

North America Electrochemical Transformation Market, Opportunity, Growth Drivers, Industry Trend Analysis and Forecast, 2024-2032

Market Report | 2024-08-23 | 75 pages | Global Market Insights

AVAILABLE LICENSES:

- Single User \$3250.00
- Multi User \$3750.00
- Enterprise User \$5750.00

Report description:

North American electrochemical transformation market was valued at USD 572.3 million in 2023 and is anticipated to grow at a CAGR of 8.5% from 2024-2032. This growth is driven by advancements in energy storage, environmental sustainability, and industrial efficiency. The increasing use of electrochemical reactors in green hydrogen production, particularly in water electrolysis, will further bolster the industry. The industry is set for substantial growth due to the deployment of electrochemical reactors in renewable energy storage solutions like batteries and supercapacitors. The global push for carbon-neutral technologies is spurring R&D in CO₂ reduction. For instance, in September 2023, Pulsenics Inc. from Canada, in collaboration with BioLargo Water and backed by Next Generation Manufacturing Canada (NGen), introduced a system that assesses electrode performance in electrochemical water treatment reactors five times faster.

The overall North America electrochemical transformation industry is classified based on the process type, application, and region. Market segmentation by process type includes electrochemical oxidation, electrochemical reduction, and electrosynthesis of chemicals. The electrochemical reduction segment is forecasted to exceed USD 420 million by 2032, driven by its role in CO₂ reduction and advancements in catalyst development, especially with nanomaterials and innovative electrode designs. This growth is further supported by the increasing regulatory pressures to lower carbon emissions and the transition towards sustainable chemical processes. Additionally, the integration of renewable energy sources, such as solar and wind, into electrochemical systems is expected to bolster the adoption of electrochemical reduction technologies.

Applications span pharmaceuticals, fine chemicals, chemical manufacturing, energy storage, and conversion. The chemical manufacturing segment is set to grow at over 8% from 2024 to 2032, driven by electrification in chemical synthesis and advancements in electrode materials and catalysts. Increased government funding for sustainable chemical production and a shift towards circular economy practices are key drivers accelerating this trend. Furthermore, collaborations between chemical manufacturers and technology providers are expected to enhance process efficiencies and reduce operational costs in chemical manufacturing.

The U.S. market is projected to exceed USD 800 million by 2032, fueled by advancements in electrocatalysis and supportive administrative initiatives. Government bodies are prioritizing research in electrochemical technologies. For instance, in May 2023,

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Argonne National Laboratory and the University of Illinois Chicago co-hosted the Next Generation Electrochemistry (NGenE) event to attract emerging scientists to the expanding electrochemical field. As electrochemical solutions align with the nation's decarbonization strategy, the industry's landscape is set to flourish.

Table of Contents:

Report Content

Chapter 1 Methodology and Scope

1.1 Market definitions

1.2 Base estimates and calculations

1.3 Forecast calculation

1.4 Data sources

1.4.1 Primary

1.4.2 Secondary

1.4.2.1 Paid

1.4.2.2 Public

Chapter 2 Industry Insights

2.1 Industry ecosystem analysis

2.2 Regulatory landscape

2.3 Industry impact forces

2.3.1 Growth drivers

2.3.2 Industry pitfalls and challenges

2.4 Growth potential analysis

2.5 Porter's analysis

2.5.1 Bargaining power of suppliers

2.5.2 Bargaining power of buyers

2.5.3 Threat of new entrants

2.5.4 Threat of substitutes

2.6 PESTEL analysis

Chapter 3 Competitive Landscape, 2024

3.1 Strategic outlook

3.2 Innovation and sustainability landscape

Chapter 4 Market Size and Forecast, By Process Type, 2021 - 2032 (USD Million)

4.1 Key trends

4.2 Electrosynthesis of chemicals

4.3 Electrochemical reduction

4.4 Electrochemical oxidation

Chapter 5 Market Size and Forecast, By Application, 2021 - 2032 (USD Million)

5.1 Key trends

5.2 Chemical manufacturing

5.3 Energy storage and conversion

5.4 Pharmaceuticals and fine chemicals

5.5 Others

Chapter 6 Market Size and Forecast, By Country, 2021 - 2032 (USD Million)

6.1 Key trends

6.2 U.S.

6.3 Canada

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Chapter 7 Company Profiles

7.1 Aclarity Inc.

7.2 Asymchem Inc.

7.3 Bloom Energy

7.4 LG Chem

7.5 Pulsenics

7.6 SeeO2 Energy Inc.

7.7 Symeres

7.8 Twelve Benefit Corporation

7.9 Vapourtec Ltd

7.10 Verdox, Inc.

□

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

North America Electrochemical Transformation Market, Opportunity, Growth Drivers, Industry Trend Analysis and Forecast, 2024-2032

Market Report | 2024-08-23 | 75 pages | Global Market Insights

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User	\$3250.00
	Multi User	\$3750.00
	Enterprise User	\$5750.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-03-02"/>
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

