development officer, before eventually co-founding LakeDiamond in 2015.

Gallo points out that he was lucky in that Kapon, who is now LakeDiamond’s head of photonics, knew a lot about business and had previously raised large amounts of venture money. “It showed me that it was possible as a scientist to start a company.” What also helped was EPFL’s technology transfer office (TTO), especially as researchers there are encouraged to write patents. “When you found your company, you can go to the same TTO and exploit the patents that you wrote as a researcher,” Gallo says. “That’s exactly what I did with patents on the use of diamonds in lasers.”

Once Gallo and his team managed to grow diamonds in the lab – purer than natural ones – by layering carbon atoms in a crystalline pattern, he was approached by several physicists and companies that brought new ideas to LakeDiamond. Together, they are now addressing a wide range of innovative applications in micromechanics, photonics, electronics and biotechnology. “When you’re a physicist, you really understand what your product can bring and how you have to design the product to make something useful, which will be adopted by the market,” he says. At the same time, Gallo is collaborating with many of his former colleagues and professors. “It’s really important to keep a good relationship with other researchers you work with or study with as a student because you build up a network,” he says.

In 2018 LakeDiamond launched its own initial coin offering, issuing virtual “crypto tokens” that can be exchanged for diamonds or part of the turnover. “It turned out to be a very good idea,” says Gallo. “We managed to raise a substantial amount of money and to make the company grow.” The company now employs 12 people and Gallo is still involved in all the technical aspects. “I really love the idea that as a CEO who is a physicist I can go really deep into the development of all the products the company’s making. It gives credibility when we talk to investors or potential partners.”

Role variation
As LakeDiamond’s chief executive, Gallo’s job is intense but he enjoys the varied work that constantly keeps him on his toes. “I really love this aspect of the job, but it requires a lot of energy,” he says. “When I was working in the lab, I could choose the pace. Now I have to do a little bit of this, a little bit of that, and the rhythm changes all the time.”

Having coincidentally ended up in a similar career as his grandfather – although avoiding the human and environmental toll of diamond mining – Gallo believes today’s physics graduates have a wide variety of opportunities, as long as they are open-minded and flexible. “You have to choose your career path to be flexible. You can have an idea in mind of where you want to go and in which field, but the exact path that you follow will be subject to who you meet, and so you really have to stay open and meet as many people as you can.”

Pascal Gallo is co-founder and chief executive of Swiss start-up company LakeDiamond.

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