

Physical Vapor Deposition (PVD): Global Markets

https://marketpublishers.com/r/PC77CED74A4EN.html

Date: March 2021

Pages: 149

Price: US\$ 2,750.00 (Single User License)

ID: PC77CED74A4EN

Abstracts

Report Scope:

This study encompasses PVD technologies and materials regarding application, properties and processes. BCC Research analyzes the major types of PVD systems and materials used to manufacture products in various end-use industries. Applications are discussed, as are properties imparted by PVD. Trends in demand also are reviewed, and their impacts on PVD are assessed.

Market drivers within each industry are identified. Materials deposited by PVD are analyzed according to basic functions (e.g., wear resistance, abrasion and corrosion resistance, conductivity, and barrier protection). Technological issues and trends are reviewed, and other influential factors such as economic conditions and standards are discussed. Because this is a global study, BCC Research analyzes domestic and international technological issues and economic considerations.

Revenue forecasts from 2019 to 2025 are given for each major type of PVD equipment, end-user and regional market.

This updated report includes the impact of COVID-19 on the end-user base of PVD, which can be seen in the global as well as regional market analysis.

Report Includes:

35 data tables and 56 additional tables

An overview of the global markets for Physical Vapor Deposition (PVD)

Estimation of the market size and analyses of global market trends, with data



from 2019, 2020 and projections of compound annual growth rates (CAGRs) through 2025

Details of PVD technology, its various techniques, and description of advantages and limitations; and coverage of technological advancements within the industry

Information on PVD vs. other types of deposition equipment used in microelectronics and discussion on current and future markets for this deposition process

Detailed analysis of COVID-19 impact on the growth of global PVD market and assessment of market size and forecast

Market share analysis of the key companies of the industry and coverage of events like mergers & acquisitions, joint ventures, collaborations or partnerships, and other key market strategies

Company profiles of major players of the industry, including Applied Materials Inc., KDF Electronics, Lam Research Corp., Semicore Equipment Inc., ULVAC Technologies Inc., and Veeco Instruments Inc.



Contents

CHAPTER 1 INTRODUCTION

Study Goals and Objectives

Reasons for Doing This Study

Scope of Report

Intended Audience

Information Sources

What's New in This Updated Report

Methodology

Data Collection

Data Validation

Data Analysis and Projections

Geographic Breakdown

Analyst's Credentials

BCC Custom Research

Related BCC Research Reports

CHAPTER 2 SUMMARY AND HIGHLIGHTS

Impact of COVID-19 Pandemic Industry Expert Insights

CHAPTER 3 MARKET BACKGROUND AND TECHNOLOGICAL DEVELOPMENTS

PVD Technology Classification of Materials Major Applications

CHAPTER 4 PVD TECHNOLOGIES

The Basic Physical Vapor Deposition Process
The Evaporation Phase
Pulsed Laser Deposition
Sputtering Operations
Ion Plating
Cathodic Arc Deposition

Other Coatings



PVD Equipment Configurations

Cluster Tools

In-line Systems

Technology Trends in PVD

Nanotechnology Offers Improvements

Nanocomposites

PVD with Nanocoatings and Nanolaminates

Custom-Made PVD Systems

Rotatable Sputter Targets for Large-Area Glass Coating

Large-area Roll-To-Roll Deposition

Future Developments

Patent Analysis

Scope of Patent Activity

Patents by Technical Subject

Patents by Company

CHAPTER 5 PVD MARKET OVERVIEW

Global Market Analysis by Application Global Market for PVD Equipment, Materials and Services by Region

