

Global Upconverting Nanoparticles (UCNPs) Supply, Demand and Key Producers, 2023-2029

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Abstracts

The global Upconverting Nanoparticles (UCNPs) market size is expected to reach \$ million by 2029, rising at a market growth of % CAGR during the forecast period (2023-2029).

Upconverting nanoparticles (UCNPs) are a type of nanomaterial that possess the ability to convert lower-energy photons (typically infrared or near-infrared light) into higher-energy visible or ultraviolet light. This unique property is known as upconversion luminescence.

UCNPs are typically composed of a host material, such as a lanthanide-doped matrix, and can be engineered at the nanoscale, ranging from a few nanometers to a few hundred nanometers in size. The host material contains dopant ions, usually lanthanides such as erbium, ytterbium, or thulium, which are responsible for the upconversion process.

When UCNPs are excited by infrared or near-infrared light, multiple photon absorption and energy transfer processes occur within the nanocrystal lattice. These processes involve sequential absorption of low-energy photons followed by energy transfer steps, ultimately resulting in the emission of higher-energy visible or ultraviolet photons.

This report studies the global Upconverting Nanoparticles (UCNPs) production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Upconverting Nanoparticles (UCNPs), and provides market size (US\$ million) and Year-over-Year (YoY) Growth, considering 2022 as the base year. This report explores

demand trends and competition, as well as details the characteristics of Upconverting Nanoparticles (UCNPs) that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Upconverting Nanoparticles (UCNPs) total production and demand, 2018-2029, (Tons)

Global Upconverting Nanoparticles (UCNPs) total production value, 2018-2029, (USD Million)

Global Upconverting Nanoparticles (UCNPs) production by region & country, production, value, CAGR, 2018-2029, (USD Million) & (Tons)

Global Upconverting Nanoparticles (UCNPs) consumption by region & country, CAGR, 2018-2029 & (Tons)

U.S. VS China: Upconverting Nanoparticles (UCNPs) domestic production, consumption, key domestic manufacturers and share

Global Upconverting Nanoparticles (UCNPs) production by manufacturer, production, price, value and market share 2018-2023, (USD Million) & (Tons)

Global Upconverting Nanoparticles (UCNPs) production by Component, production, value, CAGR, 2018-2029, (USD Million) & (Tons)

Global Upconverting Nanoparticles (UCNPs) production by Application production, value, CAGR, 2018-2029, (USD Million) & (Tons).

This reports profiles key players in the global Upconverting Nanoparticles (UCNPs) market based on the following parameters – company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Sigma-Aldrich, CD Bioparticles, Nanocs, Ocean NanoTech, Uniogen, Strem Chemicals and ACS Material, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals, COVID-19 and Russia-Ukraine War Influence.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Upconverting Nanoparticles (UCNPs) market.

Detailed Segmentation:

Each section contains quantitative market data including market by value (US\$ Millions), volume (production, consumption) & (Tons) and average price (US\$/Ton) by manufacturer, by Component, and by Application. Data is given for the years 2018-2029 by year with 2022 as the base year, 2023 as the estimate year, and 2024-2029 as the forecast year.

Global Upconverting Nanoparticles (UCNPs) Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Upconverting Nanoparticles (UCNPs) Market, Segmentation by Component

Lanthanide-Doped NaYF₄

Lanthanide-Doped NaGdF₄

Lanthanide-Doped LaF₃

Others

Global Upconverting Nanoparticles (UCNPs) Market, Segmentation by Application

Bioimaging

Sensing and Diagnostics

Photodynamic Therapy

Solar Energy Conversion

Display Technologies

Others

Companies Profiled:

Sigma-Aldrich

CD Bioparticles

Nanocs

Ocean NanoTech

Uniogen

Strem Chemicals

ACS Material

Key Questions Answered

1. How big is the global Upconverting Nanoparticles (UCNPs) market?
2. What is the demand of the global Upconverting Nanoparticles (UCNPs) market?

3. What is the year over year growth of the global Upconverting Nanoparticles (UCNPs) market?
4. What is the production and production value of the global Upconverting Nanoparticles (UCNPs) market?
5. Who are the key producers in the global Upconverting Nanoparticles (UCNPs) market?
6. What are the growth factors driving the market demand?

