

Global Protonic Ceramic Fuel Cell (PCFC) Market Research Report 2017

<https://marketpublishers.com/r/GDFC7E31230EN.html>

Date: December 2017

Pages: 124

Price: US\$ 2,900.00 (Single User License)

ID: GDFC7E31230EN

Abstracts

This report studies the Protonic Ceramic Fuel Cell (PCFC) market status and outlook of global and major regions, from angles of manufacturers, regions, product types and end industries; this report analyzes the top manufacturers in global and major regions, and splits the Protonic Ceramic Fuel Cell (PCFC) market by product type and applications/end industries.

The major players in global Fuel Cell market include

Ballard

Toshiba

PLUG Power

FuelCell Energy

Hydrogenics

Doosan Fuel Cell

Horizon

Intelligent Energy

Hyster-Yale Group

Nedstack

Pearl Hydrogen

Sunrise Power

Contents

1 PROTONIC CERAMIC FUEL CELL (PCFC) MARKET OVERVIEW

- 1.1 Product Overview and Scope of Protonic Ceramic Fuel Cell (PCFC)
- 1.2 Protonic Ceramic Fuel Cell (PCFC) Characteristic
 - 1.2.1 Function and Reactions of PCFC
 - 1.2.2 Benefits of PCFC
 - 1.2.3 Drawbacks and Future Research of PCFCs
- 1.3 Protonic Ceramic Fuel Cell (PCFC) Compare to SOFC
- 1.4 Protonic Ceramic Fabrication
 - 1.4.1 Protonic Ceramics of Interest-Perovskite ABO₃ Structures
 - 1.4.2 Synthesis of BCZY27 Using Solid-state Reactive Sintering
- 1.5 Cell Test Preparation and Test Stand Description

2 PROTONIC CERAMIC FUEL CELL (PCFC) RESEARCH DEVELOPMENT

- 2.1 New Industrial Wonder Material being developed in Norway
 - 2.1.1 Basic Research
 - 2.1.2 The Technology
- 2.2 Low-Cost Intermediate-Temperature Fuel Flexible Protonic Ceramic Fuel Cell Stack

3 MAJOR FUEL CELLS INTRODUCTION

- 3.1 Proton Exchange Membrane Fuel Cells (PEMFC)
- 3.2 Direct Methanol Fuel Cells (DMFC)
- 3.3 Phosphoric Acid Fuel Cells (PAFC)
- 3.4 Solid Oxide Fuel Cells (SOFC)
- 3.5 Molten Carbonate Fuel Cells (MCFC)
- 3.6 Alkaline Fuel Cells (AFC)

4 MAJOR FUEL CELLS APPLICATIONS

- 4.1 Portable Applications
- 4.2 Stationary Applications
- 4.3 Transport Applications

5 GLOBAL FUEL CELL MARKET ANALYSIS

- 5.1 Global Fuel Cell Shipment
- 5.2 Global Fuel Cell Market by Region
- 5.3 Global Fuel Cell Market by Type
- 5.4 Global Fuel Cell Market by Application

6 ANALYSIS OF FUEL CELL INDUSTRY KEY MANUFACTURERS

- 6.1 Ballard
 - 6.1.1 Company Profile
 - 6.1.2 Product Information
- 6.2 Toshiba
 - 6.2.1 Company Profile
 - 6.2.2 Product Information
- 6.3 PLUG Power
 - 6.3.1 Company Profile
 - 6.3.2 Product Information
- 6.4 FuelCell Energy
 - 6.4.1 Company Profile
 - 6.4.2 Product Information
- 6.5 Hydrogenics
 - 6.5.1 Company Profile
 - 6.5.2 Product Information
- 6.6 Doosan Fuel Cell
 - 6.6.1 Company Profile
 - 6.6.2 Product Information
- 6.7 Horizon
 - 6.7.1 Company Profile
 - 6.7.2 Product Information
- 6.8 Intelligent Energy
 - 6.8.1 Company Profile
 - 6.8.2 Product Information
- 6.9 Hyster-Yale Group
 - 6.9.1 Company Profile
 - 6.9.2 Product Information
- 6.10 Nedstack
 - 6.10.1 Company Profile
 - 6.10.2 Product Information
- 6.11 Pearl Hydrogen
 - 6.11.1 Company Profile

- 6.11.2 Product Information
- 6.12 Sunrise Power
 - 6.12.1 Company Profile
 - 6.12.2 Product Information

7. SOLID OXIDE FUEL CELLS (SOFC) INTRODUCTION

- 7.1 Solid Oxide Fuel Cells (SOFC) Introduction
- 7.2 Solid Oxide Fuel Cells (SOFC) Industry Chain Analysis
- 7.3 Solid Oxide Fuel Cells (SOFC) Market Analysis

