全球能源领域薄膜市场分析研究报告

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二、报告目录及图表目录

摘要INTRODUCTION Study Goals and Objectives

Increasing focus on the demand for energy led BCC Research to conduct this study, which determines the current status of thin films used in various kinds of energy. Our goal was to assess the value of thin films used in the fabrication of six energy technologies for 2007, project 2008 demand, and then forecast thin film demand growth to 2013. Other energy material studies have been done by BCC Research and are referenced in this section, but this study focuses on the merits of thin films. Our key objective was to present a comprehensive analysis of the current market for thin films and its future direction.

Reasons for Doing the Study

Global demand for traditional fossil fuels has risen at an unprecedented rate over the last several years. The economics of supply and demand have driven prices of oil, gas, and coal to record levels. In addition, fossil fuels are considered a source of pollution that aids climate change. Nations have responded by instituting reductions in activities that require the use of fossil fuels and by searching for alternative energy methods.

Our goal was to examine traditional and alternative energy technologies to determine the use, if any, of thin films in their fabrication and operation. Thin films are often applied to reduce the cost of product fabrication, improve performance, and provide more flexibility in product design. In addition, they are environmentally benign.

Our investigation of the global energy industry revealed that thin films play a part in six technologies:

Photovoltaics

Concentrating solar power

Geothermal power

Nuclear power

Batteries

Fuel cells

The presence of thin films varies from a high level for photovoltaics cells to anticorrosion coatings for geothermal energy. They all have one thing in common—a potential for

growth.

Intended Audience

In this study of thin films in energy, we present current and emerging technologies for each of the six types, detail the industry structure of each segment, discuss the competitive environment of each type of energy, review current and future applications for thin films, analyze current markets and their drivers and growth factors, and detail shipments of thin films for 2007, 2008, and 2013. This study will be of interest to those who make semiconductors and their manufacturing equipment, thin films, materials in general, pumps and related equipment, batteries and their materials, and fuel cells. It will also be of interest to those companies engaged in nanotechnology and materials for flexible substrates. Utility companies, construction firms, and those entities involved with the space program will also find this study to be valuable.

Scope of Report

The scope of this study encompasses the six energy technologies of photovoltaic, concentrating solar power, geothermal, nuclear, thin film batteries, and thin film fuel cells. Materials include copper indium diselenide, amorphous silicon, cadmium telluride, gallium arsenide, nanostructured thin films, a variety of anti-corrosive thin films, titanium nitride, metallic alloys, barrier films, lithium, platinum, and others pertinent to the energy products. BCC Research analyzes each technology, examines its current and future potential, assesses the market status of each, looks at its future impact, and presents shipments of thin films for each of the six energy segments for 2007, 2008, and 2013. Various technological issues are discussed, and a thorough economic analysis of each type of energy and its impact on future growth is presented.

In this report, we analyze thin films for energy on a global basis, including manufacturing capacity and consumption by various regional markets. We examine government funding and support, industry involvement and environmental impact. We also discuss the potential for applications, and identify where thin films are being used by specific applications.

Methodology

BCC Research presents an analysis for each of the six energy technologies in the dollar volume shipped in 2007. Our estimated values are what manufacturers have paid in undepreciated dollars. Then, based on our surveys, we analyze the potential market for each technology, and forecast shipments for 2008 and 2013. We also analyze the value and growth of the various energy components that use thin films over the same time periods.

Information Sources

Our company surveyed approximately 135 companies to obtain data for this study. Included were manufacturers of photovoltaic cells, concentrating solar thermal systems, geothermal systems and pumps, nuclear reactor components, batteries of all types, and fuel cells. We also spoke with companies developing materials, such as thin films, for energy products. In addition, we compiled data from current financial and trade information and government sources.目录及图表Chapter-1: SUMMARY