Contents

1 SUPPLY SUMMARY

- 1.1 Upconverting Nanoparticles (UCNPs) Introduction
- 1.2 World Upconverting Nanoparticles (UCNPs) Supply & Forecast
 - 1.2.1 World Upconverting Nanoparticles (UCNPs) Production Value (2018 & 2022 & 2029)
 - 1.2.2 World Upconverting Nanoparticles (UCNPs) Production (2018-2029)
 - 1.2.3 World Upconverting Nanoparticles (UCNPs) Pricing Trends (2018-2029)
- 1.3 World Upconverting Nanoparticles (UCNPs) Production by Region (Based on Production Site)
 - 1.3.1 World Upconverting Nanoparticles (UCNPs) Production Value by Region (2018-2029)
 - 1.3.2 World Upconverting Nanoparticles (UCNPs) Production by Region (2018-2029)
 - 1.3.3 World Upconverting Nanoparticles (UCNPs) Average Price by Region (2018-2029)
 - 1.3.4 North America Upconverting Nanoparticles (UCNPs) Production (2018-2029)
 - 1.3.5 Europe Upconverting Nanoparticles (UCNPs) Production (2018-2029)
 - 1.3.6 China Upconverting Nanoparticles (UCNPs) Production (2018-2029)
 - 1.3.7 Japan Upconverting Nanoparticles (UCNPs) Production (2018-2029)
- 1.4 Market Drivers, Restraints and Trends
 - 1.4.1 Upconverting Nanoparticles (UCNPs) Market Drivers
 - 1.4.2 Factors Affecting Demand
 - 1.4.3 Upconverting Nanoparticles (UCNPs) Major Market Trends
- 1.5 Influence of COVID-19 and Russia-Ukraine War
 - 1.5.1 Influence of COVID-19
 - 1.5.2 Influence of Russia-Ukraine War

2 DEMAND SUMMARY

- 2.1 World Upconverting Nanoparticles (UCNPs) Demand (2018-2029)
- 2.2 World Upconverting Nanoparticles (UCNPs) Consumption by Region
 - 2.2.1 World Upconverting Nanoparticles (UCNPs) Consumption by Region (2018-2023)
 - 2.2.2 World Upconverting Nanoparticles (UCNPs) Consumption Forecast by Region (2024-2029)
- 2.3 United States Upconverting Nanoparticles (UCNPs) Consumption (2018-2029)
- 2.4 China Upconverting Nanoparticles (UCNPs) Consumption (2018-2029)

- 2.5 Europe Upconverting Nanoparticles (UCNPs) Consumption (2018-2029)
- 2.6 Japan Upconverting Nanoparticles (UCNPs) Consumption (2018-2029)
- 2.7 South Korea Upconverting Nanoparticles (UCNPs) Consumption (2018-2029)
- 2.8 ASEAN Upconverting Nanoparticles (UCNPs) Consumption (2018-2029)
- 2.9 India Upconverting Nanoparticles (UCNPs) Consumption (2018-2029)

3 WORLD UPCONVERTING NANOPARTICLES (UCNPS) MANUFACTURERS COMPETITIVE ANALYSIS

- 3.1 World Upconverting Nanoparticles (UCNPs) Production Value by Manufacturer (2018-2023)
- 3.2 World Upconverting Nanoparticles (UCNPs) Production by Manufacturer (2018-2023)
- 3.3 World Upconverting Nanoparticles (UCNPs) Average Price by Manufacturer (2018-2023)
- 3.4 Upconverting Nanoparticles (UCNPs) Company Evaluation Quadrant
- 3.5 Industry Rank and Concentration Rate (CR)
 - 3.5.1 Global Upconverting Nanoparticles (UCNPs) Industry Rank of Major Manufacturers
 - 3.5.2 Global Concentration Ratios (CR4) for Upconverting Nanoparticles (UCNPs) in 2022
 - 3.5.3 Global Concentration Ratios (CR8) for Upconverting Nanoparticles (UCNPs) in 2022
- 3.6 Upconverting Nanoparticles (UCNPs) Market: Overall Company Footprint Analysis
 - 3.6.1 Upconverting Nanoparticles (UCNPs) Market: Region Footprint
 - 3.6.2 Upconverting Nanoparticles (UCNPs) Market: Company Product Type Footprint
 - 3.6.3 Upconverting Nanoparticles (UCNPs) Market: Company Product Application Footprint
- 3.7 Competitive Environment
 - 3.7.1 Historical Structure of the Industry
 - 3.7.2 Barriers of Market Entry
 - 3.7.3 Factors of Competition
- 3.8 New Entrant and Capacity Expansion Plans
- 3.9 Mergers, Acquisition, Agreements, and Collaborations

