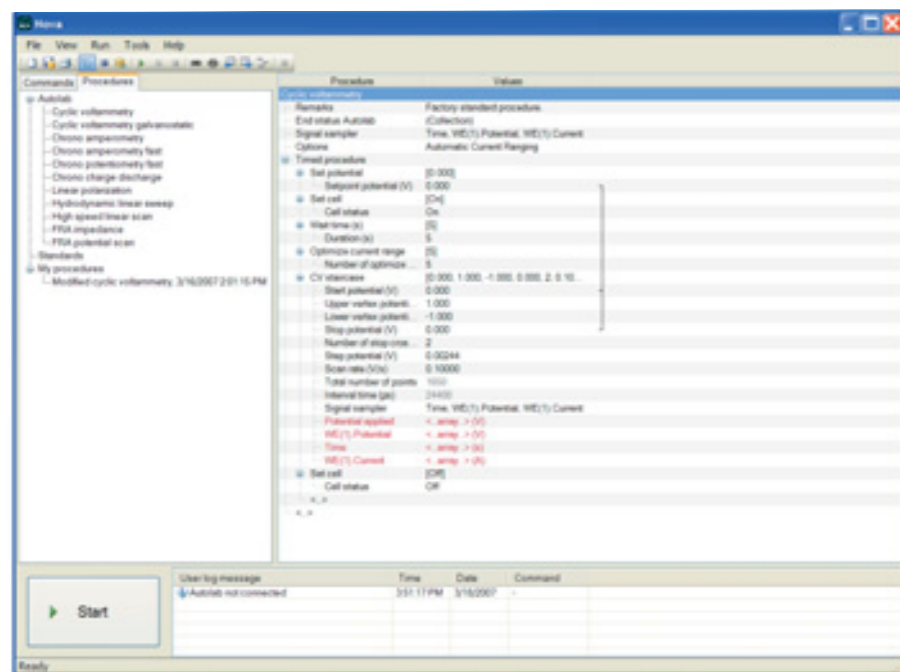
NOVA - Advanced Electrochemical Software

NOVA is Eco Chemie's new software package, designed to control all the Autolab instruments with USB interface.

Designed by electrochemists for electrochemists and integrating over two decades of user experience and the latest .NET software technology, NOVA brings more power and more flexibility to your Autolab potentiostat/galvanostat.

Flexible procedure editor environment

The object-based design of NOVA provides a flexible procedure setup interface. Rather than using rigid pre-defined electrochemical methods, NOVA proposes independent instructions or commands, that can be used as individual building blocks to create any procedure, from the most simple to the most elaborated.



NOVA is designed to answer the demands of both experienced electrochemists and newcomers alike. Setting up an experiment, measuring data and performing data analysis to produce publication ready graphs can be done in a few mouse clicks.

NOVA is different from other electrochemical software packages. As all electrochemical experiments are different and unique, NOVA provides an innovative and dynamic working environment, capable of adapting itself to fit your experimental requirements.

With NOVA you do not just use an electrochemical method, you design your electrochemical method.

NOVA comes with a library of ready-to-use procedures to perform most of the typical electrochemical measurements. These procedures can be used as templates to develop custom-made electrochemical methods.

The user interface provides a simple graphical environment in which the procedure can be constructed and edited. Using the drag and drop method, NOVA provides an easy to use graphical procedure editor.

Convenient tools like repeat loops, parameter links and increments, and predefined sets of values make routine analysis easier and let you create dynamic procedures, in which parameters are updated during the measurement.

Even data analysis can be included in the procedure.

The sampling and data acquisition settings can be defined for each command, ensuring that the relevant data is always measured under optimal conditions.

Each procedure can be saved into a user-defined database as a new electrochemical method and can be shared with other users.



AVAILABLE TECHNIQUES

Cyclic and Linear Sweep Voltammetry

- Staircase cyclic and linear sweep voltammetry
- True linear scan cyclic voltammetry⁽¹⁾
- High-speed linear scan voltammetry (up to 10 kV/s)^(1,2)
- Ultra-high speed linear scan voltammetry (up to 250 kV/s)^(1,3)
- Open Circuit Potential

Chrono methods

- Chrono methods (interval time > 1 ms)
- High-speed chrono methods (interval time > 1 μs)⁽²⁾
- Ultra-high speed chrono methods (interval time > 100 ns)⁽³⁾

Impedance methods

- Electrochemical impedance spectroscopy (EIS)
- Custom transfer function definition (IMPS, EHD, ...)
- Potential scan

TOOLS AND ACCESSORIES

- Hydrodynamic measurements (RDE control)
- Electrochemical surface plasmon resonance
- Bi-potentiostat measurements
- Analog inputs and outputs
- Electronic load interface

- (1) Requires the new SCAN250 module
- (2) Requires the ADC750 module
- (3) Requires the new ADC10M module

Autolab/PSTAT302N, successor to the highly successful PSTAT30 with the new SCAN250 and ADC10M modules.

