

**Nobel Laureates**

**Professor Gérard Mourou**

Ecole Polytechnique  
Route de Saclay  
91128 PALAISEAU Cedex

**Professor Stefan W. Hell**

Max-Planck-Institut für biophysikalische Chemie  
Am Faßberg 11  
37077 Göttingen

**Professor Theodor W. Hänsch**

Ludwig-Maximilians-Universität München  
Schellingstr. 4/III  
80799 München

16<sup>th</sup> October 2020

Vice-President Commissioner Vestager  
Commissioner Breton  
Commissioner Gabriel  
College of European Commissioners  
Berlaymont  
Brussels

Dear distinguished Vice-President and Commissioners of the European Commission,

Your recent industry strategy “A New Industrial Strategy for Europe” published only in March 2020, clearly recognized Photonics technologies as a key enabling technology for the digital transformation of European industry stating, “*The EU will support the development of key enabling technologies that are strategically important for Europe’s industrial future...including Photonics*”. Equally, Photonics is now considered by your Commission services in a series of recent statements, as one of the “*digital technologies critical for attaining the sustainability goals of the European Green Deal*”. Finally, the European Investment Bank in a separate communication identified “Photonics as one of the two key digital deep technologies that will provide the secure and resilient digital infrastructure necessary for Europe”.

In short, Photonics technologies are recognized as essential to support and advance four over-arching European Union objectives: the digital transformation of Europe’s industry; achieving the European Green deal and a sustainable EU future; the establishment of a future sovereign and resilient European digital infrastructure, and strengthening strategic value chains across key sectors.

However, to our deep regret we have learned from informed sources in Brussels of the current intent of the European Commission to cut drastically the support for the Photonics partnership in the future Horizon Europe programme 2021-

2027 from the already minimal baseline of €700 million over the past seven years (2014-2020). We understand that the current figure proposed by the Commission for a new Photonics partnership, in the range of €500 million over the next seven years, is not consistent with the planned support for other key digital technology partnerships such as Microelectronics, Artificial Intelligence or indeed High Performance Computing. It would represent only 35% of the Photonics community requested budget of the order of €1.4 billion for 2021-2027<sup>1</sup>.

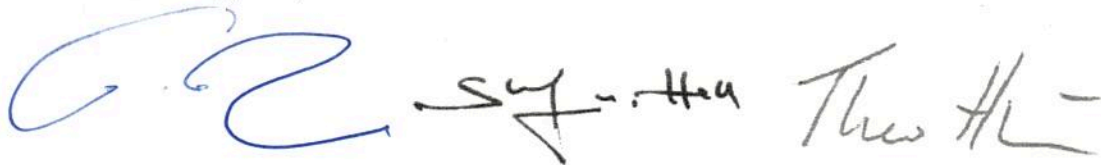
It is our considered opinion as three Nobel laureates that there can be no “Europe fit for a Digital Age”, no full digital sovereignty and no ultra-secure sovereign quantum computing enabled cyber security without Photonics technologies. The risk of losing another key digital technology to other regions of the world is serious. To achieve the aforementioned EU objectives, Europe needs to strengthen, not weaken, its industry and innovation capacity in Photonics.

We European Nobel laureates therefore ask that you ensure that the European Photonics ecosystem and Photonics sciences and technologies are funded to the level of our ambitions for European digital transformation and European digital sovereignty.

Genuine advancements in Photonics are truly essential for powering the future European digital economy. They are often driven by fundamental research and also open up other new realms of application, specifically in high critical sectors for Europe, such as health, space and mobility. We therefore kindly request you to reconsider any cuts to the Photonics partnership given its vital cross-sectional importance for Europe.

We hope we have outlined clearly what is at stake and look forward to your response.

With kind regards,



---

Gérard Mourou, Nobel Laureate in Physics 2018  
Stefan W. Hell, Nobel Laureate in Chemistry 2014  
Theodor W. Hänsch, Nobel Laureate in Physics 2005

Note: All Nobel prizes were awarded for work in the field of Photonics sciences.

---

<sup>1</sup> The Photonics21 board in 2019 delivered a commitment from the European Photonics SME industry to invest €100 billion in R&I in Europe over the course of the Horizon Europe Programme (2021-27) should a significant Photonics Public Private Partnership be launched by the Commission. The minimal request to the Commission was for a Photonics Partnership of the order of €1.4 billion.