

# **Optogenetics Actuators and Sensors Market Size, Trends, Analysis, and Outlook By Product (Actuators, Sensors), By Disease Type, Retinal Disorders, Parkinson's Disease, Anxiety & Depression, Autism, Schizophrenia, Others), by Region, Country, Segment, and Companies, 2024-2030**

<https://marketpublishers.com/r/O68FF0F0AE8AEN.html>

Date: March 2024

Pages: 190

Price: US\$ 3,980.00 (Single User License)

ID: O68FF0F0AE8AEN

## **Abstracts**

The global Optogenetics Actuators and Sensors market size is poised to register 2.74% growth from 2024 to 2030, presenting significant growth prospects for companies operating in the industry. The industry study analyzes the global Optogenetics Actuators and Sensors market across By Product (Actuators, Sensors), By Disease Type, Retinal Disorders, Parkinson's Disease, Anxiety & Depression, Autism, Schizophrenia, Others).

The Optogenetics Actuators and Sensors Market is experiencing growth driven by the increasing adoption of optogenetics technology in neuroscience research, neuroengineering, and behavioral neuroscience, and the demand for advanced light-sensitive actuators and sensors for precise manipulation and monitoring of neural activity in vivo and in vitro. Optogenetics is a technique that combines genetic engineering with optical methods to control and monitor the activity of specific neurons and neural circuits using light-sensitive proteins called opsins. Key trends shaping its future include the development of next-generation optogenetic actuators and sensors with improved spectral properties, kinetics, and targeting specificity for enhanced spatial and temporal control of neuronal signaling and modulation, the customization of optogenetic toolkits and expression systems for diverse neuroscience applications and model organisms, and the integration of optogenetics with other neuroimaging and neurostimulation techniques for multimodal interrogation of brain function and behavior. Moreover, factors such as the increasing funding for neuroscience research and brain

mapping initiatives, the growing interest in optogenetic technologies for neurotherapeutics and neuromodulation, and the regulatory approvals of optogenetic research tools and gene delivery vectors are expected to drive market growth in 2024 and beyond.

## Optogenetics Actuators and Sensors Market Drivers, Trends, Opportunities, and Growth Opportunities

This comprehensive study discusses the latest trends and the most pressing challenges for industry players and investors. The Optogenetics Actuators and Sensors market research analyses the global market trends, key drivers, challenges, and opportunities in the industry. In addition, the latest Future of Optogenetics Actuators and Sensors survey report provides the market size outlook across types, applications, and other segments across the world and regions. It provides data-driven insights and actionable recommendations for companies in the Optogenetics Actuators and Sensors industry.

## Key market trends defining the global Optogenetics Actuators and Sensors demand in 2024 and Beyond

The industry continues to remain an attractive hub for opportunities for both domestic and global vendors. As the market evolves, factors such as emerging market dynamics, demand from end-user sectors, a growing patient base, changes in consumption patterns, and widening distribution channels continue to play a major role.

## Optogenetics Actuators and Sensors Market Segmentation- Industry Share, Market Size, and Outlook to 2030

The Optogenetics Actuators and Sensors industry comprises a wide range of segments and sub-segments. The rising demand for these product types and applications is supporting companies to increase their investment levels across niche segments. Accordingly, leading companies plan to generate a large share of their future revenue growth from expansion into these niche segments. The report presents the market size outlook across segments to support Optogenetics Actuators and Sensors companies scaling up production in these sub-segments with a focus on expanding into emerging countries.

## Key strategies adopted by companies within the Optogenetics Actuators and Sensors industry

Leading Optogenetics Actuators and Sensors companies are boosting investments to capitalize on untapped potential and future possibilities across niche market segments and surging demand conditions in key regions. Further, companies are leveraging advanced technologies to unlock opportunities and achieve operational excellence. The report provides key strategies opted for by the top 10 Optogenetics Actuators and Sensors companies.

