FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of February 2012 No. 4

TOWER SEMICONDUCTOR LTD. (Translation of registrant's name into English)

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 23105
(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 S 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 S

On February 13, 2012, the registrant announces Keynote Presentation at IIC China being held	February 23 – 25, 2012.

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: February 13, 2012 By: /s/ Nati Somekh Gilboa

Name: Nati Somekh

Gilboa

Title: Corporate

Secretary

TowerJazz Demonstrates Commitment to China Market

Announces Keynote Presentation at IIC China being held February 23 – 25, 2012

Presents advanced specialty technologies focused on FEM development, CMOS image sensors, 700V LED lighting and scalable LDMOS

NISHIWAKI, Japan, February 13, 2012 – TowerJazz, the global specialty foundry leader, today announced Qin Lei, China Country Manager is presenting a keynote at IIC China in Shenzhen on February 25, 2012. The presentation will focus on the availability of TowerJazz's advanced specialty technologies such as front-end module (FEM) development, CMOS image sensors for security and x-ray applications, 700v LED lighting, and scalable LDMOS for DC-DC converters. TowerJazz's presence at IIC China demonstrates its strong commitment to address the demands of business in this region. According to iSuppli, today 42 percent of all ICs are consumed in China and it is projected to grow to nearly 50 percent by 2015.

TowerJazz's IIC China presentation will showcase the company's innovative technology solutions. The keynote will discuss high dynamic range (HDR) pixel development for security and automotive solutions, highly integrated 700v IC technology to meet the green standards for LED lighting, advanced RF CMOS and SiGe, and Silicon on Isolator (SOI) substrates providing cost improvements and an integration path for front-end modules. Also, TowerJazz will provide a summary of its extensive work to lower the on-resistance of its power devices in its bipolar-CMOS-DMOS (BCD) platforms.

"TowerJazz's total commitment to leading edge technology, technical support and best-in-class accurate modeling/design enablement tools provide the framework to meet tomorrow's challenges," said Todd Mahlen, Vice President of APAC Sales. "We are excited to participate at IIC China this year and to showcase our superior technology which enables the innovative solutions demanded by the China market."

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary TowerJazz Japan, Ltd., operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron, offering a broad range of customizable process technologies including: SiGe, BiCMOS, Mixed-Signal and RFCMOS, CMOS Image Sensor, Power Management (BCD), and Non-Volatile Memory (NVM) as well as CMOS and MEMS capabilities. TowerJazz also offers a world-class design enablement platform that complements its sophisticated technology and enables a quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Technology Optimization Process Services to IDMs as well as fabless companies that need to expand capacity, or progress from an R&D line to a production line. To provide multi-fab sourcing, TowerJazz maintains two manufacturing facilities in Israel, one in the U.S., and one in Japan with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.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 TowerJazz'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 and Jazz's most recent filings on Forms 10-K and 10-Q, as were filed with the SEC, respectively. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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