

# **Super-resolution Microscopes Market Size, Share & Trends Analysis Report By Technology (STED Microscopy, STORM), By Application (Life Science, Nanotechnology), By Region, And Segment Forecasts, 2022 - 2030**

<https://marketpublishers.com/r/S6C314CF1A6EN.html>

Date: June 2022

Pages: 115

Price: US\$ 5,950.00 (Single User License)

ID: S6C314CF1A6EN

## **Abstracts**

This report can be delivered to the clients within 3 Business Days

### **Super-resolution Microscopes Market Growth & Trends**

The global super-resolution microscopes market size is expected to reach USD 6.6 billion by 2030, according to a new report by Grand View Research, Inc. The market is expected to expand at a CAGR of 9.01% from 2022 to 2030. Increasing application in cell biology and biomedical imaging is a key factor expected to drive the market over the forecast period.

Governments all over the world are supporting R&D for innovative technology, majorly nanotechnology research to help build improved nanoimaging technology-based super-resolution microscopes. The National Institutes of Health in the U.S. established a trans-NH bioengineering nanotechnology program to solicit grant applications for biomedical nanotechnologies. The U.K. government spent EUR 81 million (USD 105 million) on the development of advanced 3D imaging technology in February 2020.

The COVID-19 pandemic accelerated technological advancement, culminating in the creation of diverse uses for super-resolution microscopes since 2020. Top players have recently introduced new super-resolution microscopes having a variety of applications, including operations, cancer research, COVID-19 investigations, and academic research. For instance, Hitachi High-Tech Corporation introduced the simple-to-use

AFM 100 and AFM100 plus Atomic Force Microscopes in July 2021, which provides improved dependability and ease for quality control applications or high-throughput R&D.

### Super-resolution Microscopes Market Report Highlights

In 2021, the life science application segment accounted for the largest revenue share as super-resolution microscopes are used in place of electron microscopes as they allow researchers to image biological specimens more precisely

Based on technology, STED microscopy held the largest revenue share in 2021 due to its ability to deliver diffraction-unlimited images, with no need for further computational processing

The nanotechnology application segment is projected to register the fastest CAGR during the forecast period. This can be attributed to key players launching new products based on nanotechnology. For instance, in October 2020, Bruker Corporation released Vutara VXL, its super-resolution microscope, which is a biological workstation for research on proteins, DNA, RNA, and other biomolecules for nanoscale imaging

North America held the largest revenue share in 2021. Increasing research activities in different segments of life science and nanotechnology and initiatives taken by the government in past years, where research funding agencies encouraged researchers to adopt super-resolution microscopes, are expected to drive the regional market

Asia Pacific is expected to expand at the fastest CAGR over the forecast period. High product sales in countries like China and the growing interest of photonics companies and venture capitalists in the field of electronics and life sciences are the factors driving the regional market

The market is technology-driven and therefore, manufacturers engage in rigorous R&D to develop new and advanced products, which cater to the changing needs of healthcare and other industries

## Contents

### CHAPTER 1 METHODOLOGY AND SCOPE

- 1.1 Market Segmentation & Scope
  - 1.1.1 Technology
  - 1.1.2 Application
  - 1.1.3 Regional Scope
  - 1.1.4 Estimates and Forecast Timeline
- 1.2 Research Methodology
  - 1.2.1 Information procurement
    - 1.2.1.1 Purchased database
    - 1.2.1.2 GVR'S internal database
    - 1.2.1.3 Secondary sources
    - 1.2.1.4 Primary research
      - 1.2.1.4.1 Details of the primary research
- 1.3 Information or Data Analysis
  - 1.3.1 Data Analysis Models
- 1.4 Market Formulation & Validation
- 1.5 Model Details
  - 1.5.1 Commodity flow analysis
- 1.6 List of Secondary Sources
- 1.7 List of Primary Sources
- 1.8 List of Abbreviations
- 1.9 Objectives
  - 1.9.1 Objective -
  - 1.9.2 Objective -
  - 1.9.3 Objective -

### CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Market Outlook
- 2.2 Segment Outlook
  - 2.2.1 Technology
  - 2.2.2 Application
- 2.3 Regional Insights
- 2.4 Competition Outlook

