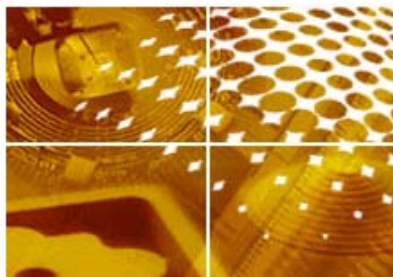


 **semi** QUARTERLY  
**report**  
TO MEMBERS | Q1 2011



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## Welcome to the SEMI Quarterly Report to Members



Stan Myers

Dear SEMI Members,

Welcome to the first edition of the 2011 Quarterly Report to Members.

As SEMI develops more targeted and differentiated services to support member companies participating in diverse segments of the micro and nano-electronics ecosystems, we have established discrete business units within our organization. This report is structured to reflect the SEMI member activities supporting your interests in semiconductor, PV and emerging markets (which includes LEDs, MEMS, Flexible Electronics and Displays).

We want to account for our progress in these areas; keep you informed about events, products, issues and services that provide value to you in reaching your business objectives; and to let you know that we are conducting these efforts in an efficient and financially sustainable manner.

The first quarter was marked by significant progress in all industries we represent. It was also, unfortunately, marked by the tragic and disruptive events in Japan that have deeply impacted the lives of many in Japan including those closely associated with the industries in which we participate.

SEMI quickly moved to represent members' interests with the ministry officials tasked with difficult decisions and planning in the wake of power supply shortages. SEMI also supported members worldwide with organized information resources and consolidated listing of Japan supply chain updates on [semi.org](http://semi.org). On behalf of the global SEMI staff, who collectively raised more than \$55,000 for earthquake and tsunami relief efforts, we look forward to continued recovery and resurgence in Japan.

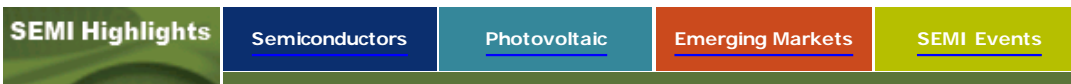
I hope that you will review the many other positive first-quarter accomplishments that have occurred around the world and in all of our member segments. Included among these are the successful, well-attended and bigger-than-expected SEMICON expositions in Korea (January) and China (March).

In the first quarter I also announced my intention to retire from full-time work after 50 years in the industry and 20 years as a SEMI board member. I have been proud to serve this great organization and the great companies around the world that comprise our membership. I am also proud of the many accomplishments that SEMI, our members and our worldwide staff have accrued each and every quarter.

I hope you will spend some time to review the accomplishments from our most recent quarter, presented by the SEMI Business Unit segments below.

Regards,  
Stan Myers  
President and CEO

## SEMI

**SEMI Response to Japan Disaster**

Public company announcements on the status of major Japan fabs and SEMI Japan member operations are provided on the SEMI website here ([www.semi.org/en/node/37556](http://www.semi.org/en/node/37556)). However, for SEMI members only, a compilation of news reports and other information on the Japan situation is provided by [www.semi.org/en/JapanSupplyChainInfo](http://www.semi.org/en/JapanSupplyChainInfo). SEMI did not want to add to the public media speculation by facilitating, contributing or accelerating what may be incomplete information so this link is not public or accessible through the SEMI website because many of these reports contain unsubstantiated information that we cannot verify.

**SEMI Establishes Fund for Japan Relief Efforts**

We established a SEMI fund for humanitarian relief efforts. All donations received, along with a SEMI corporate contribution, were directed to the International Red Cross Japan Earthquake and Pacific Tsunami Fund. SEMI encourages the generosity of both SEMI staff members and member companies who wish to contribute. To participate, please write a check in \$US dollars to the International Red Cross and send to Jim Jackman, 3081 Zanker Road, San Jose, CA 95134. If you have questions, Jim's email is [jjackman@semi.org](mailto:jjackman@semi.org).