8 PROTONIC CERAMIC FUEL CELL (PCFC) MANUFACTURING COST ANALYSIS

- 8.1 Protonic Ceramic Fuel Cell (PCFC) Key Raw Materials Analysis
 - 8.1.1 Key Raw Materials
 - 8.1.2 Key Suppliers of Raw Materials
- 8.2 Proportion of Manufacturing Cost Structure
 - 8.2.1 Raw Materials
 - 8.2.2 Labor Cost Analysis
 - 8.2.3 Other Costs Analysis
 - 8.2.4 Manufacturing Expenses

9 INDUSTRIAL CHAIN, SOURCING STRATEGY AND DOWNSTREAM BUYERS

- 9.1 Protonic Ceramic Fuel Cell (PCFC) Industrial Chain Analysis
- 9.2 Upstream Raw Materials Sourcing
- 9.3 Downstream Buyers

10 MARKETING STRATEGY ANALYSIS, DISTRIBUTORS/TRADERS

- 10.1 Marketing Channel
 - 10.1.1 Direct Marketing
 - 10.1.2 Indirect Marketing
 - 10.1.3 Marketing Channel Development Trend
- 10.2 Market Positioning
 - 10.2.1 Pricing Strategy
 - 10.2.2 Brand Strategy
- 10.3 Distributors/Traders List

11 MARKET EFFECT FACTORS ANALYSIS

- 11.1 Consumer Needs/Customer Preference Change
- 11.2 Economic/Political Environmental Change

12 GLOBAL FUEL CELL MARKET FORECAST

- 12.1 Global Fuel Cell Shipment
- 12.2 Global Fuel Cell Market by Region
- 12.3 Global Fuel Cell Market by Type
- 12.4 Global Fuel Cell Market by Application
- 12.5 Global Protonic Ceramic Fuel Cells (PCMC) Market Forecast

13 RESEARCH FINDINGS AND CONCLUSION

14 METHODOLOGY AND DATA SOURCE

- 14.1 Methodology/Research Approach
 - 14.1.1 Research Programs/Design
 - 14.1.2 Market Size Estimation
 - 14.1.3 Market Breakdown and Data Triangulation
- 14.2 Data Source
 - 14.2.1 Secondary Sources
 - 14.2.2 Primary Sources
- 14.3 Disclaimer
- 14.4 Author List

The report requires updating with new data and is sent in 2-3 business days after order is placed.

List Of Tables

LIST OF TABLES AND FIGURES

Figure Product Picture of Protonic Ceramic Fuel Cell (PCFC)

Figure Illustration of the Operation of a co-flow Planar PCFC

Figure Basic Operation of SOFCs and PCFC under Ammonia Fuel

Table Protonic Ceramics of Interest-Perovskite ABO₃ Structures

Figure Picture of Perovskite ABO₃ Structures

Figure Picture of Anode-supported Anode-electrolyte Membranes Supplied by CoorsTek

Figure Cold Zone Sealing Accomplished by Ultra-Torr Fitting, 4-point Wiring Accomplished

Figure Tube-in-shell Reactor Allows Control over Gas Compositions for Each Electrode

Figure PCFC with LSCF Cathode Exhibits Poor Performance on H₂ and NH₃ Fuels

Figure LSCF Cathode Delaminations Reduce Three-phase Boundary Density and Reduce Cell Performance

Figure Fuel Cell Where the Proton Conductor is the Yellow Layer in the Middle.

Figure Product Figure of Fuel Cell

Figure Product Figure of Proton Exchange Membrane Fuel Cells (PEMFC)

Figure Proton Exchange Membrane Fuel Cells (PEMFC) Shipment and Growth Rate 2011-2017

Figure Product Figure of Direct Methanol Fuel Cells (DMFC)

Figure Direct Methanol Fuel Cells (DMFC) Shipment and Growth Rate 2011-2017

Figure Product Figure of Phosphoric Acid Fuel Cells (PAFC)

Figure Phosphoric Acid Fuel Cells (PAFC) Shipment and Growth Rate 2011-2017

Figure Product Figure of Solid Oxide Fuel Cells (SOFC)

Figure Solid Oxide Fuel Cells (SOFC) Shipment and Growth Rate 2011-2017

Figure Product Figure of Molten Carbonate Fuel Cells (MCFC)

Figure Molten Carbonate Fuel Cells (MCFC) Shipment and Growth Rate 2011-2017

Figure Product Figure of Alkaline Fuel Cells (AFC)

