

Electrochemical Testing and Technical Consultancy Price Card-2026

(@All prices Excluding 18% GST)

Sl. No	Technique	Rs	Description/ Specifications
1	Linear Sweep Voltametry (LSV)	₹2999	per electrode
2	Cyclic Voltammetry (CV)	₹2999	per electrode
3	Electrochemical Impedance Spectroscopy (EIS)	₹2999	per electrode
4	Chronopotentiometry (CP) OR Galvonostatic Charge-Discharge (GCD)	₹2999	per electrode
6	Differential Pulse Voltammetry (DPV)	₹2999	per electrode
7	Galvonostatic Intermittent Titration Technique (GITT)	₹2999	per electrode
8	HER Studies (LSV, CV, EIS)	₹7999	per sample
9	OER Studies (LSV, CV, EIS)	₹7999	Per sample
10	Stability Studies	₹2999	Up to 12h after that Extra ₹299/h
11	Electrode Preparation/Utilization, (Ni foam, Torey carbon, Pt/C, Reference Electrode, Electrolyte-KOH, H ₂ SO ₄ , Nafion, Binder, etc)	₹1999	per electrode, per sample
12	Supercapacitor (CV, GCD, EIS)-3 electrode (Half Cell)	₹9999	per electrode
13	Supercapacitor (CV, GCD, EIS)-2 electrode (Full cell)	₹7999	per Cell
14	Coin Cell Fabrication	₹699	per Cell
15	Supercapacitor (CV, GCD, EIS)-Coin Cell	₹5999	per Cell
Electrochemical Sensor (Biomolecules-Glucose, Uric Acid, Ascorbic Acid, Creatinine)			
16	Cyclic Voltammetry (CV)	₹2999	per electrode
17	Electrochemical Impedance Spectroscopy (EIS)	₹2999	per electrode
18	Differential Pulse Voltammetry (DPV)	₹2999	per electrode
19	Interference, stability, repeatability	₹4999	per electrode

Electrochemical Results Analysis & Reporting Charges

Sl. No	Technique	Rs	
1	HER Studies (LSV, CV, EIS, Tafel, stability)	₹14999	**

Analysis & Reporting Includes: **

LSV Data Processing & Interpretation

- Plotting raw and corrected LSV curves with proper baseline adjustment
- Determining onset potential and overpotential at benchmark current densities (e.g., η_{10})
- Identifying activation-controlled and diffusion-controlled regions

CV Data Analysis

- Plotting CV curves with scan-rate corrections for reliable comparison
- Identifying redox features and catalytically active sites
- Extracting double-layer capacitance (C_{dl}) and estimating ECSA for intrinsic activity comparison

EIS Data Modelling

- Generating clear Nyquist and Bode plots
- Fitting data using appropriate equivalent circuit models
- Extracting R_s , R_{ct} , C_{dl} , and diffusion parameters to understand charge-transfer kinetics
- Interpreting interfacial behaviour and catalyst–electrolyte interactions

Tafel Plotting & Mechanistic Insights

- Plotting η vs $\log j$ with proper linear fitting
- Calculating Tafel slope and exchange current density (j_0)
- Identifying the dominant HER reaction pathway (Volmer, Heyrovsky, or Tafel mechanism)

Stability Study Evaluation

- Plotting CA/CP curves and analysing performance retention over time
- Comparing pre- and post-stability LSV to assess durability
- Identifying degradation trends and possible structural/chemical changes

Comprehensive Reporting

- Providing refined, publication-ready plots (LSV, CV, EIS, Tafel, CA/CP)
- Presenting extracted parameters in structured tables
- Offering clear interpretation of catalytic behaviour and performance trends
- Delivering a concise conclusion summarising key outcomes

Importance of These Analyses for HER Research & Manuscripts

- These analyses collectively establish **activity, kinetics, mechanism, and stability**, which are the four mandatory pillars of any high-quality HER study.
- Together, they provide all core electrochemical evidence required for writing a **complete, publication-ready manuscript**, enabling comparison with state-of-the-art catalysts and satisfying reviewer expectations for depth, reproducibility, and scientific rigour.

2	OER Studies (LSV, CV, EIS, Tafel, stability)	₹14999	**
	Analysis & Reporting Includes: ** LSV Data Processing & Interpretation - Plotting raw and corrected LSV curves with baseline adjustment - Determining onset potential and overpotential at standard current densities (e.g., η_{10} / η_{20} / η_{50}) - Identifying kinetic vs. diffusion-limited regions - Smoothing and noise reduction for high-quality comparative plots CV Data Analysis - Plotting CV curves at multiple scan rates for reliable electrochemical profiling - Identifying redox transitions associated with OER-active species (e.g., $\text{Ni}^{2+}/\text{Ni}^{3+}$, $\text{Co}^{2+}/\text{Co}^{3+}$) - Calculating double-layer capacitance (C_{dl}) and estimating ECSA for normalization of intrinsic activity EIS Data Modelling - Plotting Nyquist and Bode plots with statistical fitting - Using equivalent circuit models to extract R_s, R_{ct}, C_{dl}, Warburg elements, etc. - Evaluating charge-transfer kinetics and electrode–electrolyte interfacial behavior - Clear interpretation of kinetic and diffusion contributions to OER performance Tafel Plotting & Mechanistic Insights - Generating accurate Tafel plots (η vs $\log j$) with linear fitting - Extracting Tafel slopes and exchange current density (j_0) - Identifying dominant OER pathway (Adsorption/Deprotonation, M-O intermediate formation, etc.) - Benchmarking catalyst efficiency against literature values Stability Study Evaluation - Plotting CA/CP curves for long-term durability evaluation - Analysing current retention, potential drift, and stability failure modes - Comparing before/after LSV curves to assess surface activation or degradation - Interpretation of catalyst robustness for real-world operation Comprehensive Reporting - Providing high-quality, publication-ready plots for all techniques - Presenting extracted parameters (η, Tafel slope, R_{ct}, C_{dl}, etc.) in structured tables - Delivering in-depth interpretation of catalyst activity, kinetics, mechanism, and durability - Summarising key findings in a concise, manuscript-friendly format		