**New President of SEMI India**

In January, Debasish Paul Choudhury was appointed to the position of president of SEMI India. Choudhury assumes full responsibility for SEMI operations in India and will oversee development of the association's programs, committees, products and services in the region. He is responsible for relationships with SEMI members as well as industry, government, academia and other local associations in India.

**Paul Hyland and Dirk Stenkamp Join the SEMI Europe Advisory Board**

In February, Paul Hyland, president and CEO of AIXTRON SE, and Dirk Stenkamp, Management Board member and Chief Operating Officer (COO) of centrotherm photovoltaics AG, joined the SEMI Europe Advisory Board.

**Morgan, Teng and Wilhoit Appointed to SEMI Singapore Advisory Board**

In January, SEMI announced the appointment of Rodney Morgan, co-executive officer of IM Flash Technologies, to serve as chairman of the SEMI Singapore Regional Advisory Board (RAB). Also, David Wilhoit, president and CEO of Siltronic Samsung Wafer Pte Ltd., and Gan Wah Teng, VP of Infineon Technologies (Asia Pacific) Pte Ltd. will serve as vice chairmen.

**SEMI Foundation/High Tech U**

The SEMI Foundation delivered three SEMI High Tech U (HTU) career exploration workshops for high school students and one HTU reunion in Q1. Soitec and STMicroelectronics in Grenoble, France delivered two of the programs, and one program was conducted in Washington State. SEMI hosted HTU graduates for a reunion in Silicon Valley. Rick Wallace, president of KLA-Tencor, welcomed the 75 students. The students participated in a Diversity activity and also taped a video message of hope to Japan HTU students after the tsunami. High Tech U, originally scheduled for March 28–29 at Toshiba and JSR in Yokkaichi-city, was cancelled due to earthquake damage at one of the host companies.

A significant donation of \$100,000 was made to the SEMI Foundation by KLA-Tencor. Without donations such as these, the SEMI Foundation would not be able to continue delivering quality programs to high school students who have the potential to become part of our future technology workforce.

**New SEMI Members in Q1 2011**

[Click here](#) to see who joined SEMI in January, February and March 2011.



Jonathan Davis

## The Semiconductor Report (Q1)

*By Jonathan Davis, president, Semiconductor Business Unit*

I've just returned from Japan at the time of this writing. And while the heartbreaking images of the horrific human tragedy there on March 11 remain etched in all of our minds, I am now also impressed by the remarkable resilience of Japanese chip manufacturers, equipment providers, materials suppliers, and their respective supply chains in contending with the enormous challenges dealt by the earthquake, tsunami, power plant crisis and associated disruptions. I had the good fortune of meeting with the head the Japan Electronics and Information Technology Association (JEITA) as well as leaders of SEMI member companies such as Tokyo Electron, Nikon, Advantest, Hitachi Chemical, Covalent and others. Some challenges remain with some specific isolated supply chain issues. However, I left with a clear sense that the microelectronics industry in Japan is rapidly recovering and semiconductor manufacturing equipment and materials technology providers are standing strong and ready for business.

Fabs in Japan represent 23% of the installed worldwide semiconductor manufacturing capacity. Not surprisingly, silicon shipments to Japan also total about 23% of the world total. So by measures of manufacturing potential and actual materials use, Japan constitutes almost a quarter of worldwide chip fabrication. Combined revenues of Japanese companies account for 20% of the global semiconductor sales. Furthermore, combined spending for equipment and materials in Japan is planned to reach US\$ 14-15 billion this year. So, while the first quarter was unbelievably difficult for the region, I am confident that smart companies around the world will be planning their participation in SEMICON Japan in December – not only to celebrate the rapid resurgence of their customers, but also to participate in one of the most important microelectronics centers in the world.

Elsewhere in the world, industry momentum continued in the first quarter as the market for electronic systems and strong demand for mobile products, tablets and computing devices kept semiconductor fabs humming.