CHAPTER 6 PVD IN MICROELECTRONICS APPLICATIONS

Semiconductor Applications

Market Value

Other Microelectronics Applications

Flat Panel Displays

Electronic Components

MEMS

Equipment

PVD vs. Other Types of Deposition Equipment Used in Microelectronics

Types of PVD Systems Used

Market Value

Materials Deposited

Gate Dielectrics

Interconnects

Barrier Layers

Contact and Adhesion Layers

New Materials



Sputtering Targets
Market Value
Services
Market Value

CHAPTER 7 PVD IN DATA STORAGE APPLICATIONS BY SEGMENT

Applications

Equipment

Market Value

Materials Deposited

Nanostructured Films

Market Value

Services

Market Value

CHAPTER 8 PVD IN CUTTING TOOL APPLICATIONS

Applications

Market Value

Equipment

Market Value

Materials Deposited

Nanocoatings

Market Value

Services

Market Value

CHAPTER 9 PVD IN SOLAR (PHOTOVOLTAIC) APPLICATIONS

Applications

Silicon Wafer-Based Cells

Thin-Film Photovoltaics

Multi-junction Cells

Emerging Solar Applications

Market Value

Equipment

Market Value

Materials Deposited



Newer Materials

Market Value

Services

Market Value

CHAPTER 10 PVD IN OPTICS APPLICATIONS

Applications

Market Value

Equipment

Market Value

Materials Deposited

Plastic Lenses

Nanocoatings

Market Value

Services

Market Value

CHAPTER 11 PVD IN MEDICAL EQUIPMENT APPLICATIONS

Applications

Market Value

Equipment

Market Value

Materials Deposited

Market Value

Services

Market Value

CHAPTER 12 PVD IN FLEXIBLE PACKAGING APPLICATIONS

Applications

Market Value

Equipment

Web Coating Systems

Sputtering Systems

Market Value

Materials Deposited

Market Value



Services

Market Value

CHAPTER 13 PVD IN INDUSTRIAL APPLICATIONS

Applications

Automotive

Aerospace

Market Value

Equipment

Market Value

Materials Deposited

Market Value

Services

Market Value

CHAPTER 14 PVD INDUSTRY STRUCTURE

Industry Dynamics

Key Market Drivers

Trends

Opportunities

Global Company Ranking Analysis

Key Developments in the Global Market for PVD Technologies

CHAPTER 15 COMPANY PROFILES

AJA INTERNATION INC.

ANGSTORM ENGINEERING INC.

APPLIED MATERIALS INC.

BUHLER ALZENAU

CGS VACUUM

CHA INDUSTRIES, INC.

DENTON VACCUM U.S.A.

GALILEO VACUUM SYSTEMS

GROUP INTERNATIONAL INDUSTRIES LTD.

IMPREGLON UK LTD.

IMPACT COATINGS AB

INTEVAC INC.



KDF ELECTRONICS

KOLZER SRL

KURT J. LESKER CO.

LAM RESEARCH CORP.

LEYBOLD GMBH

NEXX SYSTEMS, INC.

OC OERLIKON MANAGEMENT AG

PENTA TECHNOLOGY (SUZHOU) CO., LTD.

PLATIT AG

RICHTER PRECISION INC. (RPI)

SEMICORE EQUIPMENT INC.

SHENYANG KEYUO VACUUM TECHNOLOGY CO., LTD.

SINGULUS TECHNOLOGIES AG

SYSTEM CONTROL TECHNOLOGIES (SCT)

STATON, S.R.O.

ULVAC

VAPOR TECHNOLOGIES INC.

VEECO INSTRUMENTS INC.

VOESTALPINE HIGH PERFORMANCE METALS CORP.

CHAPTER 16 APPENDIX: ACRONYMS



List Of Tables

LIST OF TABLES

Summary Table: Global Market for PVD, by Segment, Through 2025

Table 1: Basic PVD Technologies

Table 2: Key Properties of Typical Materials Deposited by PVD

Table 3: Leading PVD Applications

Table 4: PVD Evaporation Sources

Table 5: Key Advantages of the PVD Evaporation Process

Table 6: Major Limitations of Evaporation

Table 7: Key Advantages of Pulsed Laser Deposition

Table 8: Key Disadvantages of Pulsed Laser Deposition

Table 9: Key Advantages of Sputtering

Table 10: Key Sputtering Materials

Table 11: Major Limitations of Sputtering

Table 12: Key Applications and Advantages of Nanoceramic Coatings

Table 13: Key Applications and Advantages of Nanosilver Coatings

Table 14: Key Applications of Spectrum Nanocoating

Table 15: Advantages/Limitations of the Ion Beam Assisted Deposition Process

Table 16: Advantages and Limitations of the Cathodic Arc Process

Table 17: Basic Advantages of Roll Coating

Table 18: Technical Advantages of Cluster Tools

Table 19: Basic Benefits of In-line PVD Systems

Table 20: Industrial Applications of Nanocomposites

Table 21: Applications of a Rotatable Sputter Target System

Table 22: Major Applications for Large-area Roll-to-Roll Deposition Systems

Table 23: PVD Patents by Technical Category, July 2014-December 2019

Table 24: PVD Patents by Assignee (Two or More Patents), July 2014–December 2019

Table 25: Global Market for PVD Equipment, Materials and Services, by Region,

Through 2025

Table 26: Basic Semiconductor Applications of PVD

Table 27: Advantages of PVD in Semiconductor Fabrication

Table 28: Global Market for PVD in Microelectronics Applications, by Segment, Through 2025