### Optogenetics Actuators and Sensors Market Study- Strategic Analysis Review

The Optogenetics Actuators and Sensors market research report dives deep into the qualitative factors shaping the market, empowering you to make informed decisions-

**Industry Dynamics:** Porter's Five Forces analysis to understand bargaining power, competitive rivalry, and threats that impact long-term strategy formulation.

**Strategic Insights:** Provides valuable perspectives on key players and their approaches based on comprehensive strategy analysis.

**Internal Strengths and Weaknesses:** Develop targeted strategies to leverage strengths, address weaknesses, and capitalize on market opportunities.

**Future Possibilities:** Prepare for diverse outcomes with in-depth scenario analysis. Explore potential market disruptions, technology advancements, and economic changes.

### Optogenetics Actuators and Sensors Market Size Outlook- Historic and Forecast Revenue in Three Cases

The Optogenetics Actuators and Sensors industry report provides a detailed analysis and outlook of revenue generated by companies from 2018 to 2023. Further, with actual data for 2023, the report forecasts the market size outlook from 2024 to 2030 in three case scenarios- low case, reference case, and high case scenarios.

### Optogenetics Actuators and Sensors Country Analysis and Revenue Outlook to 2030

The report analyses 22 countries worldwide including the key driving forces and market size outlook from 2021 to 2030. In addition, region analysis across Asia Pacific, Europe,

the Middle East, Africa, North America, and South America is included in the study. For each of the six regions, the market size outlook by segments is forecast for 2030.

**North America Optogenetics Actuators and Sensors Market Size Outlook- Companies plan for focused investments in a changing environment**

The US continues to remain the market leader in North America, driven by a large consumer base, the presence of well-established providers, and a strong end-user industry demand. Leading companies focus on new product launches in the changing environment. The US economy is expected to grow in 2024 (around 2.2% growth in 2024), potentially driving demand for various Optogenetics Actuators and Sensors market segments. Similarly, Strong end-user demand is encouraging Canadian Optogenetics Actuators and Sensors companies to invest in niche segments. Further, as Mexico continues to strengthen its trade relations and invest in technological advancements, the Mexico Optogenetics Actuators and Sensors market is expected to experience significant expansion, offering lucrative opportunities for both domestic and international stakeholders.

**Europe Optogenetics Actuators and Sensors Market Size Outlook-Companies investing in assessing consumers, categories, competitors, and capabilities**

The German industry remains the major market for companies in the European Optogenetics Actuators and Sensors industry with consumers in Germany, France, the UK, Spain, Italy, and others anticipated to register a steady demand throughout the forecast period, driving the overall market prospects. In addition, the proactive approach of businesses in identifying and leveraging new growth prospects positions the European Optogenetics Actuators and Sensors market for an upward trajectory, fostering both domestic and international interest. Leading brands operating in the industry are emphasizing effective marketing strategies, innovative product offerings, and a keen understanding of consumer preferences.

**Asia Pacific Optogenetics Actuators and Sensors Market Size Outlook- an attractive hub for opportunities for both local and global companies**

The increasing prevalence of indications, robust healthcare expenditure, and increasing investments in healthcare infrastructure drive the demand for Optogenetics Actuators and Sensors in Asia Pacific. In particular, China, India, and South East Asian Optogenetics Actuators and Sensors markets present a compelling outlook for 2030, acting as a magnet for both domestic and multinational manufacturers seeking growth

opportunities. Similarly, with a burgeoning population and a rising middle class, India offers a vast consumer market. Japanese and Korean companies are quickly aligning their strategies to navigate changes, explore new markets, and enhance their competitive edge. Our report utilizes in-depth interviews with industry experts and comprehensive data analysis to provide a comprehensive outlook of 6 major markets in the region.