SUMMARY TABLE PROJECTED GLOBAL SHIPMENTS OF THIN FILMS FOR ENERGY, THROUGH 2013 (\$ MILLIONS) 0

SUMMARY FIGURE PROJECTED GLOBAL SHIPMENTS OF THIN FILMS FOR ENERGY, 2008 AND 2013 (\$ MILLIONS) 0 Chapter-2: OVERVIEW

BACKGROUND 1

TABLE 1 SCOPE OF THIN FILM/ENERGY STUDY 2

DEPOSITION TECHNOLOGIES 2

TABLE 2 BASIC THIN FILM DEPOSITION TECHNOLOGIES 3

CLASSIFICATION OF MATERIALS 3

NANOSCALE THIN FILMS 3

Thin Film Material Properties 4

TABLE 3 TYPICAL THIN FILMS USED IN ENERGY AND THEIR KEY PROPERTIES 4 CURRENT ENERGY ENVIRONMENT 4

TABLE 4 ESTIMATED GLOBAL ENERGY SUPPLY, 2007/2008, AND 2013 (%) 5

FIGURE 1 ESTIMATED GLOBAL ENERGY SUPPLY, 2007/2008 AND 2013 (%) 6

ENERGY STORAGE 6

IMPACT OF THIN FILMS 6

REPORT ORGANIZATION 7 Chapter-3: SOLAR PHOTOVOLTAIC MARKET THIN FILM PV INDUSTRY STRUCTURE 8

TABLE 5 LEADING PLAYERS IN PHOTOVOLTAIC THIN FILMS 8

TABLE 5 (CONTINUED) 9

THIN FILM PV MANUFACTURING BY REGION 10

TABLE 6 GLOBAL THIN FILM PV MANUFACTURING BY REGION, 2007 - 2013 (%) 10

FIGURE 2 GLOBAL THIN FILM PV MANUFACTURING BY REGION, 2008 AND 2013 (%)

