

# THE WALL STREET TRANSCRIPT

Connecting Market Leaders with Investors

## POET Technologies Inc. (NASDAQ:POET)



**DR. SURESH VENKATESAN** is Chairman and CEO of POET Technologies Inc. Previously, he was at GlobalFoundries, where he was Senior Vice President. He is an industry veteran with over 22 years of experience in semiconductor technology development. Earlier, he worked at Freescale Semiconductor in Austin, Texas. He also holds over 25 U.S. patents and has co-authored over 50 technical papers. He received a degree in electrical engineering from the Indian Institute of Technology and a Ph.D. in electrical engineering from Purdue University.

### SECTOR — SEMICONDUCTORS

**TWST:** Could you tell me about the company?

**Dr. Venkatesan:** POET Technologies is a hybrid silicon photonics company. We're a photonics company that is targeting significant integration in the world of photonics for multiple applications where light-based communications is important.

POET has been around for a while. I think it had its original run from 2007 on through in the solar space. And then in 2016, we kind of reinvented the company, and really targeted products in the photonics space, which is the area where we have competitive sustained differentiation from a technology perspective.

**TWST:** Do you want to highlight some noteworthy products?

**Dr. Venkatesan:** Our products today are primarily targeted in the data communication segments. This is data center communications, either intra-data center or inter-data center communications. We've proven out and validated our technology in the 100-gigabit-per-second and 200-gigabit-per-second solutions.

But really our noteworthy products going forward are going to be at a higher data rate. We just recently announced an 800-gigabit-per-second receiver product and we're working on a full transceiver module solution at 800 gigabits per second, which is where the true value of our technology and its capabilities shine. Those are our noteworthy products.

**TWST:** And maybe you could explain them.

**Dr. Venkatesan:** Data communications follows a certain set of standards, speeds, and they're categorized in the context of bits per second. So gigabits per second is a billion billion bits per second, effectively.

As people use more and more bandwidth, you need to be able to transfer more and more information. And this information is

transferred via light, because it's the fastest means of communication. And so, when we talk about 100 gigabit per second or 200 gigabit or 800 gigabit, it's just sequentially more and more data that is being transferred every second, which basically says the amount of data and the speed at which that data is communicated increases over time, to support really the growing requirements by consumers. The more data-hungry applications we move towards, the more data that data centers need to transfer and communicate with.

**TWST:** And can you explain the optical interposer?

**Dr. Venkatesan:** The optical interposer is POET's innovation. It's our invention that is protected by patents. It is a solution that allows for co-integration of photonic and electronic devices to occur. That is important especially as we get to these really high speeds. It's important to co-locate electronics and photonics. And today's conventional methods of assembling photonics devices are bulky as well as expensive, and don't support really high volumes and scale. And so what POET has done with its optical interposer is to be able to transform photonics assembly to more semiconductor-like assembly processes.

"Semiconductorization" of photonics is kind of what we call our optical interposer. And that's what it allows us to do — it allows us to package photonics devices in much the same way as semiconductor devices or electronic devices package today.

**TWST:** I understand too in recent months you've reached agreements with some businesses that are important for the company.

**Dr. Venkatesan:** We've announced two module makers or module customers, which are based in China. And we've also announced a couple of projects with a large networking company that is based in Europe. And so those are our lead customers. And we've also announced

a customer win in the artificial intelligence segment. We are currently working on these products for these committed customers that have signed up to our platform. But of course, as we get more products through sampling, we continue to engage additional customers with the goal of increasing our penetration rate and our customer wins as well.

We've publicly announced the name of one of these customers, which is Fibertop in China, and we will, over the course of the next few months, be in a position to name some of the other customers that we're working with.

**TWST: And I understand too, in conjunction with the optical interposer, that you launched the 400G FRA and 800G optical engines? Maybe you could explain those.**

**Dr. Venkatesan:** As I said, the optical interposer provides the means for photonics integration to occur at scale, and at low cost. And the more the integration, the higher the value that we bring, and what the optical interposer brings. So we've been able to showcase this in the form of extremely compact optical engines for 400-gigabit-per-second and 800-gigabit-per-second solutions. And these are what we would consider our marquee products going out into the future for data center applications particularly.

**“The products involve our technology, which is highly differentiated in that it provides an integration play for photonics. So for an investor looking at our company, they need to see big market, high growth potential, differentiated technology that enables the scaling up of photonics into these new applications. The company itself is at an inflection point in terms of revenue generation.”**

**TWST: I understand that you are traded on the Nasdaq and you had the public offering recently.**

**Dr. Venkatesan:** Yes. It's been trading as a public company on the Toronto Venture Exchange. In March of this year, we moved the company from the Toronto Venture Exchange, and uplisted on the Nasdaq as well. We still trade on the Toronto Venture Exchange as a parallel exchange, but we're now on the Nasdaq and we trade under the symbol POET.

The primary reason for doing that is we wanted to get more eyeballs on the company and we wanted to be able to attract institutional investors into our stock that has heretofore primarily been invested in by retail investors and from across the world. But, as with any technology company going forward, we need to have a healthy balance of retail and institutional investors, and we really felt it was an important time in the company's history to be trading on the Nasdaq.

**TWST: And why do you want institutional investors to know about the company?**

**Dr. Venkatesan:** Well, a few points I think are critical for investors. One is photonics is no longer a niche technology. It is being used with an explosive growth rate in a lot of different applications, data centers being one of them. But onward looking, artificial intelligence, machine learning, autonomous vehicles, whether they be cars or drones, all of these use photonics in a very large portion of their intelligence in the system. So it's a very, very large market. It's a market that requires new technology to enable the scale to occur.