Worldwide, US\$ 12.5 billion of new semiconductor manufacturing equipment was shipped in the recent quarter (a 20% increase compared to the year-ago quarter). Judging from the first quarter results, the industry remains on track to reach about \$46 billion in equipment sales and another \$46 billion in materials sales this year. In addition to those figures, SEMI and Semico recently announced the availability of a new data for the growing market for secondary equipment. The study estimates that secondary market equipment sales grew 77% last year to reach \$6.0 billion.

All that strong market activity helped drive exceptional interest at SEMICON events in the first quarter. We had excellent results for SEMICON Korea 2011 and SEMICON China 2011. SEMICON Korea was held January 26-28 in Seoul. Total verified attendance (visitors and exhibitors) jumped 40% compared to the 2010 event. In addition, almost 35,000 people attended SEMICON China (March 15-17).

Furthermore, SEMI continues progress on a variety of critical industry standards, including 3D-IC and 450 mm. That's important, as leading edge technology drives industry progress and because several leading chip makers recently have become more specific about purported 450 mm pilot line timing. While many equipment companies and their suppliers remain uncertain about both the implications of a wafer size

transition and the funding for necessary development, the reality is that 450 mm plans continue to proliferate.

Researchers, academic and research organizations, equipment and materials companies, and associations need to work together to prepare for the transition. To ramp in the time frame desired by the primary proponents there's a lot to do in terms of aligning industry activity, creating efficiencies and agreeing on the fundamental specifications that enable development progress. The international standards community is working within the time-tested format of the SEMI International Standards program to pave the way for necessary pre-competitive collaboration that is so essential for a successful transition.

For more detail on accomplishments in Q1, see the below summaries.

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### **SEMICON Korea 2011**

SEMICON Korea 2011 was held January 26-28 in Seoul. Co-located with LED Korea, total verified attendance (visitors and exhibitors) jumped 40% compared to the 2010 event, with 24,658 people attending. Nearly 400 exhibitors participated. Dr. Yoshio Nishi, Professor of Electrical Engineering at Stanford University, provided the opening keynote address. Onsite booth sales for the 2012 event exceeded expectations, with 95% of space reserved.

### **SEMICON China 2011**

SEMICON China 2011 was held March 15-17 in Shanghai, co-located with FPD China and SOLARCON China. Combined attendance was 34,808, with more than 1,000 exhibitors in over 2,200 booths. SEMICON China featured three special exhibit pavilions -- LED Manufacturing, Used IC Fab Line Market and Ecosystem, and IC Applications of China Market -- which accompanied a series of associated conferences and technical programs. SEMICON China also featured a day-long series of keynotes from SMIC, Intel, Grace Semiconductor, GLOBALFOUNDRIES, and Hua Hong-NEC.

### **3D Stacked-IC Standards**

The first North America Three-Dimensional Stacked Integrated Circuits (3DS-IC) Standards Committee meeting held in March, yielded good turnout from industry. The committee was chaired by Applied Materials, Qualcomm, Semilab, and ISMI. Three task forces were officially formed: Thin Wafer Handling, Bonded Wafer Stacks, and Inspection & Metrology.

### **SEMI Argues for Lower Export Control Restrictions**

The U.S. Department of Commerce is restructuring the Commerce Control List that outlines which dual-use items require export licenses for certain destinations, such as China. This list is aligned with multilateral controls through the Wassenaar Arrangement. On February 7, SEMI submitted detailed comments to push for the lowest level of control, given the overwhelmingly commercial nature of semiconductor equipment and materials and the presence of significant foreign availability. This is a long-term project and SEMI will continue to provide input.

### **PVJapan Postponed**

PVJapan 2011, originally scheduled for July 27-29, is postponed until December 5-7, the same week as SEMICON Japan, where we will be occupying the whole Makuhari Messe exposition center. This will be a great week for SEMI to elevate our position in these industries.

### **New SEMICON Japan Committee**

A new SEMICON Japan committee was launched in March with 14 C-level executives from Advantest, Disco, DNS, Ebara, Hitachi Chemical, JSR, Hitachi Hightech, Murata, Nikon, TEL, and THK, with Tsuneishi-san serving as chair and Maruyama-san as vice-chair. The committee will guide SEMI to create plans jointly that add more value to SEMICON Japan for more exhibitors.