Latin America Optogenetics Actuators and Sensors Market Size Outlook- Continued urbanization and rising income levels

Rising income levels contribute to greater purchasing power among consumers, spurring consumption and creating opportunities for market expansion. Continued urbanization and rising income levels are expected to sustainably drive consumption growth in the medium to long term.

Middle East and Africa Optogenetics Actuators and Sensors Market Size Outlook- continues its upward trajectory across segments

Robust demand from Middle Eastern countries including Saudi Arabia, the UAE, Qatar, Kuwait, and other GCC countries supports the overall Middle East Optogenetics Actuators and Sensors market potential. Fueled by increasing healthcare expenditure of individuals, growing population, and high prevalence across a few markets drives the demand for Optogenetics Actuators and Sensors.

Optogenetics Actuators and Sensors Market Company Profiles

The global Optogenetics Actuators and Sensors market is characterized by intense competitive conditions with leading companies opting for aggressive marketing to gain market shares. The report presents business descriptions, SWOT analysis, growth strategies, and financial profiles. Leading companies included in the study are Addgene, AGTC, Bruker, Circuit Therapeutics Inc, Cobalt International Energy Inc, Cohorent Inc, Danaher, Elliot Scientific Ltd, GenSight Biologics, Judges Scientific plc, Laserglow technologies, Merck KGaA, Noldus Information Technology, Prizmatix, REGENXBIO Inc, Scientifica, Shanghai Laser & Optics Century Co. Ltd, The Jackson Laboratory, Thorlabs Inc, Visual Solutions Inc

Recent Optogenetics Actuators and Sensors Market Developments

The global Optogenetics Actuators and Sensors market study presents recent market

news and developments including new product launches, mergers, acquisitions, expansions, product approvals, and other updates in the industry.

Optogenetics Actuators and Sensors Market Report Scope

Parameters: Revenue, Volume Price

Study Period: 2023 (Base Year); 2018- 2023 (Historic Period); 2024- 2030 (Forecast Period)

Currency: USD; (Upon request, can be provided in Euro, JPY, GBP, and other Local Currency)

Qualitative Analysis

Pricing Analysis

Value Chain Analysis

SWOT Profile

Market Dynamics- Trends, Drivers, Challenges

Porter's Five Forces Analysis

Macroeconomic Impact Analysis

Case Scenarios- Low, Base, High

Market Segmentation:

By Product

Actuators

-Channelrhodopsin

-Halorhodopsin

*Optogenetics Actuators and Sensors Market Size, Trends, Analysis, and Outlook By Product (Actuators, Sensors),...*

-Archaerhodopsin

Sensors

-Genetically Encoded Calcium Indicators

-Voltage-Sensitive Fluorescent Proteins

-pH Sensors

By Disease Type

Retinal Disorders

Parkinson's Disease

Anxiety & Depression

Autism

Schizophrenia

Others

Geographical Segmentation:

North America (3 markets)

Europe (6 markets)

Asia Pacific (6 markets)

Latin America (3 markets)

Middle East Africa (5 markets)

Companies

Addgene

AGTC

Bruker

Circuit Therapeutics Inc

Cobalt International Energy Inc

Cohorent Inc

Danaher

Elliot Scientific Ltd

GenSight Biologics

Judges Scientific plc

Laserglow technologies

Merck KGaA

Noldus Information Technology

Prizmatix

REGENXBIO Inc

Scientifica

Shanghai Laser & Optics Century Co. Ltd

The Jackson Laboratory

Thorlabs Inc



Visual Solutions Inc

Formats Available: Excel, PDF, and PPT

## Contents

### **1. EXECUTIVE SUMMARY**

- 1.1 Optogenetics Actuators and Sensors Market Overview and Key Findings, 2024
- 1.2 Optogenetics Actuators and Sensors Market Size and Growth Outlook, 2021- 2030
- 1.3 Optogenetics Actuators and Sensors Market Growth Opportunities to 2030
- 1.4 Key Optogenetics Actuators and Sensors Market Trends and Challenges
  - 1.4.1 Optogenetics Actuators and Sensors Market Drivers and Trends
  - 1.4.2 Optogenetics Actuators and Sensors Market Challenges
- 1.5 Competitive Landscape and Key Players
- 1.6 Competitive Analysis- Growth Strategies Adopted by Leading Optogenetics Actuators and Sensors Companies

