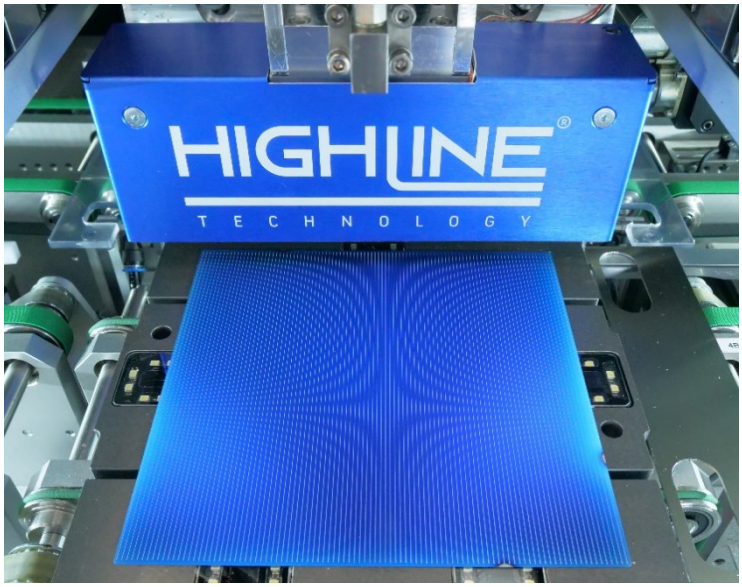
HighLine with new partners on its way towards market entry 2021 (Freiburg, 11.03.2021):

The High-Tech Gründerfonds (#HTGF) and Fraunhofer Technologie Transferfonds GmbH (#FTTF) invest in the Tech Start-up HighLine Technology GmbH. HighLine develops high precision printing technology for the semiconductor industry with current focus on solar cells. The seed investment amounts to EUR 1.2 million and is contributed equally by the HTGF and FTTF.

“The use of solar energy represents a central pillar of the future energy supply. However, scaling of the corresponding PV systems also entails the need for more efficient input of resources. In particular silver, which is applied for the conductor lines on the cells, represents a major cost factor in the production of solar cells. Accordingly, PV manufacturers and other semiconductor industries are looking for more efficient printing processes to apply respective media. Our parallel dispensing technology enables significant process optimization in terms of silver consumption, cell and module efficiency and production throughput”, explains Dr. Maximilian Pospischil, co-founder and managing director of HighLine.



Parallel dispensing print-head for application of ultra fine conductor lines
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With the HighLine parallel dispensing print heads the surface of the solar cell can be metallized in one crossing. The current printing speed of 500mm / s (LT paste for HJT) enables a higher throughput than with established competitive processes. Furthermore, thanks to the impressive homogeneity of the tiny contact fingers, more than 20% silver is saved and the efficiency of the solar cell is also increased by reducing the shadowing losses. For quick market entry, HighLine has developed a solution for integration into industrial screen printing platforms - the "cuckoo". This means that existing production lines of established system manufacturers can be equipped with the new printing technology within short time. A demonstrator can currently be seen in the PV-TEC laboratory of Fraunhofer ISE.

So far the industrialization of the technology originated from Fraunhofer ISE has been supported by the EXIST Forschungstransfer (BMWi) and PreSeed funding by the FTTF and the L-Bank BW.

"The technological developments achieved in the pre-seed phase and the positive feedback from established customers and partners confirm the clear business case of Highline, so I'm looking forward to the next steps for market entry," adds Tobias Schwind (Managing Partner at FTTF).

“Thanks to our dedicated team we achieved great development progress in 2020. Based on this financing round and together with our industrial partners, we can introduce the technology to the

PV market via a field test in 2021. This means that the market entry takes place in line with the current revival of the PV industry in Europe," explains Marian Breitenbücher, co-founder and managing director of HighLine.

"Dispensing technology offers very short ROI for solar cell manufacturers and therefore has the potential to replace established screen-printing platform in this market in the medium term. In my opinion, the technical status that has already been achieved and the strengths of the team form an excellent basis for a successful and sustainable market launch," says Olaf Joeressen (Investment Manager at High-Tech Gründerfonds).

About HighLine:

HighLine Technology GmbH is a spin-off from Fraunhofer ISE in Freiburg and develops high-precision printing technologies. HighLine has been operational since the beginning of 2020 and, with its 13 employees, has competencies in the areas of construction, process- and software development. HighLine uses the high-end laboratory environment of the PVTEC laboratory of Fraunhofer ISE. In cooperation with established automation manufacturers, HighLine develops efficient printing technologies and processes for the semiconductor industry.

https://highline-technology.com/

Contact

Marian Breitenbücher, Managing Director
info@highline-technology.de

About the High-Tech Gründerfonds

The seed investor High-Tech Gründerfonds (HTGF) finances technology start-ups with growth potential. With a volume of around EUR 900 million spread across three funds and an international partner network, the HTGF has supported more than 600 start-ups since 2005. The team of experienced investment managers and start-up experts supports the young companies with know-how, entrepreneurial spirit and passion. The focus is on high-tech start-ups in the areas of digital tech, industrial tech, life sciences, chemistry and related business areas. External investors have so far invested almost 3 billion euros in more than 1,700 follow-up financing rounds in the HTGF portfolio. The fund has also successfully sold shares in more than 120 companies.

Investors in the public-private partnership include the Federal Ministry for Economic Affairs and Energy, KfW Capital, the Fraunhofer-Gesellschaft as well as ALTANA, BASF, Bayer, Boehringer Ingelheim, B.Braun, Robert Bosch, BÜFA, CEWE, Deutsche Bank, Deutsche Post DHL, Dräger, Drillisch AG, EVONIK, EWE AG, FOND OF, Haniel, Hettich, Knauf, Körber, LANXESS, media + more venture Beteiligungs GmbH & Co. KG, PHOENIX CONTACT, QIAGEN, RWE Generation SE, SAP, Schufa , Schwarz Gruppe, STIHL, Thüga, Vector Informatik, WACKER and Wilh. Werhahn KG.

https://www.htgf.de/de/

Media Contact:

High-Tech Gründerfonds Management GmbH
Stefanie Grüter, Head of Marketing & Communications
T.: +49228 – 82300 – 188
s.grueter@htgf.de

Contact Investor:
Dr. Olaf Joeressen
T.: +49 228 82300 157
o.joeressen@htgf.de

About the Fraunhofer Technology Transfer Fonds GmbH

The Fraunhofer Technologie-Transfer Fonds (FTTF) is an independent venture capital investor with a focus on deep tech companies from the pre-seed phase and supports the founders as an entrepreneurial partner. With a fund volume of 60 million euros, start-ups using Fraunhofer technology are financed with up to 5 million euros.

https://fttf.vc/

Contact Investor:
Tobias Schwind
T.: +49 (0) 89 / 2500 639 84
tobias.schwind@fttf.eu