### **China Semiconductor Technology International Conference (CSTIC)**

China Semiconductor Technology International Conference (CSTIC) had a record 741 attendees.

### **SEMI Submits Comments to the U.S. SEC on Conflict Minerals Legislation**

In 2010, the U.S. Congress passed new legislation focusing on "Conflict Minerals," which are defined as metals that are derived/mined from areas held by rebel groups waging war with the democratically-elected government in the central African country of DR Congo. Some of these minerals are used in electronic products and the manufacturing equipment used to make these products. In response to the legislation, SEMI set up a regulatory working group to advise SEMI members and industry partners on possible impacts of the legislation. SEMI also provided feedback to the U.S. SEC on the proposed rule.

### SEMI Industry Research and Statistics

- **Book-to-Bill:** January 2011: \$1.54 billion in orders; book-to-bill ratio of 0.85; February 2011: \$1.58 billion in orders; book-to-bill ratio of 0.87; March 2011: \$1.70 billion in orders; book-to-bill ratio of 0.95.
- **Semiconductor Equipment:** In March, SEMI reported that worldwide sales of semiconductor manufacturing equipment totaled \$39.5 billion in 2010, representing a record year-over-year increase of 148%. Sales in 2009 were \$15.9 billion. Compiled from data submitted by members of SEMI and SEAJ, the Worldwide SEMS Report is a summary of the monthly billings and bookings figures for the global semiconductor equipment industry.
- **Silicon Wafer Shipments:** Worldwide silicon wafer area shipments increased by 40% in 2010 when compared to 2009, according to the SEMI Silicon Manufacturers Group (SMG) in its year-end analysis of the silicon wafer industry. Revenues also improved by 45% in 2010 compared to 2009. Silicon wafer area shipments in 2010 totaled 9,370 million square inches (MSI), up from the 6,707 MSI shipped during 2009. Revenues reached \$9.7 billion, up from \$6.7 billion posted in 2009.
- **Spending on Worldwide Fab Projects:** Spending on worldwide fab projects, including construction, facilities, and equipping, could grow by 22% over 2010 levels with fab equipment spending (new and used) to grow by 28% over 2010 levels. Total spending on fab projects could approach \$47.2 billion this year, above the estimated \$38.6 billion spent in 2010.
- **Global Semiconductor Materials Sales:** The global semiconductor materials market increased 25% in 2010 compared to 2009. Record device shipments are primarily responsible for the record revenues experienced by the materials industry, surpassing the previous high of \$42.67 billion set in 2007. Semiconductor materials market revenues totaled \$43.55 billion globally in 2010.
- **Opto/LED Fab Forecast:** The Opto/LED Fab Forecast provides summaries and in-depth analyses of capital expenditure and capacity for each fab; and forecasts for the next 18 months. This database also includes information by facilities including fab location, theoretical capacity, wafer size, and more.

*\*Book-to-Bill: a ratio of 3-month moving averages of worldwide bookings and billings for North American-based semiconductor equipment manufacturers; note that the January 2011 Book-to-Bill was reported in February, etc.*

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Bettina Weiss

### The Photovoltaics Report (Q1)

*By Bettina Weiss, executive director, PV Group*

The PV Group world has been busy this first quarter. Our members have been involved in a diverse and interesting set of activities, particularly in China, Europe and the U.S. PV Group, along with the China PV Advisory Committee and CPIA, issued its second China Policy White Paper at SEMICON/SOLARCON China 2011 in Shanghai in March, analyzing the Chinese PV market through the lens of a changing global market and making specific policy recommendations to the Chinese government to develop its domestic solar market instead of focusing solely on exports.

