

Chemical Vapor Deposition (CVD) Equipment Market Surges with Strong Growth in Semiconductors & Solar Energy Applications

The rapid growth in microelectronics and semiconductor manufacturing is a key driver for the CVD equipment market

VANCOUVER, BC, CANADA, April 8, 2025 /EINPresswire.com/ -- The [CVD equipment market](#) is expected to grow from an estimated USD 23.1 billion in 2024 to USD 52.3 billion in 2033, at a CAGR of 9.50%. An Emergen Research report of 250 pages features 194 tables, 189 charts, and graphics. Our new study is ideal for anyone who wants to learn about the global CVD

equipment market commercially and deeply, as well as to analyze the market segments in depth. With the help of our recent study, you can analyze the entire regional and global market for CVD equipment. To increase market share, you must obtain financial analysis of the entire market and its segments. Our research suggests there are significant opportunities in this rapidly expanding market for energy storage technology. Look at how you might take advantage of these revenue-generating opportunities. Additionally, the research will help you develop growth strategies, strengthen competitor analysis, and improve business productivity by enabling you to make better strategic decisions.

The global Chemical Vapor Deposition (CVD) equipment market is experiencing strong growth, fueled by rising demand in the semiconductor, electronics, and renewable energy industries. According to recent market analysis, the adoption of CVD technology surged significantly in 2023, driven by increased need for high-precision manufacturing processes.

The Semiconductor Industry Association (SIA) reported a 20% rise in the use of CVD systems last year, as chipmakers adopted more advanced equipment to meet the demands of next-generation logic and memory chips. In a key industry move, Applied Materials launched a new CVD system in September 2024 aimed at improving performance in advanced logic chip fabrication. The technology enables highly uniform thin-film coatings, which are essential for the



latest semiconductor designs.

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With our new report, you are less likely to fall behind in knowledge or miss out on opportunities. See how our work could benefit your research, analyses, and decisions. Emergen Research study is for everybody needing commercial analyses for the CVD equipment Market, 2022 to 2030, market-leading companies. You will find data, trends and predictions.

Major Players/Manufacturers profiled in the report are:

Applied Materials, Inc.

Lam Research Corporation

Tokyo Electron Limited

ASM International

Veeco Instruments Inc.

Hitachi High-Tech Corporation

Kokusai Electric Corporation

Oxford Instruments plc

Plasma-Therm LLC

CVD Equipment Corporation

Collaborations are playing an important role in shaping market trends. In June 2024, Tokyo Electron announced a partnership with a leading materials supplier to develop new deposition materials for 3D NAND memory devices, a sign of how innovation and integration are becoming essential for progress in this space.

CVD technology is also gaining ground in the renewable energy sector. According to the Solar Energy Industries Association (SEIA), CVD systems played a key role in enhancing solar cell performance in 2023. The International Renewable Energy Agency (IRENA) reported a 25% increase in solar installations globally last year, with many high-efficiency photovoltaic cells produced using CVD-based methods. Companies like Hanwha Q CELLS are now leveraging CVD technology to create solar panels with improved energy output, supporting the global push

toward cleaner energy sources.

As countries invest in cleaner energy and chipmakers move toward smaller, more powerful devices, the need for advanced manufacturing tools like CVD continues to grow. Technologies such as FinFET and 3D NAND, along with the shift to 5nm chip nodes and beyond, all require precise material deposition—an area where CVD equipment excels.

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However, the market faces challenges. Maintaining and calibrating CVD systems remains a complex task due to their intricate design and the high-temperature, chemical-rich environments in which they operate. A report from the Semiconductor Equipment and Materials International (SEMI) revealed that maintenance issues contribute to around 30% of system downtime. Additionally, a shortage of skilled workers, particularly in developing countries, is making it harder for companies to keep systems running efficiently. A 2023 survey by the Association for Manufacturing Technology (AMT) showed that over 40% of global manufacturing facilities struggle to find qualified technical staff for CVD maintenance.

These challenges are particularly difficult for smaller businesses, which often lack the resources to invest in the expertise and tools needed to manage advanced CVD systems effectively.

Looking at market segments, CVD equipment led the market in 2024, accounting for approximately 45% of total share, according to SEMI. This was largely driven by its critical role in semiconductor manufacturing and solar panel production. Key manufacturers are now incorporating AI and IoT technologies into CVD systems to boost performance and reduce maintenance needs.

Meanwhile, CVD materials are expected to be the fastest-growing segment in the coming years. This growth is linked to the increasing demand for advanced materials such as silicon carbide and gallium nitride, which are essential for modern electronics and energy devices. The push for more efficient and durable solar panels is also supporting the expansion of CVD materials.

With its growing role across multiple industries and continued innovation from key players, the CVD equipment market is well-positioned for sustained growth. As manufacturers and energy companies seek higher efficiency and performance, CVD technology will remain a vital part of the global shift toward smarter and cleaner production solutions.

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Global CVD equipment Market Report - Segmental Analysis:

By Category Outlook (Revenue, USD Billion; 2020-2033)

CVD Equipment

CVD Materials

CVD Services

By Application Outlook (Revenue, USD Billion; 2020-2033)

Semiconductor & Microelectronics

Data Storage

Solar Products

Cutting Tools

Medical Equipment

Others

Key Geographies Profiled in the Report:

North America(the U.S., Mexico, and Canada)

Asia Pacific(China, Japan, India, and Rest of Asia Pacific)

Europe(the U.K., France, Germany, and Rest of Europe)

Latin America(Brazil and Rest of Latin America)

Middle East & Africa(GCC Countries and Rest of Middle East & Africa)

Key Benefits For Stakeholders:

The report provides an extensive analysis of the current and future trends in the global minimally invasive surgical systems market to elucidate the imminent investment pockets.

A detailed analysis of the factors that drive and restrict the growth of the minimally invasive surgical systems market is provided.

Extensive analysis of key segments demonstrates the types of energy devices, access equipment,

and visualization & documentation systems used in minimally invasive surgeries.

A comprehensive analysis of the geographical landscape provides detailed information about various regions across North America, Europe, Asia Pacific, Latin America, and Middle East & Africa.

The report offers a competitive landscape of the minimally invasive surgical systems market to assist players to gain insights into the competition scenario. Key companies operating in the market are profiled to provide valuable insights.

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