Photonics21 Press Release

Light technologies buck trend despite global economic turmoil

New research published today shows the photonics industries in Europe, the US, and Asia outpaced global GDP from 2019 to the post-pandemic period of 2022, growing at a CAGR (Compound Annual Growth Rate) of 6.8% despite geopolitical risks significantly affecting international trade.

According to a new photonics market study published today by the European Technology Platform Photonics21 and conducted by the French market intelligence group Tematys, the photonics industries in Europe, Asia, and the US remained robust during 2019-2022 – a period plagued by some of the toughest global and economic tensions after decades of geoeconomics and globalisation.

Called "Insights into the Dynamic Photonics Market (2019-2022)", the new study shows the photonics industry worldwide grew from the previous 2015-2018 study despite geopolitical risks such as COVID-19 (with many countries closing their borders and restricting travel to control the spread of the virus), global inflation affecting economies worldwide, and the war in Ukraine hindering trade.

Outperforming Global Growth

Global GDP growth has generally fluctuated between two and five percent from year to year in most years since 1980.

However, the global market for photonics components and systems, which accounted for $865 billion in 2022, outpaced GDP worldwide during the three years from 2019, growing at a CAGR (Compound Annual Growth Rate) of 6.8%. This growth is predicted to continue into 2027 when the study expects the world photonics market to be worth $1.2 trillion.

Dr Lutz Aschke, Photonics21 President and CEO of Photonics Systems Group, said: "The latest research from Tematys shows that light technologies are bucking the global trend against a backdrop of some of the most turbulent economic and geopolitical activities in decades.

"The findings from the study affirm Europe's central role in driving worldwide photonics innovation. While the EU can maintain its competitive edge with its enormous photonics capacity and an innovation ecosystem spanning the continent, a sustained investment will be crucial to harnessing the full potential of optics and photonics in the coming decades."

Tematys identified photonics applications in Environment, Energy, Lighting, Industry 4.0, and Agriculture as the fastest-growing segments across the world. While the relatively small segment of Photonics for Agriculture and Food is an emerging market at present, this domain showed an exceptional CAGR of 11.8% during the period.

"Given that photonics (the study and manipulation of light) and the technologies developed by harnessing the power of light are critically important to a number of industries worldwide, this strong growth is easy to see. In healthcare, for example, optics and photonics are enabling scientists to develop fast and precise imaging of major diseases, accurate diagnostics, and minimally invasive surgical procedures by using lasers. Within the next few

years, we will experience remarkable photonic solutions that will improve our everyday lives," said Dr Aschke.

European Industry Highlights

The study reveals substantial growth and development in European photonics between 2019 and 2022. Key highlights include:

- **Thousands of extra Jobs** – Employment surged by 35,000 jobs during this period, far exceeding the growth rate of European manufacturing as a whole.

- **Industry Volume** – European photonics production soared to €124.6 billion in 2022, representing over 5,000 companies and contributing significantly to Europe's manufacturing landscape.

- **Annual Revenue Growth –** The sector witnessed a remarkable annual revenue growth rate of 6.5% (2019-2022), outpacing Europe's GDP growth even after accounting for inflation.

- **Market Share** – Europe maintained a strong position as the second-largest player in the global photonics market (15% share), underscoring its competitiveness against major counterparts like China and the United States.

- **Innovation and R&D** – The European photonics industry exhibits a strong commitment to research and innovation, with an R&D intensity of 10.5%, significantly higher than other industries.