### CHAPTER 3 MARKET VARIABLES, TRENDS & SCOPE

- 3.1 Market Lineage outlook
  - 3.1.1 Parent Market Outlook
  - 3.1.2 Related/Ancillary Market Outlook
- 3.2 User Perspective Analysis
  - 3.2.1 Consumer Behaviour Analysis
  - 3.2.2 Market Influencer Analysis
- 3.3 Market Dynamics
  - 3.3.1 Market Driver Analysis
    - 3.3.1.1 Rising R&D expenditure catering to emerging application areas
    - 3.3.1.2 Increasing demand for super-resolution in cell & microbiology and technological advancement
    - 3.3.1.3 Increasing demand for nanotechnology-based research
  - 3.3.2 Market Restraint Analysis
    - 3.3.2.1 High cost of super-resolution microscopes impeding market penetration
    - 3.3.2.2 Complexities associated with the operations
  - 3.3.3 Industry Challenges
    - 3.3.3.1 Reduction in production & stock during the pandemic
  - 3.3.4 Industry Opportunities
    - 3.3.4.1 Increasing application of microscopes in life sciences
    - 3.3.4.2 Growing government support
- 3.4 Penetration & Growth Prospect Mapping
- 3.5 Business Environment Analysis Tools
  - 3.5.1 Porter's Five Forces Analysis
    - 3.5.1.1 Threat of new entrants: Moderate
    - 3.5.1.2 Bargaining power of buyers: Low
    - 3.5.1.3 Competitive rivalry: Moderate
    - 3.5.1.4 Threat of substitutes: Low
    - 3.5.1.5 Bargaining power of suppliers: Moderate
  - 3.5.2 PESTEL Analysis
    - 3.5.2.1 Political & legal
    - 3.5.2.2 Economic
    - 3.5.2.3 Technological & Social
- 3.6 Regulatory Framework & Reimbursement Scenario
  - 3.6.1 Super-Resolution Microscopes Regulation in North America, Europe & Asia Pacific
- 3.7 Impact of COVID-19 on Super-Resolution Microscopes Market