	Importance of These Analyses for OER Research & Manuscripts - These characterisations together establish the four essential pillars of OER evaluation: Activity, kinetics, mechanism, and stability. - They provide the complete electrochemical evidence required for drafting a scientifically strong, publication-ready OER manuscript. - Reviewers expect LSV, CV, EIS, Tafel, and stability analyses for validating OER performance, benchmarking with existing catalysts, and demonstrating reliability and reproducibility.		
3	Supercapacitor (CV, GCD, EIS, Stability)-3 electrode (Half Cell)	₹14999	**
	Analysis & Reporting Includes:** CV (Cyclic Voltammetry) Analysis - Plotting CV curves at multiple scan rates for electrochemical profiling - Calculating specific capacitance (F/g, F/cm^2, or F/cm^3) from CV curves - Identifying redox peaks (if pseudocapacitive) and differentiating EDLC vs. pseudocapacitive behaviour - Assessing rate capability through shape retention at higher scan rates GCD (Galvanostatic Charge–Discharge) Analysis - Plotting GCD curves at various current densities - Extracting specific capacitance, energy density, and power density - Determining IR-drop and interpreting internal resistance contribution - Evaluating charge–discharge symmetry to understand reversibility EIS (Electrochemical Impedance Spectroscopy) Modelling - Plotting Nyquist and Bode plots with accurate fitting - Extracting R_s (solution resistance), R_{ct} (charge-transfer resistance), and Warburg elements - Interpreting ion diffusion, interface behaviour, and electrode kinetics - Modelling capacitance response using appropriate equivalent circuits Stability / Cycling Performance - Plotting capacitance retention over extended cycles (CV/GCD) - Evaluating coulombic efficiency and charge–discharge stability - Comparing pre- and post-cycling performance to assess material durability - Identifying degradation mechanisms through curve distortion and IR-drop changes Comprehensive Reporting - Providing clean, publication-ready plots for CV, GCD, EIS, and cycling data - Presenting extracted parameters (specific capacitance, R_s/R_{ct}, retention %, IR-drop, etc.) in structured tables		

	- Delivering clear interpretation of capacitive behaviour, kinetics, and long-term performance - Summarising results in a concise, manuscript-friendly technical report Importance of These Analyses for Supercapacitor Research & Manuscripts - Together, CV, GCD, EIS, and cycling stability provide the complete electrochemical fingerprint of a supercapacitor material. - These analyses validate charge storage mechanism, performance, efficiency, kinetics, and durability, all of which are essential for a high-quality, publication-ready manuscript. - Reviewers expect these four core techniques for benchmarking new electrode materials against state-of-the-art supercapacitors.		
4	Supercapacitor (CV, GCD, EIS, Stability)-2 electrode (Full cell)	₹9999	**
	Analysis & Reporting Includes:** CV (Cyclic Voltammetry) Analysis - Plotting CV curves at multiple scan rates for full-cell performance evaluation - Calculating specific capacitance (F/g, F/cm², or F/cm³) from CV curves - Assessing device behaviour (EDLC vs. pseudocapacitive characteristics) - Evaluating rate capability through CV shape retention at higher scan rates - Determining voltage window suitability and operational stability GCD (Galvanostatic Charge–Discharge) Analysis - Plotting charge–discharge curves at several current densities - Extracting: - Specific capacitance of the full cell - Energy density (Wh/kg or Wh/L) - Power density (W/kg or W/L) - Measuring IR-drop to interpret internal resistance and electrode balancing - Identifying charge–discharge symmetry for reversibility assessment EIS (Electrochemical Impedance Spectroscopy) Modelling - Plotting Nyquist and Bode plots with high-quality curve fitting - Extracting R_s (solution resistance), R_{ct} (charge-transfer resistance), and diffusion-related components - Analysing ion transport efficiency and electrode–electrolyte interactions - Determining device-level impedance and performance-limiting parameters - Equivalent circuit modelling for full-cell devices Stability / Cycling Performance - Plotting long-term cycling data (CV/GCD) for capacitance retention - Evaluating coulombic efficiency, charge–discharge durability, and performance degradation		

- Comparing pre- and post-cycling CV/GCD curves to identify changes in behaviour
- Analysing loss mechanisms such as electrode degradation, electrolyte breakdown, and resistance increase

Comprehensive Reporting

- Providing clean, publication-ready graphs for CV, GCD, EIS, and cycling stability
- Presenting key parameters in tables:
 - Specific capacitance
 - Energy & power density
 - R_s/R_{ct} values
 - Retention %, coulombic efficiency
 - IR-drop trend analysis
- Delivering a concise, interpretation-rich report suitable for journal manuscripts, theses, or client presentations
- Highlighting comparative performance with literature benchmarks

Instructions

1. The prices listed are **indicative** and provided **for reference only**.
2. **Final charges** will be communicated after further **email or phone discussion**, based on a clear understanding of the **actual testing and consultancy requirements**.
3. Prices are **subject to change** depending on **sample nature, testing complexity, and scope of work**.
4. **Testing duration and slot allocation** depend on **facility and instrument availability**.
5. The testing timeline may vary from **1 to 3 weeks after receipt of payment**.
6. All the above prices are exclusive of GST. **An additional 18% GST will be applicable** and added to the final invoice as per Government of India regulations.

For ESSNANO MATERIALS LAB Pvt. Ltd.



Director