4 UNITED STATES VS CHINA VS REST OF THE WORLD

- 4.1 United States VS China: Upconverting Nanoparticles (UCNPs) Production Value Comparison

4.1.1 United States VS China: Upconverting Nanoparticles (UCNPs) Production Value Comparison (2018 & 2022 & 2029)

4.1.2 United States VS China: Upconverting Nanoparticles (UCNPs) Production Value Market Share Comparison (2018 & 2022 & 2029)

4.2 United States VS China: Upconverting Nanoparticles (UCNPs) Production Comparison

4.2.1 United States VS China: Upconverting Nanoparticles (UCNPs) Production Comparison (2018 & 2022 & 2029)

4.2.2 United States VS China: Upconverting Nanoparticles (UCNPs) Production Market Share Comparison (2018 & 2022 & 2029)

4.3 United States VS China: Upconverting Nanoparticles (UCNPs) Consumption Comparison

4.3.1 United States VS China: Upconverting Nanoparticles (UCNPs) Consumption Comparison (2018 & 2022 & 2029)

4.3.2 United States VS China: Upconverting Nanoparticles (UCNPs) Consumption Market Share Comparison (2018 & 2022 & 2029)

4.4 United States Based Upconverting Nanoparticles (UCNPs) Manufacturers and Market Share, 2018-2023

4.4.1 United States Based Upconverting Nanoparticles (UCNPs) Manufacturers, Headquarters and Production Site (States, Country)

4.4.2 United States Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value (2018-2023)

4.4.3 United States Based Manufacturers Upconverting Nanoparticles (UCNPs) Production (2018-2023)

4.5 China Based Upconverting Nanoparticles (UCNPs) Manufacturers and Market Share

4.5.1 China Based Upconverting Nanoparticles (UCNPs) Manufacturers, Headquarters and Production Site (Province, Country)

4.5.2 China Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value (2018-2023)

4.5.3 China Based Manufacturers Upconverting Nanoparticles (UCNPs) Production (2018-2023)

4.6 Rest of World Based Upconverting Nanoparticles (UCNPs) Manufacturers and Market Share, 2018-2023

4.6.1 Rest of World Based Upconverting Nanoparticles (UCNPs) Manufacturers, Headquarters and Production Site (State, Country)

4.6.2 Rest of World Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value (2018-2023)

4.6.3 Rest of World Based Manufacturers Upconverting Nanoparticles (UCNPs)

Production (2018-2023)