## **CHAPTER 4 SUPER-RESOLUTION MICROSCOPES MARKET: TECHNOLOGY**

## **ANALYSIS**

4.1 Super-Resolution Microscopes Technology Market Share Analysis, 2021 & 2030

4.2 Super-Resolution Microscopes Technology Market: Segment Dashboard

4.3 Market Size & Forecast and Trend Analyses, 2017 to 2030 for the Technology Segment

4.3.1 Stimulated Emission Depletion Microscopy (STED) Market

4.3.1.1 Stimulated Emission Depletion Microscopy (STED) market, 2017 - 2030 (USD Million)

4.3.2 Structured-Illumination Microscopy (SIM)

4.3.2.1 Structured-Illumination Microscopy (SIM) market, 2017 - 2030 (USD Million)

4.3.3 Stochastic Optical Reconstruction Microscopy (STORM)

4.3.3.1 Stochastic Optical Reconstruction Microscopy (STORM) market, 2017 - 2030 (USD Million)

4.3.4 Fluorescence Photoactivation Localization Microscopy (FPALM)

4.3.4.1 Fluorescence Photoactivation Localization Microscopy (FPALM) market, 2017 - 2030 (USD Million)

4.3.5 Photoactivated Localization Microscopy (PALM)

4.3.5.1 Photoactivated Localization Microscopy (PALM) market, 2017 - 2030 (USD Million)

## **CHAPTER 5 SUPER-RESOLUTION MICROSCOPES MARKET: APPLICATION ANALYSIS**

5.1 Super-Resolution Microscopes Application Market Share Analysis, 2021 & 2030

5.2 Super-Resolution Microscopes Application Market: Segment Dashboard

5.3 Market Size & Forecasts and Trend Analyses, 2017 to 2030 for the Application

5.3.1 Life Science

5.3.1.1 Life science market, 2017 - 2030 (USD Million)

5.3.2 Nanotechnology

5.3.2.1 Nanotechnology market, 2017 - 2030 (USD Million)

5.3.3 Semi-Conductors

5.3.3.1 Semi-conductors market, 2017 - 2030 (USD Million)

5.3.4 Material Science

5.3.4.1 Material science market, 2017 - 2030 (USD Million)

5.3.5 Other Applications

5.3.5.1 Other applications market, 2017 - 2030 (USD Million)

## **CHAPTER 6 SUPER-RESOLUTION MICROSCOPES MARKET: REGIONAL**

## ANALYSIS

6.1 Super-Resolution Microscopes Regional Market Share Analysis, 2021 & 2030

6.2 Regional Market Snapshot (Market Size, CAGR)

6.3 Market Size, & Forecasts, and Trend Analysis, 2017 to 2030

6.3.1 North America

6.3.1.1 North America super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.1.1.1 U.S.

6.3.1.1.1.1 Regulatory & reimbursement scenario

6.3.1.1.1.2 U.S. super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.1.1.2 Canada

6.3.1.1.2.1 Regulatory & reimbursement scenario

6.3.1.1.2.2 Canada super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.2 Europe

6.3.2.1 Europe super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.2.1.1 U.K.

6.3.2.1.1.1 Regulatory & reimbursement scenario

6.3.2.1.1.2 U.K. super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.2.1.2 Germany

6.3.2.1.2.1 Regulatory & reimbursement scenario

6.3.2.1.2.2 Germany super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.2.1.3 France

6.3.2.1.3.1 Regulatory and reimbursement scenario

6.3.2.1.3.2 France super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.2.1.4 Italy

6.3.2.1.4.1 Regulatory & reimbursement scenario

6.3.2.1.4.2 Italy super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.2.1.5 Spain

6.3.2.1.5.1 Regulatory & reimbursement scenario

6.3.2.1.5.2 Spain super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.3 Asia Pacific

6.3.3.1 Asia Pacific super-resolution microscopes market, 2017 - 2030 (USD Million)

6.3.3.1.1 Japan

6.3.3.1.1.1 Regulatory and reimbursement scenario

6.3.3.1.1.2 Japan super-resolution microscopes market, 2017 - 2030 (USD Million)

#### 6.3.3.1.2 China

##### 6.3.3.1.2.1 Regulatory and reimbursement scenario

##### 6.3.3.1.2.2 China super-resolution microscopes market, 2017 - 2030 (USD Million)

#### 6.3.4 Latin America

##### 6.3.4.1 Latin America super-resolution microscopes market, 2017 - 2030 (USD Million)

##### 6.3.4.1.1 Brazil

##### 6.3.4.1.1.1 Regulatory and reimbursement scenario

##### 6.3.4.1.1.2 Brazil super-resolution microscopes market, 2017 - 2030 (USD Million)

##### 6.3.4.1.2 Mexico

##### 6.3.4.1.2.1 Regulatory and reimbursement scenario

##### 6.3.4.1.2.2 Mexico super-resolution microscopes market, 2017 - 2030 (USD Million)

#### 6.3.5 Middle East and Africa

##### 6.3.5.1 MEA super-resolution microscopes market, 2017 - 2030 (USD Million)

##### 6.3.5.1.1 South Africa

##### 6.3.5.1.1.1 Regulatory and reimbursement scenario

##### 6.3.5.1.1.2 South Africa super-resolution microscopes market, 2017 - 2030 (USD Million)

## CHAPTER 7 COMPETITIVE ANALYSIS

### 7.1 Recent Developments & Impact Analysis, by Key Market Participants

### 7.2 Competition Categorization (Key innovators, Market leaders, Emerging Players)

### 7.3 Strategy Mapping

#### 7.3.1 Launch of new products

#### 7.3.2 Geographic expansion

#### 7.3.3 Funding outlook

### 7.4 Company Market Position Analysis

### 7.5 Company Profiles

#### 7.5.1 Zeiss

##### 7.5.1.1 Company overview

##### 7.5.1.2 Financial performance

##### 7.5.1.3 Product benchmarking

##### 7.5.1.4 Strategic initiatives

##### 7.5.1.5 SWOT analysis

#### 7.5.2 Applied Precision (GE Healthcare)

##### 7.5.2.1 Company overview

##### 7.5.2.2 Financial performance



- 7.5.2.3 Product benchmarking
- 7.5.2.4 Strategic initiatives
- 7.5.2.5 SWOT analysis
- 7.5.3 Nikon Corporation
  - 7.5.3.1 Company overview
  - 7.5.3.2 Financial performance
  - 7.5.3.3 Product benchmarking
  - 7.5.3.4 Strategic initiatives
  - 7.5.3.5 SWOT analysis
- 7.5.4 Olympus Corporation
  - 7.5.4.1 Company overview
  - 7.5.4.2 Financial performance
  - 7.5.4.3 Product benchmarking
  - 7.5.4.4 Strategic initiatives
  - 7.5.4.5 SWOT analysis
- 7.5.5 Leica Microsystem (Danaher Corporation)
  - 7.5.5.1 Company overview
  - 7.5.5.2 Financial performance
  - 7.5.5.3 Product benchmarking
  - 7.5.5.4 Strategic initiatives
  - 7.5.5.5 SWOT analysis
- 7.5.6 Bruker Corporation
  - 7.5.6.1 Company overview
  - 7.5.6.2 Financial performance
  - 7.5.6.3 Product benchmarking
  - 7.5.6.4 Strategic initiatives
  - 7.5.6.5 SWOT analysis
- 7.5.7 Hitachi High-Technologies Corporation
  - 7.5.7.1 Company overview
  - 7.5.7.2 Financial performance
  - 7.5.7.3 Product benchmarking
  - 7.5.7.4 Strategic initiatives
  - 7.5.7.5 SWOT analysis

## **CHAPTER 8 KOL COMMENTARY & RECOMMENDATIONS**

- 8.1 KOL Views
- 8.2 Recommendations





## List Of Tables

### LIST OF TABLES

Table 1 List of secondary sources

Table 2 Few STED products of Leica Microsystems

Table 3 North America super-resolution microscopes market, by country, 2017 - 2030 (USD Million)

