

# CASE STUDY

## Exploring New Business Opportunities in the Lithography Space

The Client is a global leader of photolithography systems for the semiconductor industry, manufacturing machines for the production of integrated circuits.



### The Challenge:

The client approached PreScouter to understand the business opportunity that photonics (and more specifically, CMOS-photonics integration) offered in the area of lithography equipment in the coming years. In order to fully understand the technical and business opportunity this field represents, the following areas were explored during the engagement:

- Photonics materials & technology platforms
- Relevant research trends
- Lithography requirements that will enable CMOS-photonics integration
- Market Insights



## Methodology:

To tackle the Client's multifaceted challenges, PreScouter put together a multidisciplinary research team composed of 4 Advanced Degree Researchers from PreScouter's global research network with academic expertise in materials science, electrical engineering and computer science, and physics.

The PreScouter team tackled the Client's challenge by:

1. Highlighting various materials and technology platforms that enable CMOS-photonics integration from both industry and academia.
2. Providing market insights that will drive adoption of CMOS-Photonics in the coming years with a focus on high growth sectors including (1) the data center market, (2) the high performance computing market, and (3) the high speed communications market.
3. Highlighting developments in CMOS-photonics from the largest semiconductor manufacturing players
4. Providing a list of relevant players in the optical transceivers market, along with trends and designs coming from that market
5. Highlighting developments and research trends in CMOS-photonics



## Results:

The goal of this work was to help the Client understand the business opportunities that CMOS-photonics integration will offer in the area of lithography equipment moving forward. PreScouter provided the Client with an overview of the various technologies and state-of-the-art seen in industry and academic literature. The results from the data collection and analysis conducted over the course of the engagement allowed PreScouter's team to determine the lithography requirements for the next generation of optical processing hardware. The Client used PreScouter's results to plan out a development roadmap to address this market directly.

# Impact of PreScouter work:

In addition to answering key technical and strategic questions for the Client, PreScouter's research and insights provided the Client with a collection of high interest companies for further outreach to engage in technology and research partnerships, and directly supported the product development and innovation teams in understanding the market opportunities best aligned to their competencies.



Explore how PreScouter can help solve your innovation challenges. Contact us [here](#) or email us at [solutions@prescouter.com](mailto:solutions@prescouter.com).

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✓ MARKET RESEARCH & ANALYSIS

✓ TRENDS MAPPING

✓ REVIEW BEST PRACTICES

✓ PATENT COMMERCIALIZATION STRATEGY

✓ DATA ANALYSIS & RECOMMENDATIONS

✓ ACQUIRE NON-PUBLIC INFORMATION

✓ SUPPLIER OUTREACH & ANALYSIS

✓ CONSULT WITH INDUSTRY SUBJECT MATTER EXPERTS

✓ INTERVIEWING COMPANIES & EXPERTS

## WE CAN ALSO DO THE FOLLOWING

- ✓ **CONFERENCE SUPPORT:** Attend conferences of interest on your behalf.
- ✓ **WRITING ARTICLES:** Write technical or more public facing articles on your behalf.
- ✓ **WORKING WITH A CONTRACT RESEARCH ORGANIZATION:** Engage with a CRO to build a prototype, test equipment or any other related research service.

*For any requests, we welcome your additional questions and custom building a solution for you.*