11

THIN FILM PV CONSUMPTION BY REGION 11

TABLE 7 PROJECTED GLOBAL CONSUMPTION OF THIN FILM PV BY REGION, 2007-2013 (%) 12

FIGURE 3 PROJECTED GLOBAL CONSUMPTION OF THIN FILM PV BY REGION, 2008 AND 2013 (%) 12

AN AMBITIOUS GOAL 13

DEVELOPERS OF ADVANCED THIN FILM PV TECHNOLOGY 14

TABLE 8 SELECTED ORGANIZATIONS DEVELOPING THIN FILM RELATED PV TECHNOLOGY 14

TABLE 8 (CONTINUED) 15

THIN FILM PV TECHNOLOGY 15

THE PV EFFECT 15

Silicon as an Example 16

Creating Charge Carriers 17

Forming the Electric Field 17

Driving the Charge Carriers 18

Energy Band Gaps 18

TABLE 9 IMPORTANCE OF SELECTING MATERIALS WITH PROPER BAND GAP ENERGY 18

THIN FILM SOLAR CELLS 19

TABLE 10 OBJECTIVES OF THIN FILM SOLAR CELLS 20

AMORPHOUS SILICON 20

Properties of Amorphous Silicon 20

TABLE 11 KEY ADVANTAGES OF AMORPHOUS SILICON 21

Early Problems with a-Si 21

Solution Efforts 22

TABLE 12 AMORPHOUS SILICON R&D ACTIVITIES 22

TABLE 13 STRUCTURE OF A TRIPLE JUNCTION A-SI CELL 23

COPPER INDIUM DISELENIDE 23

TABLE 14 CELL STRUCTURE OF POLYCRYSTALLINE THIN FILM 23

Fabricating CIS Cells 24

CIS R&D 25

CADMIUM TELLURIDE CELLS 25

Manufacturing Cadmium Telluride Cells 25

Environmental Concerns 26

TABLE 15 RESEARCH ACTIVITIES FOR CADMIUM TELLURIDE CELLS 26

OTHER THIN FILMS 26

Gallium Arsenide Solar Cells 27

TABLE 16 KEY PROPERTIES OF GALLIUM ARSENIDE 27

GaAs Challenges 27

Dye-Sensitized Cells 28

Properties of the Dye-Sensitized Solar Cell 28

TABLE 17 SCHEMATIC OF DYE-SENSITIZED CELL 28

Cell Efficiencies 29

Classification 29

TABLE 18 KEY BENEFITS OF DYE-SENSITIZED SOLAR CELLS 29

Nanofilms 30

Nanocrystals 30

TABLE 19 INORGANICS USED TO FORM NANOSTRUCTURES 30

Organic Photovoltaics 31

PATENT ANALYSIS 31

PATENTS BY TECHICAL CATEGORY 31

TABLE 20 PHOTOVOLTAIC PATENTS BY TECHNOLOGY (2007 - 2008) 31

TABLE 20 (CONTINUED) 32

PATENTS BY REGION 32

TABLE 21 THIN FILM PHOTOVOLTAIC PATENTS BY REGION, 2007 – 2008 32

INDUSTRY COMPETITIVENESS 33

GLOBAL PV SUPPORT 33

TABLE 22 GLOBAL SUPPORT FOR PV DEVELOPMENT 33

TABLE 23 U.S. GOVERNMENT FUNDING OF PHOTOVOLTAICS, 1998-2006 (\$

MILLIONS) 34

SOLAR REBATES AND INCENTIVES 34

BETTER PV TECHNOLOGY 34

SOLAR PV MARKETS AND PROJECTIONS 35

MARKET CHARACTERISTICS 35

PV Demand Continues to Grow 36

TABLE 24 GLOBAL PV CELL/MODULE SHIPMENTS, 2001 - 2007 (MW) 36

FIGURE 4 GLOBAL PV CELL/MODULE SHIPMENTS, 2001 - 2007 (MW) 36

The Push for New Technologies 37

Increased Utility Involvement 37

Incentives and Feed-in Tariffs 37

THIN FILM PV APPLICATIONS 37

Grid-Connected Applications 37

Rooftop Systems 38

TABLE 25 KEY ADVANTAGES OF ROOFTOP SYTEMS 38

Building-Integrated Photovoltaics (BIPV) 38

TABLE 26 TYPICAL BIPV SYSTEM 39

Off-Grid Applications 39

Off-Grid Residential PV 40

Space Applications 40

THIN FILM PV MARKET FORCES 40