### **2. OPTOGENETICS ACTUATORS AND SENSORS MARKET SIZE OUTLOOK TO 2030**

- 2.1 Optogenetics Actuators and Sensors Market Size Outlook, USD Million, 2021- 2030
- 2.2 Optogenetics Actuators and Sensors Incremental Market Growth Outlook, %, 2021- 2030
- 2.3 Segment Snapshot, 2024

### **3. OPTOGENETICS ACTUATORS AND SENSORS MARKET- STRATEGIC ANALYSIS REVIEW**

- 3.1 Porter's Five Forces Analysis
  - \* Threat of New Entrants
  - \* Threat of Substitutes
  - \* Intensity of Competitive Rivalry
  - \* Bargaining Power of Buyers
  - \* Bargaining Power of Suppliers
- 3.2 Value Chain Analysis
- 3.3 SWOT Analysis

### **4. OPTOGENETICS ACTUATORS AND SENSORS MARKET SEGMENTATION ANALYSIS AND OUTLOOK**

- 4.1 Market Segmentation and Scope
- 4.2 Market Breakdown by Type, Application, and Other Segments, 2021-2030

## By Product

### Actuators

-Channelrhodopsin

-Halorhodopsin

-Archaerhodopsin

### Sensors

-Genetically Encoded Calcium Indicators

-Voltage-Sensitive Fluorescent Proteins

-pH Sensors

## By Disease Type

Retinal Disorders

Parkinson's Disease

Anxiety & Depression

Autism

Schizophrenia

Others

4.3 Growth Prospects and Niche Opportunities, 2023- 2030

4.4 Regional comparison of Market Growth, CAGR, 2023-2030

## **5. REGION-WISE MARKET OUTLOOK TO 2030**

5.1 Key Findings for Asia Pacific Optogenetics Actuators and Sensors Market, 2025

5.2 Asia Pacific Optogenetics Actuators and Sensors Market Size Outlook by Type, 2021- 2030

5.3 Asia Pacific Optogenetics Actuators and Sensors Market Size Outlook by Application, 2021- 2030

5.4 Key Findings for Europe Optogenetics Actuators and Sensors Market, 2025

5.5 Europe Optogenetics Actuators and Sensors Market Size Outlook by Type, 2021- 2030

5.6 Europe Optogenetics Actuators and Sensors Market Size Outlook by Application, 2021- 2030

5.7 Key Findings for North America Optogenetics Actuators and Sensors Market, 2025

5.8 North America Optogenetics Actuators and Sensors Market Size Outlook by Type, 2021- 2030

5.9 North America Optogenetics Actuators and Sensors Market Size Outlook by Application, 2021- 2030

5.10 Key Findings for South America Optogenetics Actuators and Sensors Market, 2025

5.11 South America Pacific Optogenetics Actuators and Sensors Market Size Outlook by Type, 2021- 2030

5.12 South America Optogenetics Actuators and Sensors Market Size Outlook by Application, 2021- 2030

5.13 Key Findings for Middle East and Africa Optogenetics Actuators and Sensors Market, 2025

5.14 Middle East Africa Optogenetics Actuators and Sensors Market Size Outlook by Type, 2021- 2030

5.15 Middle East Africa Optogenetics Actuators and Sensors Market Size Outlook by Application, 2021- 2030

## **6. COUNTRY-WISE MARKET SIZE OUTLOOK TO 2030**

6.1 US Optogenetics Actuators and Sensors Market Size Outlook and Revenue Growth Forecasts

6.2 US Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.3 Canada Market Size Outlook and Revenue Growth Forecasts

6.4 Canada Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.6 Mexico Market Size Outlook and Revenue Growth Forecasts