And POET has a very unique hybrid silicon photonics platform that enables this scale in photonics. We have spent the past five years developing this technology. And starting this year, we're deploying this technology into products that are getting into customers' hands. We expect to start ramping these products into production late this year,

early next year, which drives revenue into the company. So we're at that inflection point between transitioning from technology to product.

The products involve our technology, which is highly differentiated in that it provides an integration play for photonics. So for an investor looking at our company, they need to see big market, high growth potential, differentiated technology that enables the scaling up of photonics into these new applications. The company itself is at an inflection point in terms of revenue generation.

**TWST: This year you were named to the OTCQX Best 50, which is a ranking of top-performing companies traded on the OTCQX.**

**Dr. Venkatesan:** Yes, the exchanges track a certain set of metrics in terms of our company's stock performance. So, for our size company, which is micro-cap, we have, over a few years now, both on the OTCQX as well as on the TSXV, in Canada, periodically broken this list of top 50, top 10, top five, sometimes, in terms of its overall performance over the course of the year. Obviously, that's a good thing for us. This year has been obviously very challenging, and rocky, as with most other companies, especially among the micro caps. But we're happy that we've been able to provide some degree of sustained performance for our investors.

**TWST: And you mentioned that there were challenges this year. Did you want to talk about some of the challenges you're facing? Do they relate to supply chain issues, the economy, the pandemic?**

**Dr. Venkatesan:** I think as a small company, especially a company trying to burst onto the scene with new technology, the speed of innovation is important. And the pandemic over the past couple of years has really hurt us. We are a global company with operations in Singapore, China and the U.S. And so advantages of having that global presence were somewhat blunted by the pandemic, and our inability to be able to travel across the sites and have the teams communicate. So that's one aspect of it.

The other is clearly the disruption in the supply chain, and the significant over-utilization of foundry. We rely on these foundries for building our interposers, as well as the components. Over-utilization in the foundries resulted in doubling, sometimes tripling of the lead times, in terms of delivery of components and products, which also factored into some of the delays we've had in terms of the product deployments that we wanted to do.

As with every company, we try to mitigate these risks as much as possible. But it's impossible to completely eliminate them. We definitely have seen delays on the order of a quarter or two quarters over the past couple of years in our schedules.

This year, in particular, obviously, our intent was to move to the Nasdaq to get more institutional investors into our stock and excited about it. And unfortunately, our timing hasn't been perfect in hindsight. I think we moved in March and everything went to hell in a handbasket very quickly thereafter with the invasion of Ukraine and the overall turmoil in the stock market since March of this year. So that has been a challenge for us, of course, as we try to capitalize the company, and get

more institutions involved. It has obviously blunted some of our plans, especially in the second quarter. Of course, we look to the third and fourth quarters of this year for the stock market to stabilize and investors to gain more confidence and stability.

But, I mean, it's hard to time these things. I guess I would say if the country is moving into a recession, we're going to need to work through that at this point. But those are the challenges we faced, both on the capital market side, as well as on the supply chain and technology development side of things.

**TWST: It sounds like you're on the cutting edge of technology. I understand you have a relationship with the Shine Center at the College of Design Engineering at the National University of Singapore.**

**Dr. Venkatesan:** Yes, absolutely. The Shine Center allows us to do pre-competitive research with other partners, as well as leveraging the investments made by the government of Singapore, so that we're not outlaying a lot of the capital ourselves. So that has been good. From that perspective, access to new capability, new technology tools, without having to deploy our own capex — I think, we obviously couldn't have done that if it weren't for the fact that our technology was innovative and is broadly applicable to a number of segments that are of interest. We've also been able to influence a number of parties to work with us as a consequence of our innovation.

Those are positives, for sure. And we continue to make progress on our product development cycle. And then those are also important from a third-party endorsement of our technology and its capabilities.

**TWST: As far as the sectors that you're in, are there going to be any major changes in the next few years in the fields of semiconductors, 5G, more automation?**

**Dr. Venkatesan:** I think photonics has always kind of been in the background, I would say. It largely started with undersea communications, fiber optic communication, and so on, and people don't quite see it. It's kind of behind the scenes, if you will. But you know, with fiber-to-home, higher speed communications, 3D sensing being placed in all of our cell phones, and all of our portable devices, photonics has been thrust more into the mainstream in terms of consumers. So we see a few of those trends.

We see more photonics applications in wearable devices and mobile phones, as it relates to health care, well-being basically, threshold monitoring, not quite medical devices, but threshold monitoring devices that are built into consumer form factors. We see the artificial intelligence

market growing significantly. And with artificial intelligence, photonics-based processing is becoming increasingly important.

We see, obviously, the trends around autonomous vehicles. It was initially kind of feet-off driving, then eyes-off driving, and now hands-off driving. So it's moving towards more autonomy. And that requires a lot of photonics technologies as it relates to monitoring your immediate neighborhood around you. So we're going to start seeing a lot of these new applications come online.

And of course, data communications will continue to be very important, because every one of these things relies on fast communication of data, either between human and machine or machine to machine. And so those trends are going to continue.

New trends are going to form like I've talked about, and broadly, we see all of those driving the need for more photonics in the world that are more palpable. I mean, they're not going to be in the background anymore. There's going to be obvious utilization of this technology and we believe that in order to support that kind of growth, new disruptions are required and POET is a company that's providing disruption in the way photonics is being packaged for these new applications.

**TWST: And can these applications be seen both in consumer products as well as in business and manufacturing?**

**Dr. Venkatesan:** Yes, that's correct. I would consider wearable devices, autonomous vehicles as more kind of consumer in that context. But, obviously, compute infrastructure with artificial intelligence and data center communications are more business oriented from that standpoint.

**TWST: Thank you. (ES)**

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