Positive Factors 40

Limiting Factors 41

FORECAST ASSUMPTIONS 42

TABLE 27 CURRENT FACTS IMPACTING THIN FILM PV GROWTH 42

TABLE 28 FORECAST ASSUMPTIONS—GROWTH OF THIN FILMS IN PV APPLICATIONS 42

MARKET FORECASTS 43

Emerging Materials 43

TABLE 29 FORECAST GLOBAL SHIPMENTS OF THIN FILM SOLAR CELLS BY TYPE, THROUGH 2013 (MW) 43

FIGURE 5 FORECAST GLOBAL SHIPMENTS OF THIN FILM SOLAR CELLS BY TYPE OF MATERIAL, 2008 AND 2013 (MW) 44

VALUE OF MATERIALS 44

Declining Module Costs 45

TABLE 30 AVERAGE COST FOR THIN FILM MODULES, THROUGH 2013 (\$W) 45

TABLE 31 ESTIMATED VALUE OF THIN FILM MATERIALS FOR PV, THROUGH 2013 (\$ MILLIONS) 45

FIGURE 6 ESTMATED VALUE OF THIN FILM MATERIALS FOR PV, 2008 AND 2013 (\$

MILLIONS) 46

SHIPMENTS OF THIN FILM PV BY APPLICATIONS 46

TABLE 32 PROJECTED GLOBAL SHIPMENTS OF THIN FILM CELLS BY APPLICATION, THROUGH 2013 (MW) 47

FIGURE 7 PROJECTED GLOBAL SHIPMENTS OF PV THIN FILMS BY APPLICATION,

2008 AND 2013 (MW) 48 Chapter-4: SOLAR THERMAL MARKET

IMPACT OF THIN FILMS 49

INDUSTRY STRUCTURE 49

TABLE 33 LEADING COMPANIES IN THE CONCENTRATING SOLAR POWER BUSINESS 50

FACTORS IN MANUFACTURING LOCATIONS 51

SOLAR CONCENTRATOR MIRROR MANUFACTURERS 51

TABLE 34 COMPANNIES MAKING SOLAR CONCENTRATING MIRRORS 51

CSP TECHNOLOGY 52

THE SOLAR RESOURCE 52

SYSTEMS OVERVIEW 52

TABLE 35 TYPICAL OPERATING TEMPERATURES AND CAPACITIES FOR CONCENTRATING SOLAR POWER SYSTEMS 53

Parabolic Trough Systems 53

Development Plans 53

Power Tower Systems 54

TABLE 36 ADVANTAGES OF SOLAR POWER TOWERS 55

Technology Status 55

Dish/Engine Systems 56

Recent Developments 57

Future Markets 57

Status of the Technology 58

TABLE 37 COMMERCIAL STATUS OF CONCENTRATING SOLAR POWER SYSTEMS 58

PATENT ANALYSIS 59

Patents by Technology 59

TABLE 38 CSP PATENTS BY TECHNOLOGY, 2006 - 2008 59

Patents by Region 59

TABLE 39 CSP PATENT ACTIVITY BY REGION, 2007 - 2008 60

INDUSTRY COMPETITIVENESS 60

GOVERNMENT CSP SUPPORT 60

RISING ENERGY DEMAND 61

CSP MARKETS AND PROJECTIONS 61

MARKET STATUS 61

Global Market Expands CSP 62

Cost Factor 62

CSP ADVANTAGES AND LIMITATIONS 62

Positive Factors 63

Limiting Factors 63

SOLAR THERMAL APPLICATIONS 64

FORECAST ASSUMPTIONS 64

TABLE 40 FORECAST ASSUMPTIONS—GROWTH OF CSP TECHNOLOGY 64

TABLE 41 ESTIMATED GLOBAL EXPENDITURES FOR SOLAR THERMAL POWER PLANTS, THROUGH 2013 (\$ MILLIONS) 65

FIGURE 8 ESTIMATED GLOBAL EXPENDITURES FOR SOLAR THERMAL POWER

PLANTS, 2008 AND 2013 (\$ MILLIONS) 65

CSP MATERIALS AND PROJECTIONS 66

REFLECTOR MATERIALS 66

Cost 66

Consumption 67

TABLE 42 ESTIMATED DEMAND FOR REFLECTIVE MATERIALS IN SOLAR CONCENTRATING MIRRORS, THROUGH 2013 (\$ MILLIONS) 67

SOLAR SELECTIVE COATINGS 67

Technology 67

Cost 68

TABLE 43 ESTIMATED DEMAND FOR SOLAR SELECTIVE MATERIALS IN CSP SYSTEMS, THROUGH 2013 (\$ MILLIONS) 68