The 5th European PV Fab Managers Forum in Berlin a week later was

the forum where the CTM (crystalline silicon technology manufacturers) group unveiled their second International Technology Roadmap for PV (ITRPV) update to a packed house; and two solar teams with SEMI member representatives stormed Capitol Hill in Washington to urge legislators to extend critical legislation, tax credits, and grants to keep the manufacturing sector state-side.

And to top it off, the North American PV Standards Committee and its task forces met in San Jose in March to continue important discussions around new test methods, specifications and guidelines needed to drive down manufacturing cost and increase efficiencies, so stakeholders can focus on innovation and differentiation.

These diverse activities speak to a global PV market that is still largely fragmented, but also to the stronger and continued dialogue now occurring up and down the manufacturing supply chain that we serve. Stakeholders are keenly aware of what's important in technology advancement, public policy, innovative R&D and cost efficient manufacturing. I look forward to the rest of this year in the hope that the trend continues, and that we can continue to serve our members and collectively solve shared challenges.

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### Market Data

SEMI formed a partnership with Linx-AEI to publish the new PV Chemicals and Gases Report. The new report delivers detailed insights about growth opportunities in the soaring PV materials market, including detailed insights into the demand for silicon, slurries, gases, wet chemicals, precursors, dopants, and other critical materials.

### Public Policy

In the U.S., SEMI PV Group responded to a U.S. Senate Energy and National Resources (ENR) Committee request for comment on a proposed Clean Energy Standard (CES). Recommendations called for increased deployment and manufacturing of PV and other renewable technologies be a priority within the Federal CES. PV Group will continue to monitor this legislation and push for the fair treatment of solar in any forthcoming energy policy.

SEMI PV Group Hosts "Lobby Day." The SEMI Washington office organized meetings on February 8-9 to bring the PV Group's issues agenda to policymakers. Most participants were member company representatives from the North American PV Advisory Committee's Public Policy Subcommittee. The group met with officials from the White House Office of Science and Technology Policy, the Energy Department and several congressional offices to discuss tax policies, a renewable energy standard and other solar energy policies.

### Second Edition of the ITRPV Released at the Fab Managers Forum

During the 5th PV Fab Managers Forum in Berlin, the Crystalline Cell Technology and Manufacturing Group (CTM), in cooperation with SEMI PV Group released the second (March 2011) edition of the International Technology Roadmap for Photovoltaics (ITRPV). The Roadmap identifies and targets critical technology needs and cost reduction goals for PV materials, manufacturing methods and processes. This second edition of the ITRPV is based on input from approximately 40 companies and institutes, representing an enormous level of effort by the industry and significant progress in mapping key areas of improvement. For more information, visit [www.itrpv.net](http://www.itrpv.net) or contact Stephan Raithel at [sraithel@semi.org](mailto:sraithel@semi.org).

### SEMI International Standards

The North American PV Standards Committee and task forces met in San Jose to continue important standardization efforts for equipment and materials. The prolific NA PV Gases and Liquid Chemical Purity Standards Task Force now has over a dozen standards in the works. The first SEMI Standards development proposal from a Chinese company (Suntech) was recently submitted as an activity to develop a specification for anti-reflective (AR) coating glass, which is used in crystalline silicon PV modules. A standard will improve communication between users and suppliers, reduce costs, and increase productivity.

The Taiwan Photovoltaic Committee already has a task force developing a module

vibration testing method, and a new PV Cell Vibration Test Method Task Force was recently formed. The goal of this activity is to provide a test method to evaluate the defects on PV cells due to stress during transportation.

A specification for Solar Grade Silicon Feedstock Materials was approved by the PV Standards Committee, to be published in May pending procedural review. This activity was initiated in Europe, but also received contributions from major players in Japan, NA, and China, as the industry is in need of a standardized specification.

#### **SEMI Taiwan Member Day**

The SEMI Taiwan Member Day addressed Taiwan's challenges in raw materials and domestic production of PV cell manufacturing equipment. Recommendations were made to reduce reliance on turn-key solutions and focus energy on developing the next generation of photovoltaic technology.