Table 29: Advantages of PVD for Other Microelectronics Products

Table 30: PVD Functions vs. Other Technologies in Semiconductor Fabrication

Table 31: Global Market for PVD in Microelectronics Applications, by Type of

Equipment, Through 2025



- Table 32: Key Materials Deposited by PVD for Semiconductor Fabrication
- Table 33: Desired Dielectric Properties for Microelectronic Products
- Table 34: Key Materials Used in Microelectronic Products
- Table 35: Global Market for Materials Deposited by PVD in Microelectronics, Through 2025
- Table 36: Global Market for PVD Deposition Services in the Microelectronics Applications, Through 2025
- Table 37: Major Advantages of PVD for Data Storage Products
- Table 38: Global Market for PVD in Data Storage Applications, by Segment, Through 2025
- Table 39: Global Market for PVD Equipment, Through 2025
- Table 40: Major Materials Deposited by PVD for the Fabrication of Storage Devices
- Table 41: Global Market for Materials Deposited by PVD in Data Storage Applications, Through 2025
- Table 42: Global Market for PVD Services in Data Storage Applications, Through 2025
- Table 43: General Types of Cutting Tools Coated By PVD
- Table 44: Basic Cutting Tool PVD Applications
- Table 45: Global Market for PVD in Cutting Tool Applications, by Segment, Through 2025
- Table 46: Global Market for PVD in Cutting Tool Applications, by Type of Equipment, Through 2025
- Table 47: Key Materials Deposited by PVD for Cutting Tool Applications
- Table 48: Global Market for Materials Deposited by PVD in Cutting Tool Applications, Through 2025
- Table 49: Global Market for PVD Deposition Services in Cutting Tool Applications,
- Through 2025
- Table 50: PVD Photovoltaic Applications
- Table 51: Global Market for PVD in Photovoltaic Applications, by Segment, Through 2025
- Table 52: Major Advantages of PVD in Making Solar Cells
- Table 53: Global Market for PVD in Photovoltaic Applications, by Type of Equipment, Through 2025
- Table 54: Major Materials Used in Solar Applications
- Table 55: Global Market for Materials Deposited by PVD in Photovoltaic Applications, Through 2025
- Table 56: Global Market for PVD Services in Photovoltaic Applications, Through 2025
- Table 57: Most Common Optics PVD Applications
- Table 58: Global Market for PVD in Optics Applications, by Segment, Through 2025
- Table 59: Keys to Successful Optical Coatings



Table 60: Global Market for PVD in Optics Applications, by Type of Equipment, Through 2025

Table 61: Key Materials Used for Optical Coatings

Table 62: Global Market for Materials Deposited by PVD in Optics Applications,

Through 2025

Table 63: Global Market for PVD Services in Optics Applications, Through 2025

Table 64: Overview of Medical Equipment Applications

Table 65: Global Market for PVD in in Medical Equipment Applications, by Segment,

Through 2025

Table 66: Global Market for PVD in Medical Applications, by Type of Equipment,

Through 2025

Table 67: Major Thin Film Materials used to Manufacture Medical Devices and

Equipment

Table 68: Global Market for Materials Deposited by PVD in Medical Equipment

Applications, Through 2025

Table 69: Global Market for PVD Services in Medical Equipment Applications, Through

2025

Table 70: Overview of Flexible Packaging Applications

Table 71: Representative Products Using Flexible Packaging

Table 72: Advantages of PVD in Flexible Packaging

Table 73: Global Market for PVD in Packaging Applications, by Segment, Through 2025

Table 74: Global Market for PVD in Packaging Applications, by Type of Equipment,

Through 2025

Table 75: Key Materials Deposited by PVD in Flexible Packaging

Table 76: Global Market for Materials Deposited by PVD in Packaging Applications,

Through 2025

Table 77: Global Market for PVD Services in Packaging Applications, Through 2025

Table 78: Overview of Current and Emerging Industrial PVD Applications

Table 79: Global Market for PVD in Automotive and Aerospace Applications, by

Segment, Through 2025

Table 80: Advantages of PVD Industrial Coatings

Table 81: Global Market for PVD Automotive and Aerospace Applications, Through

2025

Table 82: Key Materials Deposited by PVD in Industrial Applications

Table 83: Global Market for Materials Deposited by PVD in Automotive and Aerospace

Applications, Through 2025

Table 84: Global Market for PVD Services in Automotive and Aerospace Applications,