SHIPMENTS BY APPLICATION 68

TABLE 44 CSP SYSTEM APPLICATIONS (%) 69 Chapter-5: GEOTHERMAL MARKET

IMPACT OF THIN FILMS 70

INDUSTRY STRUCTURE 71

TABLE 45 KEY COMPANIES IN THE GEOTHERMAL BUSINESS 71

MANUFACTURING ACTIVITY IN GEOTHERMAL ENERGY 72

TABLE 46 ESTIMATED GLOBAL MANUFACTURING ACTIVITY IN GEOTHERMAL ENERGY BY REGION, 2007-2013 (%) 72

FIGURE 9 ESTIMATED GLOBAL MANUFACTURING ACTIVITY IN GEOTHERMAL ENERGY BY REGION, 2008 AND 2013 (%) 73

GEOTHERMAL CONSUMPTION PATTERNS 73

TABLE 47 ESTIMATED CONSUMPTION OF GEOTHERMAL ENERGY BY REGION, 2007-2013 (%) 74

FIGURE 10 ESTIMATED GLOBAL CONSUMPTION OF GEOTHERMAL ENERGY, 2008 AND 2013 (%) 74

GEOTHERMAL TECHNOLOGY 75

STEAM PLANTS 75

BINARY PLANTS 75

Heat Pumps 76

POTENTIAL FOR CORROSION 77

ADDITIONAL R&D IN TECHNOLOGY 77

PATENT ANALYSIS 77

Patents by Technology 77

TABLE 48 GEOTHERMAL PATENTS BY TECHNOLOGY, 2007 – 2008 78

Patents by Region 78

TABLE 49 GEOTHERMAL PATENTS BY REGION, 2007 – 2008 78

INDUSTRY COMPETITIVENESS 79

BASIC ADVANTAGES 79

TABLE 50 BASIC ADVANTAGES OF GEOTHERMAL ENERGY 79

CONTINUING RESEARCH 79

INCREASING ENERGY DEMAND 80

GEOTHERMAL MARKETS AND PROJECTIONS 80

MARKET STATUS 80

GEOTHERMAL ENERGY'S ADVANTAGES AND LIMITATIONS 80

Positive Factors 80

Limiting Factors 81

GEOTHERMAL APPLICATIONS 81

Direct Use of Geothermal Energy 81

Geothermal Heat Pumps 82

FORECAST ASSUMPTIONS 82

TABLE 51 GLOBAL GROWTH OF GEOTHERMAL ENERGY, THROUGH 2007 (MW) 83 TABLE 52 FORECAST ASSUMPTIONS—GROWTH OF GEOTHERMAL ENERGY AND ACCOMPANYING THIN FILMS 83

GEOTHERMAL MARKET GROWTH 83

TABLE 53 PROJECTED GROWTH OF GEOTHERMAL ENERGY, THROUGH 2013 (MW) 84

GEOTHERMAL MATERIALS AND PROJECTIONS 84

MATERIALS FOR GEOTHERMAL MARKET 84

Heat Exchanger Tube Coatings 84

Thermal Spray Pipe Coatings 85

ADVANCED MATERIALS 85

Downhole Equipment 85

FORECAST—VALUE OF THIN FILM MATERIALS FOR GEOTHERMAL 86

Materials Cost 86

Thin Film Consumption 86

TABLE 54 PROJECTED DEMAND FOR THIN FILM COATING MATERIALS FOR GEOTHERMAL APPLICATIONS, THROUGH 2013 (\$ MILLIONS) 86

FIGURE 11 GROWTH OF THIN FILM SHIPMENTS FOR GEOTHERMAL APPLICATIONS, 2008 AND 2013 (\$ MILLIONS) 87

SHIPMENTS BY APPLICATION 87

TABLE 55 GEOTHERMAL APPLICATIONS (%) 88 Chapter-6: NUCLEAR ENERGY MARKET

THE ROLE OF THIN FILMS 89

INDUSTRY STRUCTURE 90

TABLE 56 REPRESENTATIVE LISTING OF COMPANIES INVOLVED IN THE NUCLEAR INDUSTRY 90

GLOBAL NUCLEAR ENERGY 91

TABLE 57 TOP 10 COUNTRIES GETTING 25% OR MORE OF THEIR POWER FROM NUCLEAR ENERGY, 2007 (%) 91

FIGURE 12 TOP 10 COUNTRIES GETTING 25% OR MORE OF THEIR POWER FROM NUCLEAR ENERGY, 2007 (%) 92

GLOBAL NUCLEAR GENERATION 92

TABLE 58 TOP 10 NUCLEAR GENERATING COUNTRIES, 2007 (BILLION KWH) 92 FIGURE 13 TOP 10 NUCLEAR GENERATING COUNTRIES, 2007 (BILLION KWH) 93 NUCLEAR POWER TECHNOLOGY 93

