
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month June 2022 No. 2

TOWER SEMICONDUCTOR LTD.

(Translation of registrant's name into English)

Ramat Gavriel Industrial Park

P.O. Box 619, Migdal Haemek, Israel 2310502

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F

Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes

No

**On June 8, 2022, the Registrant announces a Webinar Showcasing Key
Process and PDK Features of Its Silicon Photonics Process**

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TOWER SEMICONDUCTOR LTD.

Date: June 8, 2022

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

Tower Semiconductor to Showcase Key Process and PDK Features of Its Silicon Photonics Process

Webinar will demonstrate an end-to-end design flow for PIC design on Tower's PH18 Process

MIGDAL HAEMEK, Israel, June 8, 2022 – Tower Semiconductor (NASDAQ/TASE: TSEM), the leading foundry of high-value analog semiconductor solutions, today announced a webinar titled “**Develop and Verify Designs Using a Silicon Photonics Platform with Integrated Lasers**”. The webinar will be hosted by technology and design enablement experts and will introduce key process and process design kit (PDK) features of Tower's PH18 process. Attendees will see a demonstration of an end-to-end design flow using Synopsys products for photonic integrated circuit (PIC) design together with Tower's silicon photonics platform which includes OpenLight's groundbreaking technology with InP-based integrated lasers, amplifiers, modulators and photodetectors. The platform targets datacom, telecom, LiDAR, healthcare, HPC, AI, and optical computing applications.

As the optical transceiver market moves from 400Gb/s to 800Gb/s, many complex analog components are required to assemble energy-efficient and cost-effective optical modules. This webinar will examine an 800G-DR8 PIC design case study to show how to accurately develop PIC designs with a focus on co-simulating and synthesizing an integrated laser. The webinar showcases key process and PDK features of Tower's PH18 process along with OpenLight's silicon photonics platform with integrated lasers and the industry's only unified electronic and photonic design solution comprising of Synopsys OptoCompiler™, Synopsys OptSim™, Synopsys PrimeSim™ and Synopsys IC Validator™ products. These solutions and techniques help improve performance and scalability, while reducing cost of design for some of the world's most exciting and growing markets. The 800G-DR8 PIC example can be extrapolated to develop PICs for other applications that can benefit from silicon photonics.

The webinar will be held on June 28, 2022 (schedule below) and requires advanced registration.

Develop and Verify Designs Using a Silicon Photonics Platform with Integrated Lasers

Session 1 – China 11:00am | Japan 12:00pm

Session 2 – USA PST 9:00am | Europe (Germany) 6:00pm

Speakers:

Jae Shin Director of Design Enablement, **OpenLight**

Daniel Sparacin VP of Business Development & Strategy, **OpenLight**

Luis Orbe Customer Support Coordinator, Photonic Solutions, **Synopsys**

Samir Chaudhry Sr. Director, Design Enablement, **Tower Semiconductor**

For additional details and registration, please visit the event webpage [here](https://towersemi.com/webinars/): <https://towersemi.com/webinars/>.

About Tower Semiconductor

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the leading foundry of high value analog semiconductor solutions, provides technology and manufacturing platforms for integrated circuits (ICs) in growing markets such as consumer, industrial, automotive, mobile, infrastructure, medical and aerospace and defense. Tower Semiconductor focuses on creating positive and sustainable impact on the world through long term partnerships and its advanced and innovative analog technology offering, comprised of a broad range of customizable process platforms such as SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, non-imaging sensors, integrated power management (BCD and 700V), and MEMS. Tower Semiconductor also provides world-class design enablement for a quick and accurate design cycle as well as process transfer services including development, transfer, and optimization, to IDMs and fabless companies. To provide multi-fab sourcing and extended capacity for its customers, Tower Semiconductor owns two manufacturing facilities in Israel (150mm and 200mm), two in the U.S. (200mm), three facilities in Japan (two 200mm and one 300mm) which it owns through its 51% holdings in TPSCo and is sharing a 300mm manufacturing facility being established in Italy with ST. For more information, please visit: www.towersemi.com.

Safe Harbor Regarding Forward-Looking Statements

This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results may vary from those projected or implied by such forward-looking statements. A complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect Tower's business is included under the heading "Risk Factors" in Tower's most recent filings on Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority. Tower does not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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