Powerful data presentation

Recorded data points are displayed, in a clear and efficient way, in a dedicated view, called the measurement view.

Data analysis is performed in the analysis view. Switching from one view to another can be done by a simple mouse click.

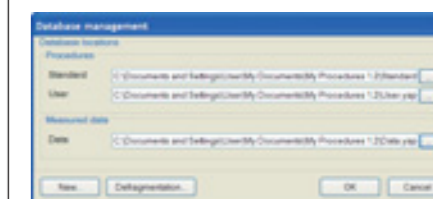
This ensures a less cluttered work space and allows you to analyze previously recorded data while the measurement is running, or start working on the next procedure while the measurement is finishing.

When the measurement is finished, the recorded data points are automatically stored in the user-defined database. Even if the measurement is aborted or interrupted, everything is saved so that data cannot be lost.

A floating Autolab display window is available at any time, providing real time information about the measured data points, as well as the instrument settings.

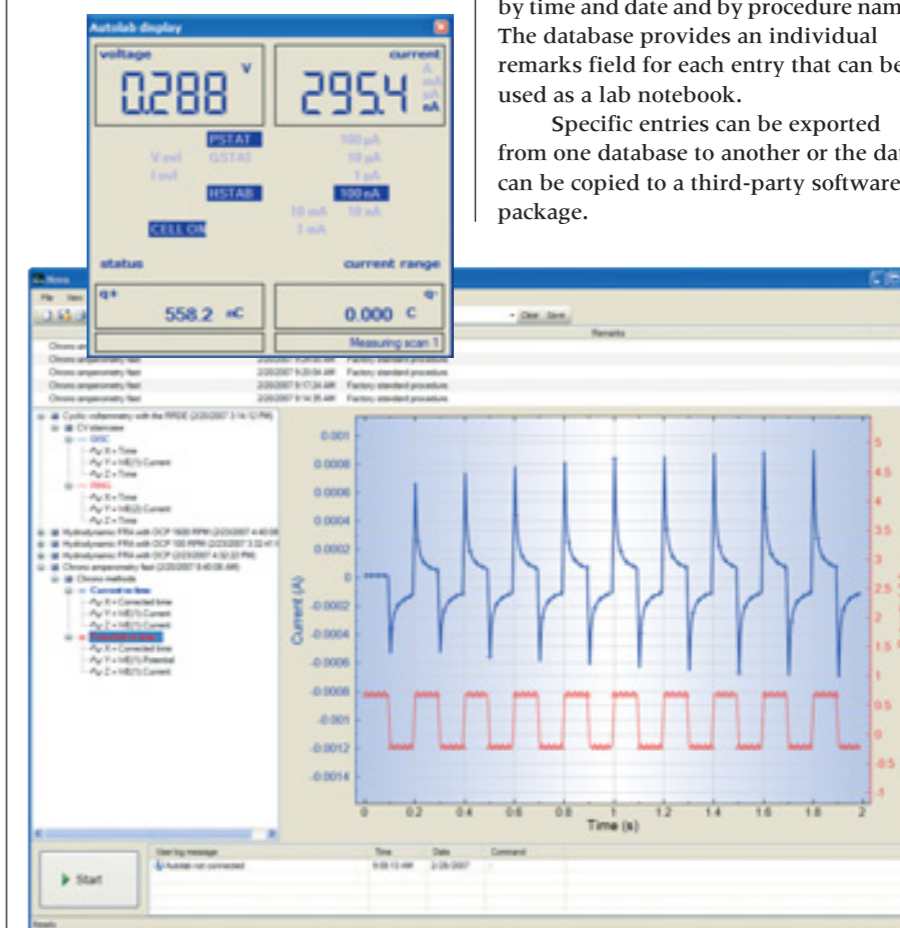
THE DATABASE - YOUR LAB NOTEBOOK

Procedures and measurements are automatically stored into user-defined databases, which can be located on any storage device. This provides a simple working environment for multiple users. Data backup requires just a few clicks.



Each entry is logged by procedure, by time and date and by procedure name. The database provides an individual remarks field for each entry that can be used as a lab notebook.

Specific entries can be exported from one database to another or the data can be copied to a third-party software package.



