BioLogic

Instruments for All Solid-State Batteries.

A comprehensive solution to empower innovation





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BioLogic empowers All Solid-State Battery innovation at every stage



The transition from liquid to solid electrolytes introduces its own set of challenges:

- **Reduced conductivity** of lithium ceramics, polymers, resins and glass composites at room temperature.
- **Increased impedance** at interfaces.
- Stabilization of electrolyte to **more positive potential**.

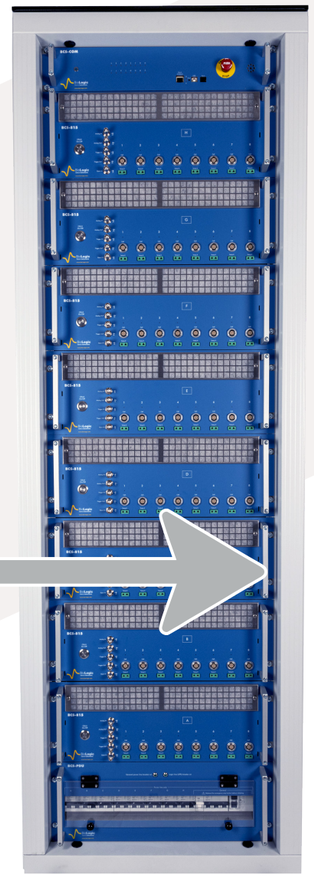
EC-Lab® & VMP-300, the perfect combination for ASSB innovation:

- EIS up to 7 MHz
- EIS quality indicators
- ZFit for data modeling
- Remote or on-site connectivity
- Safety limits
- High current boosters

Throughout the full ASSB value chain, every single component must be thoroughly tested. This includes anode, cathode, and solid electrolyte, all the way to the commercial cell. There are unique challenges at every step:

- Material conductivity studies
- Interface characterization
- Fundamental investigations of full cells
- Proof of concept studies of full cells
- Commercial cell validation & aging
- Screening & benchmarking for modules
- Integration & second life evaluation





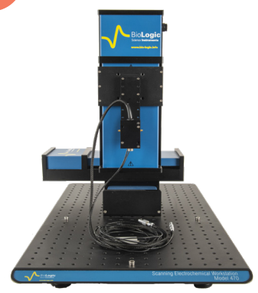
From research & development to validation

Materials & components research

Fundamental investigations of full cells

Proof of concept studies of full cells

Commercial cell validation & aging



M470

Scanning electrochemical workstation

- Customize with up to 7 different modules
- Differentiate local electrochemical effects
- ic-ac-SECM



MTZ-35

Impedance analyzer

- Atmospheric and pressure control
- Compatible with temperature control units
- EIS up to 35 MHz



VMP-300

Premium potentiostats

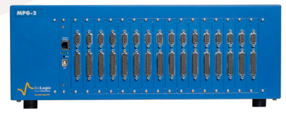
- Fast CC-CV shift
- Climate chamber management
- 3-electrode cell
- Wide range of techniques
- Up to 16 channels
- ±500 mA (up to ±150 A)
- EIS up to 7 MHz



VMP-3e

Essential potentiostats

- FlexP booster up to 60 V
- Stack mode
- Fast CC-CV shift
- Climate chamber management
- 3-electrode cell
- ± 1 A (up to ±800 A)
- EIS up to 1 MHz



MPG-2xx

Research grade battery cycler

- Fast CC-CV shift
- Climate chamber management
- 3-electrode cells (MPG-2)
- Negative voltage
- ±100 mA / ±5 A
- EIS up to 100 kHz

BCS-8xx

Ultra-precision battery cycler

- High throughput cell screening
- Statistical study of cells
- Fast CC-CV shift
- Climate chamber management
- ±150 mA / ±1.5 A / ± 15 A (up to ±120 A)
- EIS up to 10 kHz

Integrated into a high-end measurement chain



Flat sample holder
CESH-e
For controlled environments

Quartz Crystal Microbalance
BluQCM
With a range sensors and cells

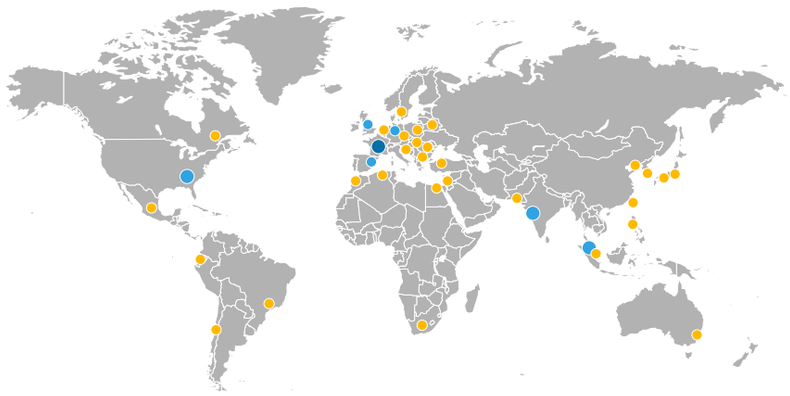
Climate chamber
For safety and temperature control

Cell holders
For coin, cylindrical and pouch cells

We serve our customers worldwide through our subsidiary offices and our extensive distribution network.

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Always by your side. Wherever you are.

We here at BioLogic pride ourselves on the quality and robustness of our instruments. However if you, for whatever reason, encounter a problem with your instrument, our global support network will help find you a solution quickly and effectively.

If you need more information, or perhaps a little inspiration, you can browse our ever-growing support database with hundreds of Learning Center articles, application/technical notes and support videos at www.biologic.net.

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Shaping the future. Together.

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