5 MARKET ANALYSIS BY COMPONENT

5.1 World Upconverting Nanoparticles (UCNPs) Market Size Overview by Component:
2018 VS 2022 VS 2029

5.2 Segment Introduction by Component

5.2.1 Lanthanide-Doped NaYF₄

5.2.2 Lanthanide-Doped NaGdF₄

5.2.3 Lanthanide-Doped LaF₃

5.2.4 Others

5.3 Market Segment by Component

5.3.1 World Upconverting Nanoparticles (UCNPs) Production by Component
(2018-2029)

5.3.2 World Upconverting Nanoparticles (UCNPs) Production Value by Component
(2018-2029)

5.3.3 World Upconverting Nanoparticles (UCNPs) Average Price by Component
(2018-2029)

6 MARKET ANALYSIS BY APPLICATION

6.1 World Upconverting Nanoparticles (UCNPs) Market Size Overview by Application:
2018 VS 2022 VS 2029

6.2 Segment Introduction by Application

6.2.1 Bioimaging

6.2.2 Sensing and Diagnostics

6.2.3 Photodynamic Therapy

6.2.4 Solar Energy Conversion

6.2.5 Display Technologies

6.2.6 Others

6.3 Market Segment by Application

6.3.1 World Upconverting Nanoparticles (UCNPs) Production by Application
(2018-2029)

6.3.2 World Upconverting Nanoparticles (UCNPs) Production Value by Application
(2018-2029)

6.3.3 World Upconverting Nanoparticles (UCNPs) Average Price by Application
(2018-2029)

7 COMPANY PROFILES

7.1 Sigma-Aldrich

7.1.1 Sigma-Aldrich Details

7.1.2 Sigma-Aldrich Major Business

7.1.3 Sigma-Aldrich Upconverting Nanoparticles (UCNPs) Product and Services

7.1.4 Sigma-Aldrich Upconverting Nanoparticles (UCNPs) Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.1.5 Sigma-Aldrich Recent Developments/Updates

7.1.6 Sigma-Aldrich Competitive Strengths & Weaknesses

7.2 CD Bioparticles

7.2.1 CD Bioparticles Details

7.2.2 CD Bioparticles Major Business

7.2.3 CD Bioparticles Upconverting Nanoparticles (UCNPs) Product and Services

7.2.4 CD Bioparticles Upconverting Nanoparticles (UCNPs) Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.2.5 CD Bioparticles Recent Developments/Updates

7.2.6 CD Bioparticles Competitive Strengths & Weaknesses

7.3 Nanocs

7.3.1 Nanocs Details

7.3.2 Nanocs Major Business

7.3.3 Nanocs Upconverting Nanoparticles (UCNPs) Product and Services

7.3.4 Nanocs Upconverting Nanoparticles (UCNPs) Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.3.5 Nanocs Recent Developments/Updates

7.3.6 Nanocs Competitive Strengths & Weaknesses

7.4 Ocean NanoTech

7.4.1 Ocean NanoTech Details

7.4.2 Ocean NanoTech Major Business

7.4.3 Ocean NanoTech Upconverting Nanoparticles (UCNPs) Product and Services

7.4.4 Ocean NanoTech Upconverting Nanoparticles (UCNPs) Production, Price, Value, Gross Margin and Market Share (2018-2023)

7.4.5 Ocean NanoTech Recent Developments/Updates

7.4.6 Ocean NanoTech Competitive Strengths & Weaknesses

7.5 Uniogen

7.5.1 Uniogen Details

7.5.2 Uniogen Major Business

7.5.3 Uniogen Upconverting Nanoparticles (UCNPs) Product and Services

7.5.4 Uniogen Upconverting Nanoparticles (UCNPs) Production, Price, Value, Gross Margin and Market Share (2018-2023)

- 7.5.5 Uniogen Recent Developments/Updates
- 7.5.6 Uniogen Competitive Strengths & Weaknesses
- 7.6 Strem Chemicals
 - 7.6.1 Strem Chemicals Details
 - 7.6.2 Strem Chemicals Major Business
 - 7.6.3 Strem Chemicals Upconverting Nanoparticles (UCNPs) Product and Services
 - 7.6.4 Strem Chemicals Upconverting Nanoparticles (UCNPs) Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.6.5 Strem Chemicals Recent Developments/Updates
 - 7.6.6 Strem Chemicals Competitive Strengths & Weaknesses
- 7.7 ACS Material
 - 7.7.1 ACS Material Details
 - 7.7.2 ACS Material Major Business
 - 7.7.3 ACS Material Upconverting Nanoparticles (UCNPs) Product and Services
 - 7.7.4 ACS Material Upconverting Nanoparticles (UCNPs) Production, Price, Value, Gross Margin and Market Share (2018-2023)
 - 7.7.5 ACS Material Recent Developments/Updates
 - 7.7.6 ACS Material Competitive Strengths & Weaknesses

8 INDUSTRY CHAIN ANALYSIS

- 8.1 Upconverting Nanoparticles (UCNPs) Industry Chain
- 8.2 Upconverting Nanoparticles (UCNPs) Upstream Analysis
 - 8.2.1 Upconverting Nanoparticles (UCNPs) Core Raw Materials
 - 8.2.2 Main Manufacturers of Upconverting Nanoparticles (UCNPs) Core Raw Materials
- 8.3 Midstream Analysis
- 8.4 Downstream Analysis
- 8.5 Upconverting Nanoparticles (UCNPs) Production Mode
- 8.6 Upconverting Nanoparticles (UCNPs) Procurement Model
- 8.7 Upconverting Nanoparticles (UCNPs) Industry Sales Model and Sales Channels
 - 8.7.1 Upconverting Nanoparticles (UCNPs) Sales Model
 - 8.7.2 Upconverting Nanoparticles (UCNPs) Typical Customers

