

Why doesn't the EU want to lead on photonics?

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Opinion Plus

When countries around the world are sinking billions into deep technologies like *photonics*, why does it always feel like the EU is consistently applying the brake, asks Carlos Lee.

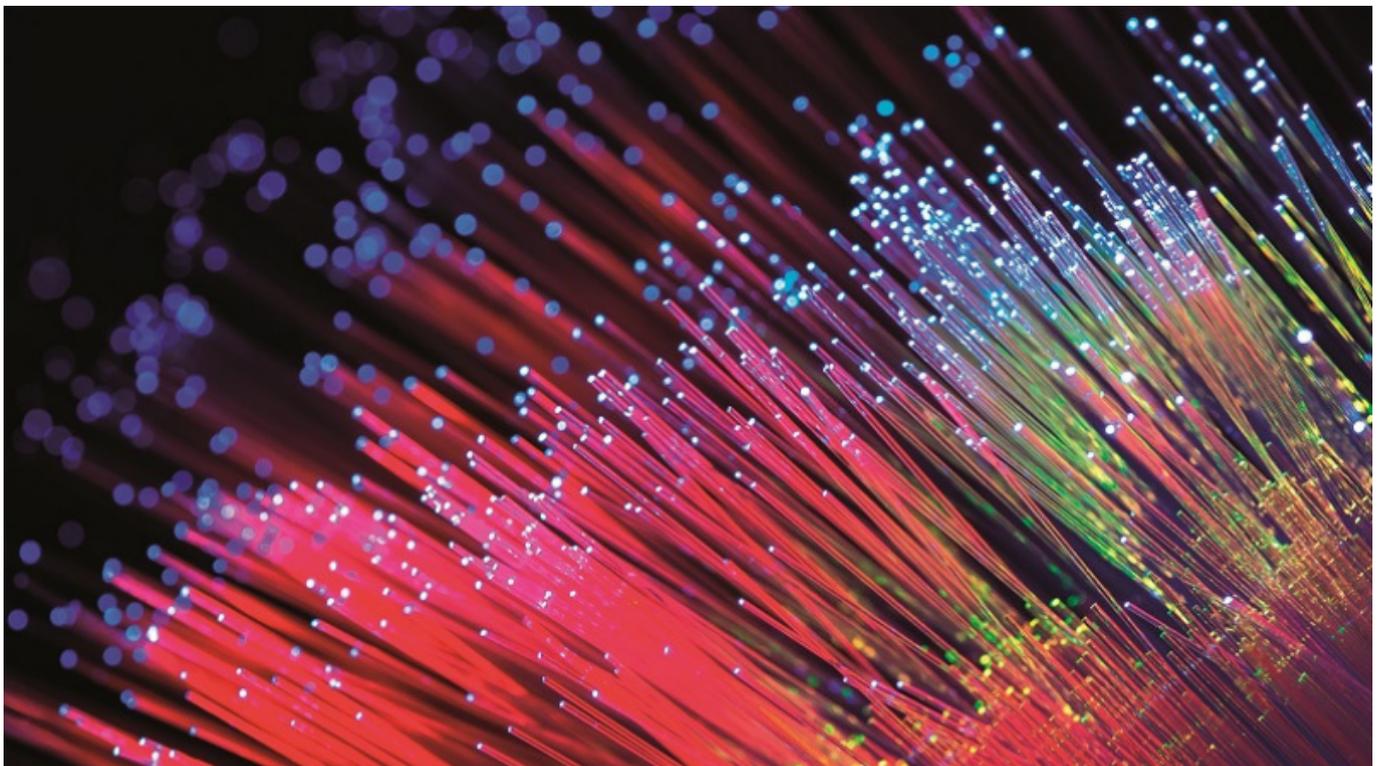


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Recently, a group of European Nobel Laureates wrote an open letter to the European Commission, protesting at the surprising absence of a key enabling and strategically deep technology in the next Horizon budget 2021-2027.

More specifically, they're concerned that the Commission is ignoring one of the most crucial deep technologies; photonics.

To most people, the word 'photonics' makes their eyes grow, lost in puzzlement. Yet photonics is surprisingly mainstream – they're simply everywhere, from medicine to aeronautics and data security.

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You probably use devices powered by photonics every day. Photovoltaics is a key green sustainable energy source, while photonics is the basis of today's communications where data moves via light.

Although photonics themselves may be technical, most people will understand the cost of losing research and product development capability: less jobs, fewer homegrown technologies and economic damage.

Photonics isn't one of those technologies being developed in deep, secretive underground laboratories; more than 86 percent of the EU's roughly 5,000 photonics-based companies are SMEs - a true European success story.

The threat to research and product development risks thousands of people the opportunity of completing their lives' work and perhaps losing their livelihood.

This is something that should worry us all. Last year, the Commission and the European Investment Bank described photonics as "one of two essential key enabling building blocks for the digital transformation of Europe, which will be based on deep technologies."

This poses the question, 'what is Europe's technological endgame'. We have already lost our dominance in the semiconductor, LED and solar industries, with hundreds of companies shutting down, thousands of jobs lost across Europe and our strategic interests severely damaged.

The Commission now appears to be abandoning another key deep technology and once again throwing away the chance to lead the world in future technologies.

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Beyond Europe, governments are making sizable investments in deep technologies like photonics. Chinese public investment has increased every year by 40 percent and will reach €1bn by 2020.

South Korean spending will soon surge to €2.8bn per year. The US collectively spends billions more through public-private partnerships.

When countries around the world are sinking billions into tech, why does it always feel like the EU is consistently applying the brake.

If money is the issue, then Commissioners should consider listening to constituents, who are more

than ready to invest.

Emphasising that point, Photonics21, an SME-packed public-private partnership with the Commission, has demonstrated that for every euro invested by the EU over the past four years, industry has spent five.

With Europe now producing many Nobel prize winners in related fields, there is no question over whether the EU is capable; it is whether it has the ambition to lead this deep science and technology field.

With a strong foundation and at a time when high-tech R&D have never been so important, the Commission's current actions are baffling.

These measures will adversely affect all of us, but we still have time to change the outcome for the next decades.

Will history remember us as the generation that brought Europe back to technology and industry greatness or as the hindrance?

About the author

Carlos Lee is Director General at EPIC, the world's leading photonics industry association

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