Figure Alkaline Fuel Cells (AFC) Shipment and Growth Rate 2011-2017

Figure Portable Fuel Cells Application

Figure Portable Fuel Cells Shipment and Growth Rate 2011-2017

Figure Stationary Fuel Cells Application

Figure Stationary Fuel Cells Shipment and Growth Rate 2011-2017

Figure Transport Fuel Cells Application

Figure Transport Fuel Cells Shipment and Growth Rate 2011-2017

Figure Global Fuel Cell Shipment and Growth Rate 2011-2017

Table Global Fuel Cell Shipment by Region 2011-2017
Table Global Fuel Cell Shipment Market Share by Region 2011-2017
Figure Global Fuel Cell Shipment Market Share by Region in 2016
Table Global Fuel Cell Shipment by Type 2011-2017
Table Global Fuel Cell Shipment Market Share by Type 2011-2017
Figure Global Fuel Cell Shipment Market Share by Type in 2016
Table Global Fuel Cell Shipment by Application 2011-2017
Table Global Fuel Cell Shipment Market Share by Application 2011-2017
Figure Global Fuel Cell Shipment Market Share by Application in 2016
Table Ballard Company Profile
Table Fuel Cell Product Picture and Specifications of Ballard
Table Toshiba Company Profile
Table Fuel Cell Product Picture and Specifications of Toshiba
Table PLUG Power Company Profile
Figure Fuel Cell Product Picture and Specifications of PLUG Power
Table FuelCell Energy Company Profile
Table Fuel Cell Product Picture and Specifications of FuelCell Energy
Table Hydrogenics Company Profile
Table Fuel Cell Product Picture and Specifications of Hydrogenics
Table Doosan Fuel Cell Company Profile
Table Fuel Cell Product Picture and Specifications of Doosan Fuel Cell
Table Horizon Company Profile
Table Fuel Cell Product Picture and Specifications of Horizon
Table Intelligent Energy Company Profile
Table Fuel Cell Product Picture and Specifications of Intelligent Energy
Table Hyster-Yale Group Company Profile
Figure Fuel Cell Product Picture and Specifications of Hyster-Yale Group
Table Nedstack Company Profile
Table Fuel Cell Product Picture and Specifications of Nedstack
Table Pearl Hydrogen Company Profile
Table Fuel Cell Product Picture and Specifications of Pearl Hydrogen
Table Sunrise Power Company Profile
Table Fuel Cell Product Picture and Specifications of Sunrise Power
Table Solid Oxide Fuel Cells (SOFC) Advantages and Disadvantages
Figure Solid Oxide Fuel Cells (SOFC) Industry Chain Analysis
Figure Solid Oxide Fuel Cells (SOFC) Shipment and Growth Rate 2011-2017
Table Key Raw Materials
Table Key Suppliers of Raw Materials
Figure Manufacturing Cost Structure of Protonic Ceramic Fuel Cell (PCFC)

Figure USA Labor Cost Analysis 2012-2016
Figure Cost of Employing a Factory Worker
Figure 2016 Estimated Labour Costs for the Whole Economy in Europe
Figure Monthly Minimum Wages in Asia 2016
Figure China Labor Costs 2013-2016
Table Average Price of Electricity to Ultimate Customers 2007-2016
Figure Electricity Prices for Household Consumers in 2016
Figure Summary of the Driving Assumptions
Figure Industrial Electric Rates 2016 (PER KWH)
Figure Protonic Ceramic Fuel Cell (PCFC) Industrial Chain Analysis
Figure Setting Pricing Policy
Figure Global GDP Growth Rate for 2016
Figure US GDP 2006-2016 (Billion USD)
Figure US CPI Change 2016-2017
Figure EU GDP 2006-2016 (Billion USD)
Figure EU CPI Change 2012-2016
Figure Germany GDP 2006-2016 (Billion USD)
Figure UK GDP 2006-2016 (Billion USD)
Figure UK CPI Change 2016-2017
Figure Italy GDP 2006-2016 (Billion USD)
Figure Italy CPI Change 2016-2017
Figure Japan GDP 2006-2016 (Billion USD)
Figure Japan CPI Change 2012-2016
Figure China GDP 2006-2016 (Billion USD)
Figure China CPI Change 2016-2017
Figure Global Fuel Cell Shipment and Growth Rate 2017-2022
Table Global Fuel Cell Shipment by Region 2017-2022
Table Global Fuel Cell Shipment Market Share by Region 2017-2022
Figure Global Fuel Cell Shipment Market Share by Region in 2022
Table Global Fuel Cell Shipment by Type 2017-2022
Table Global Fuel Cell Shipment Market Share by Type 2017-2022
Figure Global Fuel Cell Shipment Market Share by Type in 2022
Table Global Fuel Cell Shipment by Application 2017-2022
Table Global Fuel Cell Shipment Market Share by Application 2017-2022
Figure Global Fuel Cell Shipment Market Share by Application in 2022
Figure Global Protonic Ceramic Fuel Cells (PCMC) Market Forecast

I would like to order

Product name: Global Protonic Ceramic Fuel Cell (PCFC) Market Research Report 2017

Product link: <https://marketpublishers.com/r/GDFC7E31230EN.html>

Price: US\$ 2,900.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/GDFC7E31230EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970