NUCLEAR POWER TECHNOLOGY (CONTINUED) 94

THE NULEAR FUEL CYCLE 95

TABLE 59 NUCLEAR FUEL CYCLE 95

TYPES OF REACTORS 95

TECHNOLOGY IN THE LONG-TERM 96

High Temperature Reactors for Efficiency and Multiple Uses 97

Improved Fuels and Better Coolants 97

Accelerator-Driven Systems (ADS) 97

Nuclear Fusion Power 97

PATENT ANALYSIS 98

Patents by Technical Category 98

TABLE 60 NUCLEAR ENERGY PATENTS BY TECHNICAL CATEGORY, 2007 - 2008 98

Patents by Region 99

TABLE 61 NUCLEAR PATENTS BY REGION, 2007 - 2008 99

INDUSTRY COMPETITIVENESS 99

ENVIRONMENTAL STATUS 100

TABLE 62 AVERAGE LIFECYCLE CARBON DIOXIDE EMISSIONS FROM A VARIETY

OF ENERGY SOURCES 100

THE SAFETY AND SECURITY FACTORS 101

The U.S. Example: The NRC 101

TABLE 63 NRC SECURITY HIGHLIGHTS 102

International Safeguards 102

NUCLEAR ECONOMICS 103

New Plants in the Works 103

NUCLEAR ENERGY MARKETS AND PROJECTIONS 104

MARKET STATUS 104

NUCLEAR ENERGY'S ADVANTAGES AND LIMITATIONS 104

Positive Factors 104

Limiting Factors 105

NUCLEAR ENERGY APPLICATIONS 105

MARKET EXPERIENCE 106

Slow Constant Growth 106

TABLE 64 GLOBAL NUCLEAR ELECTRICITY THROUGH 2006 (BILLIONS OF KWH) 106

FORECAST ASSUMPTIONS 107

TABLE 65 FORECAST ASSUMPTIONS—GROWTH OF NUCLEAR ENERGY AND

ACCOMPANYING THIN FILMS 107

NUCLEAR MARKET GROWTH 107

TABLE 66 PROJECTED GROWTH OF NUCLEAR ENERGY, THROUGH 2013 (BILLIONS OF KWH) 108

NUCLEAR ENERGY MATERIALS AND PROJECTIONS 108

THIN FILM MATERIALS FOR THE NUCLEAR MARKET 108

Control Rod and Tube Coatings 108

Fittings 109

Other Parts 109

ADVANCED MATERIALS 109

FORECAST—VALUE OF THIN FILM MATERIALS FOR NUCLEAR 109

Materials Cost 110

Thin Film Consumption 110

TABLE 67 PROJECTED DEMAND FOR THIN FILM COATING MATERIALS FOR NUCLEAR APPLICATIONS, THROUGH 2013 (\$ MILLIONS) 110

FIGURE 14 PROJECTED DEMAND FOR THIN FILM COATINGS IN NUCLEAR APPLICATIONS, 2008 AND 2013 (\$ MILLIONS) 111

SHIPMENTS BY APPLICATION 111 Chapter-7: THIN FILM BATTERY MARKET

TABLE 68 DISTINGUISHING PROPERTIES OF THIN FILM BATTERIES 112

INDUSTRY STRUCTURE 112

TABLE 69 LEADING COMPANIES INVOLVED IN THIN FILM BATTERIES 113

THIN FILM BATTERY MANUFACTURING BY REGION 113

TABLE 70 PROJECTED MANUFACTURING SHARES OF THIN FILM BATTERIES BY REGION, 2007-2013 (%) 114

