Solar Energy Research Institute of Singapore Adopts Synopsys' Sentaurus TCAD for Solar Cell Research

Device Simulation Enables Optimization of Solar Cells to Improve Efficiency and Reduce Cost

MOUNTAIN VIEW, Calif., April 1 /PRNewswire-FirstCall/ -- Synopsys, Inc. , a world leader in software and IP for semiconductor design and manufacturing, today announced that the Solar Energy Research Institute of Singapore (SERIS) has adopted Synopsys' Sentaurus TCAD to support its solar cell research and development programs. SERIS is Singapore's national institute for applied solar energy research and is jointly sponsored by the Singapore Economic Development Board (EDB) and the National University of Singapore (NUS). The Sentaurus TCAD tools will initially be used to support SERIS' silicon-based solar cell research. The tools simulate the fabrication steps and photovoltaic (PV) performance of solar cells, allowing SERIS researchers to investigate and optimize current and new cell designs aiming for higher PV efficiency and lower cost.

With photovoltaic technologies playing an increasing role in the sustainable energy supply, the establishment of SERIS as a center for PV research in the Asia-Pacific region is an important step to foster innovation for this rapidly growing segment locally. The research at SERIS focuses on the development of materials, components, processes and systems for photovoltaic electricity generation and energy-efficient buildings.

"Solar cells are demanding semiconductor devices. To bring down the cost of solar photovoltaic electricity, we need to realize advanced solar cell designs using inexpensive semiconductor materials and surface coatings. Multi-dimensional computer simulation is a powerful tool to provide us with the physical insight needed to explore and optimize new designs," said Professor Armin Aberle, deputy chief executive officer of SERIS.

"We see a big role for simulation in the development of solar cells. The work SERIS is carrying out with our Sentaurus TCAD tools not only improves the current state-of-the art, but also gives us a window into the future of photovoltaic research so we can stay abreast of this rapidly changing field and continue to improve our capabilities," said Howard Ko, general manager and senior vice president of the Silicon Engineering Group at Synopsys.

About Synopsys TCAD

Technology Computer-Aided Design (TCAD) refers to the use of computer simulation to model semiconductor processing and device operation. TCAD provides insight into the fundamental physical phenomena that ultimately impact performance and yield.

About Synopsys

Synopsys, Inc. is the world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, software-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys' customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has more than 60 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at https://www.synopsys.com/.

Synopsys is a registered trademark of Synopsys, Inc. Any other trademarks or registered trademarks mentioned in this release are the intellectual property of their respective owners.

Editorial Contacts:
Sheryl Gulizia
Synopsys, Inc.
650-584-8635
sgulizia@synopsys.com

Lisa Gillette-Martin
MCA, Inc.
650-968-8900 x115
lgmartin@mcapr.com

SOURCE: Synopsys, Inc.

Web site: https://www.synopsys.com/