Table 4 North America super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 5 North America super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 6 U.S. super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 7 U.S. super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 8 Canada super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 9 Canada super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 10 Europe super-resolution microscopes market, by country, 2017 - 2030 (USD Million)

Table 11 Europe super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 12 Europe super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 13 U.K. super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 14 U.K. super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 15 Germany super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 16 Germany super-resolution microscopes Market, by application, 2017 - 2030 (USD Million)

Table 17 France super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 18 France super-resolution microscopes Market, by application, 2017 - 2030 (USD Million)

Table 19 Spain super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Million)

Table 20 Spain super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 21 Italy super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 22 Italy super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 23 Asia Pacific super-resolution microscopes market, by country, 2017 - 2030 (USD Million)

Table 24 Asia Pacific super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 25 Asia Pacific super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 26 Japan super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 27 Japan super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 28 China super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 29 China super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 30 Latin America super-resolution microscopes market, by country, 2017 - 2030 (USD Million)

Table 31 Latin America super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 32 Latin America super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 33 Brazil super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 34 Brazil super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 35 Mexico super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 36 Mexico super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 37 MEA super-resolution microscopes market, by country, 2017 - 2030 (USD Million)

Table 38 MEA super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 39 MEA super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

Table 40 South Africa super-resolution microscopes market, by technology, 2017 - 2030 (USD Million)

Table 41 South Africa super-resolution microscopes market, by application, 2017 - 2030 (USD Million)

## List Of Figures

### LIST OF FIGURES

- Fig. 1 Super-resolution microscopes market segmentation
- Fig. 2 Estimation and forecast timeline
- Fig. 3 Market research process
- Fig. 4 Data triangulation techniques
- Fig. 5 Primary research pattern
- Fig. 6 Market research approaches
- Fig. 7 Value chain-based sizing & forecasting
- Fig. 8 QFD modeling for market share assessment
- Fig. 9 Market formulation & validation
- Fig. 10 Commodity flow analysis
- Fig. 11 Market outlook 2021 (USD Million)
- Fig. 12 Market trends & outlook
- Fig. 13 Market driver relevance analysis (Current & future impact)
- Fig. 14 Market restraint relevance analysis (Current & future impact)
- Fig. 15 Penetration & growth prospect mapping
- Fig. 16 Porter's five forces analysis
- Fig. 17 PESTLE analysis
- Fig. 18 Super-resolution microscopes technology market share analysis, 2021 & 2030
- Fig. 19 Super-resolution microscopes technology market: Segment dashboard
- Fig. 20 Stimulated Emission Depletion Microscopy (STED) market, 2017 - 2030 (USD Million)
- Fig. 21 Structured-Illumination Microscopy (SIM) market, 2017 - 2030 (USD Million)
- Fig. 22 Stochastic Optical Reconstruction Microscopy (STORM) market, 2017 - 2030 (USD Million)
- Fig. 23 Fluorescence Photo activation Localization Microscopy (FPALM) market, 2017 - 2030 (USD Million)
- Fig. 24 Photo Activated Localization Microscopy (PALM) market, 2017 - 2030 (USD Million)
- Fig. 25 Super-resolution microscopes market application movement analysis, 2021 & 2030
- Fig. 26 Super-resolution microscopes application market: Segment dashboard
- Fig. 27 Nanotechnology market, 2017 - 2030 (USD Million)
- Fig. 28 Life science market, 2017 - 2030 (USD Million)
- Fig. 29 Material science market, 2017 - 2030 (USD Million)
- Fig. 30 Semi-conductors market, 2017 - 2030 (USD Million)

Fig. 31 Other applications market, 2017 - 2030 (USD Million)

Fig. 32 Regional outlook, 2021 & 2030

Fig. 33 Regional market place: Key takeaways

Fig. 34 North America super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 35 U.S. super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 36 Canada super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 37 Europe super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 38 U.K. super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 39 Germany super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 40 France super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 41 Italy super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 42 Spain super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 43 Asia Pacific super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 44 Japan super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 45 China super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 46 Latin America super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 47 Brazil super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 48 Mexico super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 49 MEA super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 50 South Africa super-resolution microscopes market, 2017 - 2030 (USD Million)

Fig. 51 Recent developments & impact analysis, by key market participants

Fig. 52 Strategy framework

Fig. 53 Company market position analysis

## I would like to order

Product name: Super-resolution Microscopes Market Size, Share & Trends Analysis Report By Technology (STED Microscopy, STORM), By Application (Life Science, Nanotechnology), By Region, And Segment Forecasts, 2022 - 2030

Product link: <https://marketpublishers.com/r/S6C314CF1A6EN.html>

Price: US\$ 5,950.00 (Single User License / Electronic Delivery)

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

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/S6C314CF1A6EN.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