FIGURE 15 PROJECTED SHARES OF THIN FILM BATTERY MANUFACTURING BY REGION, 2008 AND 2013 (%) 114

CONSUMPTION PATTERNS 115

TABLE 71 PROJECTED CONSUMPTION OF THIN FILM BATTERIES BY REGION, 2007-2013 (%) 115

FIGURE 16 GLOBAL CONSUMPTION OF THIN FILM BATTERIES BY REGION, 2008 AND 2013 (%) 116

AN INDUSTRY WITH GROWTH POTENTIAL 116

THIN FILM BATTERY TECHNOLOGY 116

BATTERY BASICS 117

Background of Lithium Technology 117

THIN FILM BATTERIES 118

TABLE 72 UNIQUE PROPERTIES OF THIN FILM BATTERIES 118

Construction 119

TABLE 73 LAYOUT OF A THIN FILM BATTERY 119

Lithium Polymer Batteries 120

TABLE 74 FEATURES OF A THIN FILM POLYMER BATTERY 120

TECHNOLOGY DEVELOPMENT 121

Nanotechnology and Thin Film Batteries 121

PATENT ANALYSIS 122

Patents by Technology 122

TABLE 75 THIN FILM BATTERY PATENTS BY TECHICAL CATEGORY, 2007 - 2008 122

Patents by Region 123

TABLE 76 THIN FILM BATTERY PATENT ACTIVITY BY REGION, 2007 - 2008 (%) 123

INDUSTRY COMPETITIVENESS 124

SERVING THE PORTABLE AND WIRELESS MARKETS 124

IMPROVING TECHNOLOGY 124

PRODUCTIVITY IMPACT 125

ENVIRONMENTAL FACTOR 125

THIN FILM BATTERY MARKETS AND PROJECTIONS 125

MARKET STATUS 126

THIN FILM BATTERY ADVANTAGES AND LIMITATIONS 126

Positive Factors 126

Limiting Factors 127

THIN FILM BATTERY APPLICATIONS 127

FORECAST ASSUMPTIONS 128

TABLE 77 GLOBAL GROWTH OF LITHIUM BATTERIES AND THIN FILM BATTERIES,

THROUGH 2007 (\$ MILLIONS) 129

TABLE 78 FORECAST ASSUMPTIONS—GROWTH OF THIN FILM BATTERIES AND

ACCOMPANYING THIN FLMS 129

THIN FILM BATTERY MARKET GROWTH 130

TABLE 79 PROJECTED GROWTH OF THIN FILM BATTERIES, THROUGH 2013 (\$

MILLIONS) 130

THIN FILM BATTERY MATERIALS AND PROJECTIONS 130

Nanotechnology 131

FORECAST—VALUE OF THIN FILM MATERIALS FOR T/F BATTERIES 132

Materials Cost Considerations 132

Thin Film Consumption 132

TABLE 80 PROJECTED GLOBAL DEMAND FOR THIN FILM MATERIALS FOR THIN FILM BATTERIES, THROUGH 2013 (\$ MILLIONS) 132

FIGURE 17 PROJECTED GLOBAL DEMAND FOR THIN FILM MATERIALS, 2008 AND 2013 (\$ MILLIONS) 133

SHIPMENTS BY APPLICATION 133

TABLE 81 PROJECTED SHIPMENTS OF THIN FILM BATTERIES BY APPLICATION, THROUGH 2013 (\$ MILLIONS) 134 Chapter-8: THIN FILM FUEL CELL MARKET

