POLARIS

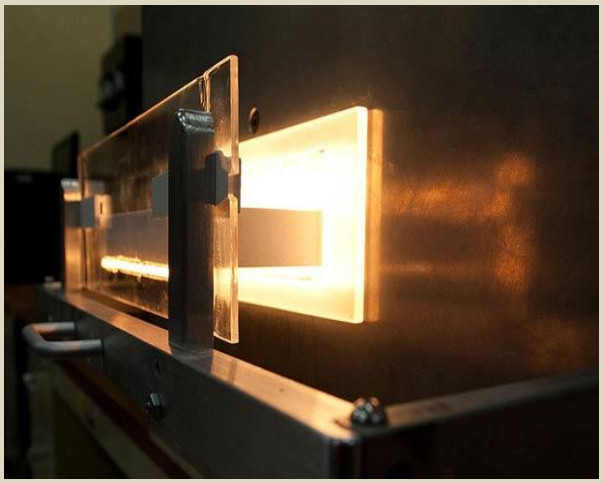
The Right Spark

July 2K17, Volume: 02, Issue :07

A NEWSLETTER OF ELETRICAL & ELECTRONICS DEPARTMENT

EDITOR'S VOICE:

Clever Optical Furnace Could Cut in Half the Energy Required to Make Solar Cells



Less Energy During Manufacturing = Cheaper Solar Panels

Solar photovoltaic (PV) technology is one of the cleanest ways to make electricity, even when the whole life cycle impact is taken into account. But despite that, the manufacturing process to make solar panels is fairly energy-intensive, which means that there's room for improvement. A good thing could be made even better. That's exactly what the smart folks at the **National Renewable Energy Laboratory** are doing, and one way they have found to both reduce the energy required to make a solar cell *and* to make the solar cell itself more efficient is to use an optical furnace to heat up the silicon substrate with which the panel is made.

Editors: Mrs. A . Jyothirmaye & Mr. O.Hima Kiran Kumar

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Guest lecture: Familiarization of thermal power plant :Mr.Y.Ravi

A Guest lecture on Familiarization of thermal power plant on 18/7/2017 for the III-EEE students was conducted by Mr.Y.Ravi D.E of NTTPC, Vijayawada.

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Work shop: Autonomous Robotics ***:Build something that excites you***

A Robotic workshop 2-day was organized to the III-EEE students on 23/07/2017&24/07/2017, by Ramson Tech lab with various Robotic applications and modern tools.

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Industrial visit: NTTPC *:Vijayawada*

An Industrial visiting was done by the EEE students on 25/07/2017 for the thermal power plant NTTPC in Vijayawada. This visiting is very informative regarding to gain practical knowledge like coal handling, Boilers, steamers, Cooling tower, Tubine and generator set and SCADA controlling system etc.

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SCIENTIST OF THE MONTH:

Frank Sprague (25 July1857-25 Oct 1934):

Frank (Julian) Sprague was an American engineer, inventor, and a pioneer in electric railway transportation. He started his career at sea in the U.S. Navy (1878). Later, he worked at the Brooklyn Navy Yard making plans for incadescent electric lamps on navy vessels, which led to joining Edison at Menlo Park (1883) He formed the Sprague Electric Railway and Motor Company in 1884, and became known as "the father of electric railway traction." when he installed the first U.S. electric trolley system (Richmond, Va., 1887). Edison took over this company in 1892. Sprague earned many patents, many for railway applications and diverse ideas such as electric toasters, electric signs, electric elevators and naval weaponry.

The contract for the Richmond Union Railway specified a construction period of ninety days, which — despite the obstacles of the hilly terrain, and also Sprague's coming down with typhoid fever during the summer as it was under construction — Sprague very nearly fulfilled. He later referred to it as "a rather foolish contract," in that he had agreed to produce in ninety days an amount of equipment equal to the total existing in the world at that time. He set an example of efficiency which today's public transport projects – which often take years or even decades to plan and build — could do well to emulate. He was a member of many technical societies, president of the New York Electrical Society, the American Institute of Consulting Engineers, and the Inventors Guild, and the recipient of many awards. He received the Edison Medal in 1910, "For meritorious achievement in electrical science, engineering and arts as exemplified in his contributions hereto." Sprague was married twice, to Mary Keatinge and to Harriet Chapman Jones. He had three sons and one daughter. He died on 25 October 1934 and is buried at Arlington National Cemetery.