#### **PVJapan 2011 Rescheduled to December 5-7**

PV Japan 2011 was rescheduled to December 5-7, the same week as SEMICON Japan.

#### **SOLARCON China 2011**

Over 12,500 attendees visited SOLARCON China, held in conjunction with SEMICON China, specifically interested in PV, including over 2500 attendees from China cell and module manufacturers. Over 7000 attendees had an interest in PV equipment and materials. Dr. Zhengrong Shi, Founder and Chairman of Suntech Power provided the keynote address. The PV Day conference attracted over 300 attendees.

#### **India National Solar Mission**

SEMI India initiated a stakeholder survey on 'One Year of India's National Solar Mission' which will culminate with the presentation of a report to the Ministry of New and Renewable Energy in May 2011. SEMI India also initiated a discussion with the National Center for PV Research & Education (NCPRE) at IIT Bombay to jointly roll out training programs across the country. In addition, the India PV Advisory Committee has been expanded from 10 to 15 members. In addition, SOLARCON India received U.S. Department of Commerce certification.

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Tom Morrow

### **The Emerging Markets Report (Q1)**

*By Tom Morrow, EVP, Emerging Markets Business Unit and CMO, SEMI*

We're off to a fast start in Emerging Markets in 2011. The worldwide HB-LED market exploded last year, growing from approximately \$5 billion to over \$10 billion in sales, and SEMI is pleased to report a number of activities worldwide to help members grow their business, reduce costs and effectively plan for the next decade of opportunity in the emerging solid state lighting industry.

During the quarter, SEMI completed the fifth annual LED Korea exposition and conference, held in conjunction with SEMICON Korea, selling out the event while achieving record attendance (over 4,000 attendees). Our LED Manufacturing Forum and Pavilion at SEMICON China also was highly successful, attracting attendees from a majority of China's LED fabs, as well as industry leaders from Europe, Japan, Korea and Taiwan, and the U.S. During this period, SEMI also organized a successful 3-part online webinar on LED manufacturing issues, co-sponsored the Manufacturing Forum at Strategies in Light-U.S., and held an industry seminar in Taiwan. Major LED events are also planned throughout the year at SEMICON West, SEMICON Taiwan, SEMICON Russia, and SEMICON Japan.

Another important accomplishment during the quarter was the initial meetings of HB-LED Standards Committees and their important task forces on sapphire wafers, automation/interfaces and assembly. Global

EHS efforts with LED manufacturers in Taiwan and Korea have been initiated with a meeting in Korea between SEMI and leading Korean and Taiwan manufacturers to identify key EHS industry-wide priorities. The group agreed to meet regularly and invite other leading industry stakeholders to their process. An LED Committee in Taiwan has also been formed.

Other accomplishments in the first quarter include the first emerging markets forum at SEMICON Korea, focusing on MEMS and Printed Electronics, and the continuation of our agreement with Plastics Electronics Foundation for a co-located conference in conjunction with SEMICON Korea.

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#### **SEMI -Yole Développement LED Webinar Series**

SEMI-Yole Développement LED Webinar series on "HB-LED Manufacturing Growth & Transition--Challenges, Solutions & Opportunities" took place in February and March. The webinars featured Yole Développement and Tom Morrow, EVP of the SEMI Emerging Markets Business Unit. The webinar series was free to SEMI members and \$99 for non-members. Over 400 participants registered for the event.

#### **LED Korea 2011**

LED Korea 2011 featured more than 50 exhibitors in over 150 booths. Over 4,000 attendees interested in LED manufacturing visited the event and leading exhibitors Aixtron, Veeco, KLA-Tencor, and Ju Sung were there.

#### **Strategies in Light 2011**

SEMI co-sponsored and helped organize the Manufacturing Forum at Strategies in Light in February to discuss ways to advance cost reduction and industry-wide supply chain coordination.

#### **China LED Pavilion and LED Forum**

As part of SEMICON China, over 400 people attended the LED Manufacturing Forum which included speakers from Cree, Philips and Epistar. An LED Manufacturing Pavilion was constructed in the center of the SEMICON China with 16 sponsors.

