Electrochemical Cell Integrated with Ultra-High Vacuum (UHV) Chamber and Sample Transfer



Description and Features

Electrochemical cell integrated with compact ultrahigh vacuum (UHV) chamber based on CF2.75" flanges with sample transfer capability.

Includes:

- Electrochemical Cell and Electrodes
- Vertical and Horizontal Transfer of Sample
- Sample Mounting Adapter for Wet Electrochemical Measurements
- Flag Style Sample Holders Compatible with Thermal Annealing up to 1400 °C
- Battery Split Test Cell Configuration



Applications

Unique tool for nanoscale monitoring and experimental modelling of electrochemical processes:

- Electrodes for Battery, Fuel Cell and Water Splitting
- Electrodeposition of Epitaxial Films
- Materials for CO2 capture and conversion
- Single Atom Catalysis
- Corrosion Studies
- Epitaxial Graphene Interactions
- Electrodes for Battery, Fuel Cell and Water Splitting
- Substrate crystallography Induced by Soft Matter Interactions (Organic and Biological Molecules)

Canada: 200 Stronach Cres., London, Ontario, N5V3A1 USA: 6405 Inducon Drive West, Sanborn (Niagara County), NY, 14132 TEL. (519) 457-0878, FAX (519) 457-0837 E-mail: info@ocivm.com Website: www.ocivm.com

Split Test Cell with transferable electrode and UHV compatibility for battery R&D

Model EC-UHV-75-STC



Independent attachment to:

-SEM for surface topography and EDX composition

- XPS for chemical analysis
- STM for nanoscale microscopy
- QMS for emitted gas analysis from electrolyte or electrodes
- AES for Li surface concentration and elemental composition
- LEED for surface crystallography on single crystals
- XRD for bulk crystalography

Instant access to the battery cell electrode for in-vacuum characterization at any stage of charge

Integration to UHV system



EC chamber integrated to basic MBE system with LEED-AES spectrometer



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