TABLE 82 BASIC PARTS OF A FUEL CELL 135

INDUSTRY STRUCTURE 136

TABLE 83 LEADING COMPANIES IN THE THIN FILM FUEL CELL INDUSTRY 136 TABLE 83 (CONTINUED) 137

A SMALL BUT EVOLVING INDUSTRY 137

THIN FILM FUEL CELL MANUFACTURING BY REGION 137

TABLE 84 PROJECTED THIN FILM FUEL CELL FABRICATION BY REGION, THROUGH 2013 (%) 138

FIGURE 18 PROJECTED THIN FILM FUEL CELL FABRICATION BY REGION, 2008 AND 2013 (%) 138

THIN FILM FUEL CELL CONSUMPTION 139

TABLE 85 PROJECTED CONSUMPTION OF THIN FILM FUEL CELLS BY REGION, 2007-2013 (%) 139

FIGURE 19 PROJECTED THIN FILM FUEL CELL CONSUMPTION BY REGION, 2008 AND 2013 (%) 140

ANOTHER INDUSTRY WITH GROWTH POTENTIAL 140

FUEL CELL TECHNOLOGY 140

GENERAL DEFINITION 141

PARTS OF A FUEL CELL 141

TABLE 86 KEY PARTS OF A PEM FUEL CELL 141

TABLE 86 (CONTINUED) 142

TABLE 87 SCHEMATIC LAYERS OF A FUEL CELL 142

FUEL CELL SYSTEMS 143

TYPE OF FUEL CELLS 144

Polymer Electrolyte Membrane 144

Direct Methanol Fuel Cells 144

Alkaline Fuel Cells 144

Phosphoric Acid Fuel Cells 145

Molten Carbonate Fuel Cells 145

Solid Oxide Fuel Cells 145

COMPARISON OF FUEL CELLS 146

TABLE 88 COMPARISON OF FUEL CELL TECHNOLOGY 146

TABLE 88 (CONTINUED) 147

TECHNOLOGICAL DEVELOPMENT 147

Reduced Cost of Fabrication 147

Uniformity of Materials 147

Nanofilms 148

PATENT ANALYSIS 148

Patents by Technology 148

TABLE 89 THIN FILM FUEL CELL PATENTS BY TECHNICAL CATEGORY, 2007 – 2008 148

Patents by Region 149

TABLE 90 THIN FILM FUEL CELL PATENTS BY REGION, 2007 - 2008 149

INDUSTRY COMPETITIVENESS 150

GLOBAL R&D SUPPORT 150

TABLE 91 SELECTED GLOBAL ORGANIZATIONS PROVIDING R&D FOR FUEL CELLS 150

TABLE 91 (CONTINUED) 151

ENERGY ENVIRONMENT 151

THIN FILM FUEL CELL MARKETS AND PROJECTIONS 152

MARKET STATUS 152

ADVANTAGES AND LIMITATIONS OF FUEL CELLS 153

Positive Factors 153

Limitations 153

FUEL CELL APPLICATIONS 153

Micro Fuel Cells 154

FORECAST ASSUMPTIONS 154

TABLE 92 PROJECTED GLOBAL GROWTH OF SELECTED FUEL CELL TECHNOLOGIES, THROUGH 2007 (\$ MILLIONS) 155

TABLE 93 FORECAST ASSUMPTIONS—GROWTH OF FUEL CELLS AND ACCOMPANYING THIN FILMS 155

FUEL CELL MARKET GROWTH 156

TABLE 94 PROJECTED GROWTH OF SELECTED FUEL CELLS, THROUGH 2013 (\$

MILLIONS) 156

THIN FILM FUEL CELL MATERIALS AND PROJECTIONS 156

Nanotechnology 157

Material Objectives 157

FORECAST—VALUE OF THIN FILM MATERIALS FOR FUEL CELLS 158

Materials Cost Considerations 158

Thin Film Consumption 158

TABLE 95 PROJECTED GLOBAL DEMAND FOR THIN FILMS IN FUEL CELLS, THROUGH 2013 (\$ MILLIONS) 158

FIGURE 20 PROJECTED GLOBAL DEMAND FOR THIN FILMS IN FUEL CELLS, 2008 AND 2013 (\$ MILLIONS) 159

SHIPMENTS BY APPLICATION 159

TABLE 96 PROJECTED SHIPMENTS OF SELECTED FUEL CELLS BY APPLICATION,

THROUGH 2013 (\$ MILLIONS) 160

Chapter-9: COMPANY PROFILES 13

ADVENT SOLAR, INC. 161

ANGSTROM POWER, INC. 162

THE ARMOLOY CORP. 162

AVANCIS GMBH 7 CO. KG 163

BECHTEL CORP. 163

CHEVRON CORP. 164

CYMBET CORP. 165

TANTALUM TECHNOLOGIES A/S 165

ENERGY PHOTOVOLTAICS INC. 166

FIRST SOLAR, LLC 167

FLAGSOL GMBH 167

JAPAN NUCLEAR FUEL-JAPAN CO., LTD. 168

GLOBAL SOLAR ENERGY, INC. 168

INFINITE POWER SOLUTIONS 169

KYOCERA CORP. 169

MIASOLE 170

MTI MICRO 171

NANOSOLAR, INC. 171

ORMAT TECHNOLOGIES, INC. 172

SOLEL SOLAR SYSTEMS, LTD. 172

SOLICORE, INC. 173 STIRLING ENERGY SYSTEMS 173

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