6.6 Mexico Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.7 Germany Market Size Outlook and Revenue Growth Forecasts

6.8 Germany Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.9 France Market Size Outlook and Revenue Growth Forecasts

6.10 France Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.11 UK Market Size Outlook and Revenue Growth Forecasts

6.12 UK Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.13 Spain Market Size Outlook and Revenue Growth Forecasts

6.14 Spain Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.16 Italy Market Size Outlook and Revenue Growth Forecasts

6.16 Italy Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.17 Rest of Europe Market Size Outlook and Revenue Growth Forecasts

6.18 Rest of Europe Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.19 China Market Size Outlook and Revenue Growth Forecasts

6.20 China Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.21 India Market Size Outlook and Revenue Growth Forecasts

6.22 India Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.23 Japan Market Size Outlook and Revenue Growth Forecasts

6.24 Japan Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.26 South Korea Market Size Outlook and Revenue Growth Forecasts

6.26 South Korea Optogenetics Actuators and Sensors Industry Drivers and

## Opportunities

6.27 Australia Market Size Outlook and Revenue Growth Forecasts

6.28 Australia Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.29 South East Asia Market Size Outlook and Revenue Growth Forecasts

6.30 South East Asia Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.31 Rest of Asia Pacific Market Size Outlook and Revenue Growth Forecasts

6.32 Rest of Asia Pacific Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.33 Brazil Market Size Outlook and Revenue Growth Forecasts

6.34 Brazil Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.36 Argentina Market Size Outlook and Revenue Growth Forecasts

6.36 Argentina Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.37 Rest of South America Market Size Outlook and Revenue Growth Forecasts

6.38 Rest of South America Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.39 Middle East Market Size Outlook and Revenue Growth Forecasts

6.40 Middle East Optogenetics Actuators and Sensors Industry Drivers and Opportunities

6.41 Africa Market Size Outlook and Revenue Growth Forecasts

6.42 Africa Optogenetics Actuators and Sensors Industry Drivers and Opportunities

## **7. OPTOGENETICS ACTUATORS AND SENSORS MARKET OUTLOOK ACROSS SCENARIOS**

7.1 Low Growth Case

7.2 Reference Growth Case

7.3 High Growth Case

## **8. OPTOGENETICS ACTUATORS AND SENSORS COMPANY PROFILES**

8.1 Profiles of Leading Optogenetics Actuators and Sensors Companies in the Market

8.2 Business Descriptions, SWOT Analysis, and Growth Strategies

8.3 Financial Performance and Key Metrics

Addgene

AGTC

Bruker

Circuit Therapeutics Inc

Cobalt International Energy Inc

Cohorent Inc  
Danaher  
Elliot Scientific Ltd  
GenSight Biologics  
Judges Scientific plc  
Laserglow technologies  
Merck KGaA  
Noldus Information Technology  
Prizmatix  
REGENXBIO Inc  
Scientifica  
Shanghai Laser & Optics Century Co. Ltd  
The Jackson Laboratory  
Thorlabs Inc  
Visual Solutions Inc

## **9. APPENDIX**

9.1 Scope of the Report  
9.2 Research Methodology and Data Sources  
9.3 Glossary of Terms  
9.4 Market Definitions  
9.5 Contact Information

## I would like to order

Product name: Optogenetics Actuators and Sensors Market Size, Trends, Analysis, and Outlook By Product (Actuators, Sensors), By Disease Type, Retinal Disorders, Parkinson's Disease, Anxiety & Depression, Autism, Schizophrenia, Others), by Region, Country, Segment, and Companies, 2024-2030

Product link: <https://marketpublishers.com/r/O68FF0F0AE8AEN.html>

Price: US\$ 3,980.00 (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/O68FF0F0AE8AEN.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