Support for new modules and special applications

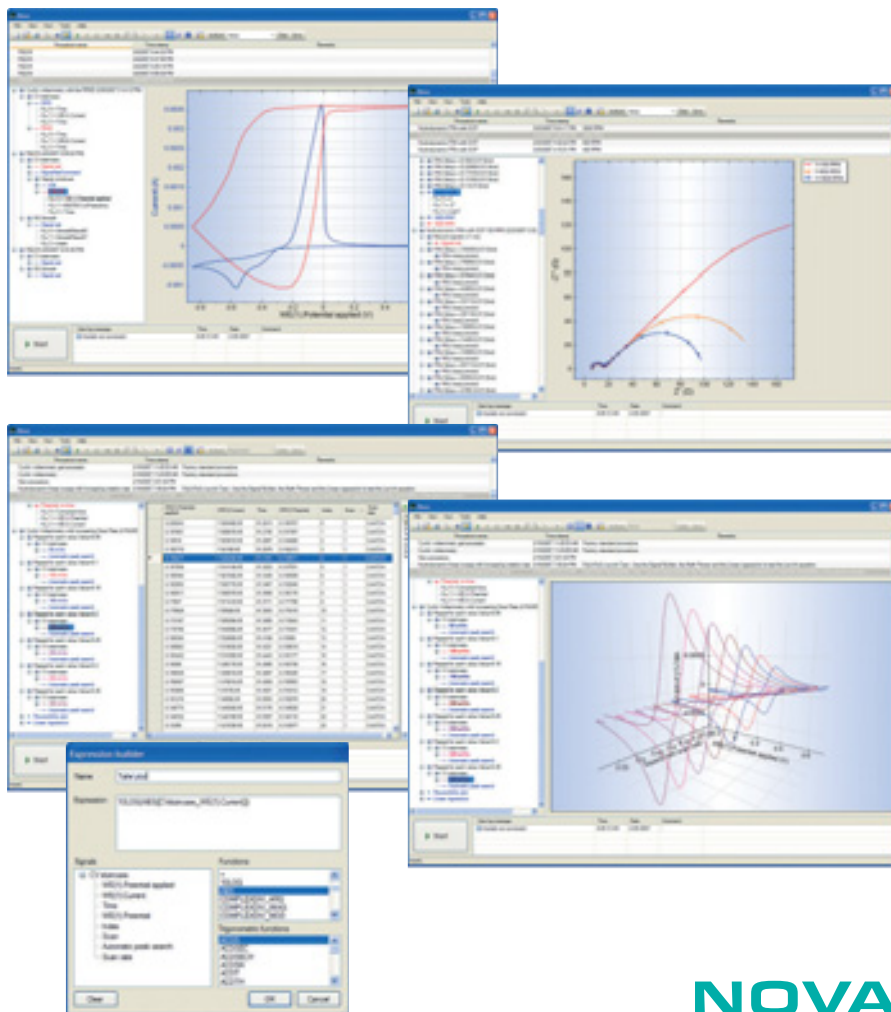
NOVA is designed to support the latest optional modules for the Autolab PGSTAT series while ensuring backwards compatibility with earlier hardware configurations.

It allows you to perform ultra-high speed chrono measurements with interval times down to 100 ns with the new ADC10M module, or high speed

true linear scan cyclic voltammetry up to 250 kV/s with the additional SCAN250 module.

Advanced data analysis

NOVA provides a dedicated analysis environment featuring an advanced graphics engine to create any number of publication-ready 2 and 3-Dimensional plots.



NOVA

NOVA offers more in terms of number of recorded data points and is capable of running a sequence of hundreds of steps without any interruption. Sampling of data points can be switched on periodically during long measurements.

Additionally, NOVA is fully customizable, allowing you to define your own acquisition parameters, the transfer function for any form of impedance, offsets and multipliers for the analog inputs and outputs of the instrument. It is designed as a generic electrochemical interface and it can easily be adapted to any kind of special application.

Tools like individual axis scaling, overlays, multiple Y axes, plot additions, zooming and rotation help you display the relevant data in clear, publication-ready graphs. Each plot can be saved as an image file or directly pasted into a paper or a presentation.

Powerful data analysis tools can be combined with a built-in electrochemical spreadsheet to generate new data and create new plots. Filter, process, analyze and plot the relevant data fast.

NOVA is designed to help you analyze the data quickly without having to export it to a third-party software.

Analysis progress can be saved to the database at any time. Peak search results, plot settings, calculated data points, additional plots are added to the database's original entries, turning each measurement into a complete workbook that you can share with your coworkers.

NOVA is compatible with all the Autolab instruments with a USB interface and is based on the Microsoft .NET framework. The following PC configuration is recommended: Processor 2 GHz or higher, 80 GB HDD, 1 GB RAM, USB port, Windows 2000, XP or Vista.

ECO CHEMIE

UTRECHT
THE NETHERLANDS
E-MAIL
NOVA@ECOCHEMIE.NL
HOMEPAGE
WWW.ECOCHEMIE.NL



ISO 9001:2000