#### **Emerging Markets Forum at SEMICON Korea 2011**

An Emerging Markets Forum, focusing on MEMS and Printed Electronics, was held for the first time at SEMICON Korea.

#### **FPD China 2011**

FPD China 2011 was held March 15-17 in Shanghai. Over 39,000 attended our combined SEMICON China, FPD China and SOLARCON China overall with over 17,000 interested in FPD equipment and materials. The China FPD Conference was attended by 385 executives. For the first time, FPD China attracted exhibitor participation from seven of the world's leading panel manufacturers from five different countries/regions including Samsung, LG, Chimei-Innolux, Mitsubishi, Mirasole, Tianma, and Visionlux. Three special FPD programs were held during the event: the China LCD Era Summit, the Next Display Forum, and the Road for Local Suppliers.

#### **GFPC Postponed**

The Global FPD Partners Conference, originally scheduled for April 10-12, has been postponed due to the Japan Earthquake.

#### **High-Brightness LED Standards**

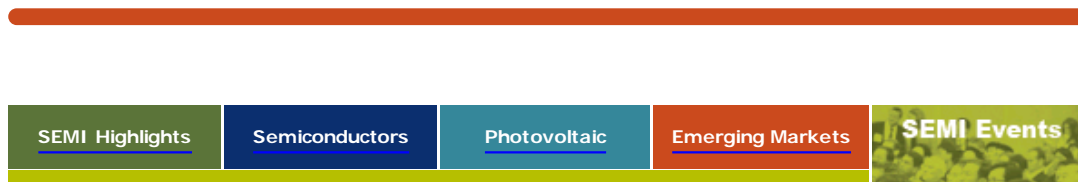
The North America HB-LED Standards Committee meetings in February and March led to the official approval of three task forces: wafer, equipment automation, and assembly. The committee is led by Philips Lumileds, Veeco, and Semilab. Members are also thinking about looking at safety technology in fabs for III/V process operations.

#### **EHS Activities for the LED/SSL Industry**

A meeting was held in Seoul between SEMI and leading Korea and Taiwan LED manufacturers to discuss ways to collaborate on EHS challenges in the industry. The group agreed to meet quarterly and expand the meeting to include more international members. To advise on these new activities, SEMI has established new LED EHS committees in Korea and Taiwan, with additional committees proposed for China, North America, and Japan.

### SEMI Working on Fix to LED Export Requirement

Some manufacturers of MOCVD tools for LED applications are required to get export licenses before shipping to certain destinations. This control is overly broad and governments do not appear to want to capture tools used for applications such as lighting. On March 16, SEMI joined representatives from Applied Materials and Veeco to meet with U.S. Commerce Department Assistant Secretary for Export Administration Kevin Wolf to discuss ideas for a technical fix to the regulation.



### Upcoming SEMI Events

- May 31-Jun 2: **SEMICON Russia 2011** (Moscow, Russia)
- Jun 1: Webinar: Opportunities for the U.S. PV Industry in the Global PV Market
- Jun 1: SEMI Northeast Forum (Chelmsford, MA)
- Jun 8-10: **Intersolar Europe 2011** (Munich, Germany)
- Jun 8-9: SEMI Europe PV Standards Meeting (Munich, Germany)
- Jun 10-14: SEMI Tutorial: PV (Seoul, Korea)
- Jun: SEMI Tutorial: Semiconductor Packaging (Seoul, Korea)
- Jul 11: **NA PV Fab Managers Forum** (San Francisco, CA)
- Jul 11-14: SEMICON West Standards Meetings (San Francisco, CA)
- Jul 12-14: **SEMICON West 2011** (San Francisco, CA)
- Jul 12-14: **Intersolar North America** (San Francisco, CA)
- Jul 27-29: **PVJapan 2011** (*rescheduled to Dec 5-7*) (Makuhari, Japan)

For a full list of events, [click here](#).

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