9 RESEARCH FINDINGS AND CONCLUSION

10 APPENDIX

- 10.1 Methodology
- 10.2 Research Process and Data Source

10.3 Disclaimer

List Of Tables

LIST OF TABLES

Table 1. World Upconverting Nanoparticles (UCNPs) Production Value by Region (2018, 2022 and 2029) & (USD Million)

Table 2. World Upconverting Nanoparticles (UCNPs) Production Value by Region (2018-2023) & (USD Million)

Table 3. World Upconverting Nanoparticles (UCNPs) Production Value by Region (2024-2029) & (USD Million)

Table 4. World Upconverting Nanoparticles (UCNPs) Production Value Market Share by Region (2018-2023)

Table 5. World Upconverting Nanoparticles (UCNPs) Production Value Market Share by Region (2024-2029)

Table 6. World Upconverting Nanoparticles (UCNPs) Production by Region (2018-2023) & (Tons)

Table 7. World Upconverting Nanoparticles (UCNPs) Production by Region (2024-2029) & (Tons)

Table 8. World Upconverting Nanoparticles (UCNPs) Production Market Share by Region (2018-2023)

Table 9. World Upconverting Nanoparticles (UCNPs) Production Market Share by Region (2024-2029)

Table 10. World Upconverting Nanoparticles (UCNPs) Average Price by Region (2018-2023) & (US\$/Ton)

Table 11. World Upconverting Nanoparticles (UCNPs) Average Price by Region (2024-2029) & (US\$/Ton)

Table 12. Upconverting Nanoparticles (UCNPs) Major Market Trends

Table 13. World Upconverting Nanoparticles (UCNPs) Consumption Growth Rate Forecast by Region (2018 & 2022 & 2029) & (Tons)

Table 14. World Upconverting Nanoparticles (UCNPs) Consumption by Region (2018-2023) & (Tons)

Table 15. World Upconverting Nanoparticles (UCNPs) Consumption Forecast by Region (2024-2029) & (Tons)

Table 16. World Upconverting Nanoparticles (UCNPs) Production Value by Manufacturer (2018-2023) & (USD Million)

Table 17. Production Value Market Share of Key Upconverting Nanoparticles (UCNPs) Producers in 2022

Table 18. World Upconverting Nanoparticles (UCNPs) Production by Manufacturer (2018-2023) & (Tons)

Table 19. Production Market Share of Key Upconverting Nanoparticles (UCNPs) Producers in 2022

Table 20. World Upconverting Nanoparticles (UCNPs) Average Price by Manufacturer (2018-2023) & (US\$/Ton)

Table 21. Global Upconverting Nanoparticles (UCNPs) Company Evaluation Quadrant

Table 22. World Upconverting Nanoparticles (UCNPs) Industry Rank of Major Manufacturers, Based on Production Value in 2022

Table 23. Head Office and Upconverting Nanoparticles (UCNPs) Production Site of Key Manufacturer

Table 24. Upconverting Nanoparticles (UCNPs) Market: Company Product Type Footprint

Table 25. Upconverting Nanoparticles (UCNPs) Market: Company Product Application Footprint

Table 26. Upconverting Nanoparticles (UCNPs) Competitive Factors

Table 27. Upconverting Nanoparticles (UCNPs) New Entrant and Capacity Expansion Plans

Table 28. Upconverting Nanoparticles (UCNPs) Mergers & Acquisitions Activity

Table 29. United States VS China Upconverting Nanoparticles (UCNPs) Production Value Comparison, (2018 & 2022 & 2029) & (USD Million)

Table 30. United States VS China Upconverting Nanoparticles (UCNPs) Production Comparison, (2018 & 2022 & 2029) & (Tons)

