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MATERIALS

XRD In-Situ Cell for Battery Characterization | Kapton Window

In-situ XRD electrochemical cell with Kapton window for real-time battery material analysis. Single and double-window configurations. Compatible with standard diffractometers.

In-Situ Cells

Materials Characterization

Energy Storage

Electrochemistry & Catalysis

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Product Overview

In-situ XRD electrochemical cell with Kapton window for real-time battery material analysis. Single and double-window configurations. Compatible with standard diffractometers.

In-situ XRD cells allow real-time observation of structural changes in battery electrode materials during charge/discharge cycling. Our cell features a Kapton polyimide window that transmits X-rays while maintaining electrochemical integrity. Essential for studying phase transitions, lattice parameter changes, and crystallographic evolution in battery materials research.

In-situ XRD electrochemical cell with stainless steel body and polyimide (Kapton) film X-ray window. Positive-window version (single-sided) for reflection mode (Bragg-Brentano geometry); dual-window version (double-sided) for transmission mode. Kapton window film offers low absorption for Cu-Kalpha and other common X-ray sources. Synchronized diffraction and electrochemical data acquisition via potentiostat. For operando in-situ characterization of crystal structure evolution during battery charge/discharge, enabling studies of phase transitions, intercalation/de-intercalation mechanisms, and structural relaxation.

Related Guide: XRD In-Situ Cell Setup Guide

Technical Specifications

Parameter	Value	Unit
Window material	Kapton polyimide film	
Body material	Stainless steel	
Configurations	Single-window / dual-window	
Optical mode	Reflection (single) / transmission (dual)	
X-ray source	Cu-Kalpha and common sources	
Technique	In-situ / operando XRD	

Order / Quote

Model	Pack Size	Availability
XRD-DUAL-1	1 complete cell per unit, bubble wrapped	In stock (Amazon / direct)
XRD-POS-1	1 complete cell per unit, bubble wrapped	In stock (Amazon / direct)

Current pricing and ordering: labcorematerials.com/products/xrd-in-situ-cell/

Shipping & Compliance

- Ships as empty hardware. No electrolyte, no lithium. Not classified as dangerous goods.

Contact

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labcorematerials.com/products/xrd-in-situ-cell/