Through 2025

Table 85: List of Key Market Players



Table 86: Key Technical Areas Reflecting PVD Improvements

Table 87: Market Ranking Analysis at the Global Level, by Manufacturer, 2019

Table 88: Key Developments by Major Manufacturers, 2017-2021

Table 89: Acronyms Used in This Report

Table 90: List of Associations Related to This Report



List Of Figures

LIST OF FIGURES

Summary Figure: Global Market for PVD, by Segment, 2019-2025

Figure 1: Global Market Shares of PVD Equipment, Materials and Services, by Application, 2019-2025

Figure 2: Global Market Shares of PVD Equipment, Materials and Services, by Application, 2019

Figure 3: Global Market for PVD Equipment, Materials and Services, by Region, 2019-2025

Figure 4: Global Market Shares of PVD in Microelectronics Applications, by Segment, 2019

Figure 5: Global Market for PVD in Microelectronics Applications, by Segment, 2019-2025

Figure 6: Global Market for PVD Equipment in Microelectronics Applications, by Type of Equipment, 2019-2025

Figure 7: Global Market for Materials Deposited by PVD in Microelectronics, 2019-2025

Figure 8: Global Market for PVD in Data Storage Applications, by Segment, 2019-2025

Figure 9: Global Market for Materials Deposited by PVD in Data Storage Applications, 2019-2025

Figure 10: Global Market Shares of PVD in Data Storage Applications, by Segment, 2019

Figure 11: Global Market Shares of PVD in Cutting Tool Applications, by Segment, 2019

Figure 12: Global Market for PVD in Cutting Tool Applications, by Segment, 2019-2025

Figure 13: Market Distribution of Cutting Tools Material, 2017

Figure 14: Global Market for PVD in Microelectronics Applications, by Type of Equipment, 2019-2025

Figure 15: Global Market for Materials Deposited by PVD in Cutting Tool Applications, 2019-2025

Figure 16: Global Market Shares of PVD in Photovoltaic Applications, by Segment, 2019

Figure 17: Global Market for PVD in Photovoltaic Applications, by Segment, 2019-2025

Figure 18: Global Market for PVD in Photovoltaic Applications, by Type of Equipment, 2019-2025

Figure 19: Global Market for Materials Deposited by PVD in Cutting Tool Applications, 2019-2025

Figure 20: Global Market Shares of PVD in Optics Applications, by Segment, 2019

Figure 21: Global Market for PVD in Optics Applications, by Segment, 2019-2025



Figure 22: Global Market for PVD in Optics Applications, by Type of Equipment, 2019-2025

Figure 23: Global Market for Materials Deposited by PVD in Optics Applications, 2019-2025

Figure 24: Global Market Shares of PVD in Medical Equipment Applications, by Segment, 2019

Figure 25: Global Market for PVD in Medical Equipment Applications, by Segment, 2019-2025

Figure 26: Global Market for PVD in Medical Applications, by Type of Equipment, 2019-2025

Figure 27: Global Market for Materials Deposited by PVD in Medical Equipment Applications, 2019-2025

Figure 28: Global Market Shares of PVD in Packaging Applications, by Segment, 2019

Figure 29: Global Market for PVD in Packaging Applications, by Segment, 2019-2025

Figure 30: Global Market for PVD in Packaging Applications, by Type of Equipment, 2019-2025

Figure 31: Global Market for Materials Deposited by PVD in Packaging Applications, 2019-2025

Figure 32: Global Market Shares of PVD in Automotive and Aerospace Applications, by Segment, 2019

Figure 33: Global Market for PVD in Automotive and Aerospace Applications, by Segment, 2019-2025

Figure 34: Global Market for PVD in Automotive and Aerospace Applications, 2019-2025

Figure 35: Global Market for Materials Deposited by PVD in Automotive and Aerospace Applications, 2019-2025

Figure 36: Solar PV Net Capacity Additions, by Application, 2020-2022

Figure 37: Applied Materials Inc.: Revenue Share, by Segment, 2020

Figure 38: Applied Materials Inc.: Revenue Share, by Region, 2020

Figure 39: Buhler Alzenau: Revenue Share, by Region, 2019

Figure 40: Lam Research: Revenue Share, by Business Segment, 2020

Figure 41: OC Oerlikon Management AG: Revenue Share, by Region, 2019

Figure 42: Veeco Instruments Inc.: Revenue Share, by Region, 2019



I would like to order

Product name: Physical Vapor Deposition (PVD): Global Markets

Product link: https://marketpublishers.com/r/PC77CED74A4EN.html

Price: US\$ 2,750.00 (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/PC77CED74A4EN.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
	Custumer 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