Table 31. United States VS China Upconverting Nanoparticles (UCNPs) Consumption Comparison, (2018 & 2022 & 2029) & (Tons)

Table 32. United States Based Upconverting Nanoparticles (UCNPs) Manufacturers, Headquarters and Production Site (States, Country)

Table 33. United States Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value, (2018-2023) & (USD Million)

Table 34. United States Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value Market Share (2018-2023)

Table 35. United States Based Manufacturers Upconverting Nanoparticles (UCNPs) Production (2018-2023) & (Tons)

Table 36. United States Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Market Share (2018-2023)

Table 37. China Based Upconverting Nanoparticles (UCNPs) Manufacturers, Headquarters and Production Site (Province, Country)

Table 38. China Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value, (2018-2023) & (USD Million)

Table 39. China Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value Market Share (2018-2023)

Table 40. China Based Manufacturers Upconverting Nanoparticles (UCNPs) Production (2018-2023) & (Tons)

Table 41. China Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Market Share (2018-2023)

Table 42. Rest of World Based Upconverting Nanoparticles (UCNPs) Manufacturers, Headquarters and Production Site (States, Country)

Table 43. Rest of World Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value, (2018-2023) & (USD Million)

Table 44. Rest of World Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Value Market Share (2018-2023)

Table 45. Rest of World Based Manufacturers Upconverting Nanoparticles (UCNPs) Production (2018-2023) & (Tons)

Table 46. Rest of World Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Market Share (2018-2023)

Table 47. World Upconverting Nanoparticles (UCNPs) Production Value by Component, (USD Million), 2018 & 2022 & 2029

Table 48. World Upconverting Nanoparticles (UCNPs) Production by Component (2018-2023) & (Tons)

Table 49. World Upconverting Nanoparticles (UCNPs) Production by Component (2024-2029) & (Tons)

Table 50. World Upconverting Nanoparticles (UCNPs) Production Value by Component (2018-2023) & (USD Million)

Table 51. World Upconverting Nanoparticles (UCNPs) Production Value by Component (2024-2029) & (USD Million)

Table 52. World Upconverting Nanoparticles (UCNPs) Average Price by Component (2018-2023) & (US\$/Ton)

Table 53. World Upconverting Nanoparticles (UCNPs) Average Price by Component (2024-2029) & (US\$/Ton)

Table 54. World Upconverting Nanoparticles (UCNPs) Production Value by Application, (USD Million), 2018 & 2022 & 2029

Table 55. World Upconverting Nanoparticles (UCNPs) Production by Application (2018-2023) & (Tons)

Table 56. World Upconverting Nanoparticles (UCNPs) Production by Application (2024-2029) & (Tons)

Table 57. World Upconverting Nanoparticles (UCNPs) Production Value by Application (2018-2023) & (USD Million)

Table 58. World Upconverting Nanoparticles (UCNPs) Production Value by Application (2024-2029) & (USD Million)

Table 59. World Upconverting Nanoparticles (UCNPs) Average Price by Application

(2018-2023) & (US\$/Ton)

Table 60. World Upconverting Nanoparticles (UCNPs) Average Price by Application
(2024-2029) & (US\$/Ton)

Table 61. Sigma-Aldrich Basic Information, Manufacturing Base and Competitors

Table 62. Sigma-Aldrich Major Business

Table 63. Sigma-Aldrich Upconverting Nanoparticles (UCNPs) Product and Services

Table 64. Sigma-Aldrich Upconverting Nanoparticles (UCNPs) Production (Tons), Price
(US\$/Ton), Production Value (USD Million), Gross Margin and Market Share
(2018-2023)

Table 65. Sigma-Aldrich Recent Developments/Updates

Table 66. Sigma-Aldrich Competitive Strengths & Weaknesses

Table 67. CD Bioparticles Basic Information, Manufacturing Base and Competitors

Table 68. CD Bioparticles Major Business

Table 69. CD Bioparticles Upconverting Nanoparticles (UCNPs) Product and Services

Table 70. CD Bioparticles Upconverting Nanoparticles (UCNPs) Production (Tons),
Price (US\$/Ton), Production Value (USD Million), Gross Margin and Market Share
(2018-2023)

Table 71. CD Bioparticles Recent Developments/Updates

Table 72. CD Bioparticles Competitive Strengths & Weaknesses

Table 73. Nanocs Basic Information, Manufacturing Base and Competitors

Table 74. Nanocs Major Business

Table 75. Nanocs Upconverting Nanoparticles (UCNPs) Product and Services

Table 76. Nanocs Upconverting Nanoparticles (UCNPs) Production (Tons), Price
(US\$/Ton), Production Value (USD Million), Gross Margin and Market Share
(2018-2023)

Table 77. Nanocs Recent Developments/Updates

Table 78. Nanocs Competitive Strengths & Weaknesses

Table 79. Ocean NanoTech Basic Information, Manufacturing Base and Competitors

Table 80. Ocean NanoTech Major Business

Table 81. Ocean NanoTech Upconverting Nanoparticles (UCNPs) Product and Services

Table 82. Ocean NanoTech Upconverting Nanoparticles (UCNPs) Production (Tons),
Price (US\$/Ton), Production Value (USD Million), Gross Margin and Market Share
(2018-2023)

Table 83. Ocean NanoTech Recent Developments/Updates

Table 84. Ocean NanoTech Competitive Strengths & Weaknesses

Table 85. Uniogen Basic Information, Manufacturing Base and Competitors

Table 86. Uniogen Major Business

Table 87. Uniogen Upconverting Nanoparticles (UCNPs) Product and Services

Table 88. Uniogen Upconverting Nanoparticles (UCNPs) Production (Tons), Price

(US\$/Ton), Production Value (USD Million), Gross Margin and Market Share
(2018-2023)

Table 89. Uniogen Recent Developments/Updates

Table 90. Uniogen Competitive Strengths & Weaknesses

Table 91. Strem Chemicals Basic Information, Manufacturing Base and Competitors

Table 92. Strem Chemicals Major Business

Table 93. Strem Chemicals Upconverting Nanoparticles (UCNPs) Product and Services

Table 94. Strem Chemicals Upconverting Nanoparticles (UCNPs) Production (Tons),
Price (US\$/Ton), Production Value (USD Million), Gross Margin and Market Share
(2018-2023)

Table 95. Strem Chemicals Recent Developments/Updates

Table 96. ACS Material Basic Information, Manufacturing Base and Competitors

Table 97. ACS Material Major Business

Table 98. ACS Material Upconverting Nanoparticles (UCNPs) Product and Services

Table 99. ACS Material Upconverting Nanoparticles (UCNPs) Production (Tons), Price
(US\$/Ton), Production Value (USD Million), Gross Margin and Market Share
(2018-2023)

Table 100. Global Key Players of Upconverting Nanoparticles (UCNPs) Upstream (Raw
Materials)

Table 101. Upconverting Nanoparticles (UCNPs) Typical Customers

Table 102. Upconverting Nanoparticles (UCNPs) Typical Distributors

List Of Figures

LIST OF FIGURES

- Figure 1. Upconverting Nanoparticles (UCNPs) Picture
- Figure 2. World Upconverting Nanoparticles (UCNPs) Production Value: 2018 & 2022 & 2029, (USD Million)
- Figure 3. World Upconverting Nanoparticles (UCNPs) Production Value and Forecast (2018-2029) & (USD Million)
- Figure 4. World Upconverting Nanoparticles (UCNPs) Production (2018-2029) & (Tons)
- Figure 5. World Upconverting Nanoparticles (UCNPs) Average Price (2018-2029) & (US\$/Ton)
- Figure 6. World Upconverting Nanoparticles (UCNPs) Production Value Market Share by Region (2018-2029)
- Figure 7. World Upconverting Nanoparticles (UCNPs) Production Market Share by Region (2018-2029)
- Figure 8. North America Upconverting Nanoparticles (UCNPs) Production (2018-2029) & (Tons)
- Figure 9. Europe Upconverting Nanoparticles (UCNPs) Production (2018-2029) & (Tons)
- Figure 10. China Upconverting Nanoparticles (UCNPs) Production (2018-2029) & (Tons)
- Figure 11. Japan Upconverting Nanoparticles (UCNPs) Production (2018-2029) & (Tons)
- Figure 12. Upconverting Nanoparticles (UCNPs) Market Drivers
- Figure 13. Factors Affecting Demand
- Figure 14. World Upconverting Nanoparticles (UCNPs) Consumption (2018-2029) & (Tons)
- Figure 15. World Upconverting Nanoparticles (UCNPs) Consumption Market Share by Region (2018-2029)
- Figure 16. United States Upconverting Nanoparticles (UCNPs) Consumption (2018-2029) & (Tons)
- Figure 17. China Upconverting Nanoparticles (UCNPs) Consumption (2018-2029) & (Tons)
- Figure 18. Europe Upconverting Nanoparticles (UCNPs) Consumption (2018-2029) & (Tons)
- Figure 19. Japan Upconverting Nanoparticles (UCNPs) Consumption (2018-2029) & (Tons)
- Figure 20. South Korea Upconverting Nanoparticles (UCNPs) Consumption

(2018-2029) & (Tons)

Figure 21. ASEAN Upconverting Nanoparticles (UCNPs) Consumption (2018-2029) & (Tons)

Figure 22. India Upconverting Nanoparticles (UCNPs) Consumption (2018-2029) & (Tons)

Figure 23. Producer Shipments of Upconverting Nanoparticles (UCNPs) by Manufacturer Revenue (\$MM) and Market Share (%): 2022

Figure 24. Global Four-firm Concentration Ratios (CR4) for Upconverting Nanoparticles (UCNPs) Markets in 2022

Figure 25. Global Four-firm Concentration Ratios (CR8) for Upconverting Nanoparticles (UCNPs) Markets in 2022

Figure 26. United States VS China: Upconverting Nanoparticles (UCNPs) Production Value Market Share Comparison (2018 & 2022 & 2029)

Figure 27. United States VS China: Upconverting Nanoparticles (UCNPs) Production Market Share Comparison (2018 & 2022 & 2029)

Figure 28. United States VS China: Upconverting Nanoparticles (UCNPs) Consumption Market Share Comparison (2018 & 2022 & 2029)

Figure 29. United States Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Market Share 2022

Figure 30. China Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Market Share 2022

Figure 31. Rest of World Based Manufacturers Upconverting Nanoparticles (UCNPs) Production Market Share 2022

Figure 32. World Upconverting Nanoparticles (UCNPs) Production Value by Component, (USD Million), 2018 & 2022 & 2029

Figure 33. World Upconverting Nanoparticles (UCNPs) Production Value Market Share by Component in 2022

Figure 34. Lanthanide-Doped NaYF₄

Figure 35. Lanthanide-Doped NaGdF₄

Figure 36. Lanthanide-Doped LaF₃

Figure 37. Others

Figure 38. World Upconverting Nanoparticles (UCNPs) Production Market Share by Component (2018-2029)

Figure 39. World Upconverting Nanoparticles (UCNPs) Production Value Market Share by Component (2018-2029)

Figure 40. World Upconverting Nanoparticles (UCNPs) Average Price by Component (2018-2029) & (US\$/Ton)

Figure 41. World Upconverting Nanoparticles (UCNPs) Production Value by Application, (USD Million), 2018 & 2022 & 2029

Figure 42. World Upconverting Nanoparticles (UCNPs) Production Value Market Share by Application in 2022

Figure 43. Bioimaging

Figure 44. Sensing and Diagnostics

Figure 45. Photodynamic Therapy

Figure 46. Solar Energy Conversion

Figure 47. Display Technologies

Figure 48. Others

Figure 49. World Upconverting Nanoparticles (UCNPs) Production Market Share by Application (2018-2029)

Figure 50. World Upconverting Nanoparticles (UCNPs) Production Value Market Share by Application (2018-2029)

Figure 51. World Upconverting Nanoparticles (UCNPs) Average Price by Application (2018-2029) & (US\$/Ton)

Figure 52. Upconverting Nanoparticles (UCNPs) Industry Chain

Figure 53. Upconverting Nanoparticles (UCNPs) Procurement Model

Figure 54. Upconverting Nanoparticles (UCNPs) Sales Model

Figure 55. Upconverting Nanoparticles (UCNPs) Sales Channels, Direct Sales, and Distribution

Figure 56. Methodology

Figure 57. Research Process and Data Source

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