Criteria Concern for DSSC Industrialization

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As the photosynthesis of Dye Sensitized Solar Cell (DSSC), it is the best photovoltaics technology study for indoor cell and wireless sensor applications. Most indoor lightsources are fluorescent lights (T5, T8) and LED lights which spectrums are in 400~700 nm range, we found DSSC efficiency varied with the different indoor lightsources.

Improve the DSSC performance for long term stability and design cost-effective materials with environmental friendly concern are the most important consideration for DSSC industrialization, Everlight chemical would like to present the achievement of the past decade.

In addition, two more important criteria needed to consider for emerging technology become an industrialization：International Industrial Standard for world-wide trade as well as potential Killer application. Everlight Chemical will also show the current progress of these two criteria, too!

In order to support DSSC industrialization for world-wide trade, we believed the suitable International Standard for DSSC indoor application is needed to set up. Through the platform of SEMI, we formed the OPV/ DSSC Tasking Force group on 2/26, 2013 in Taiwan. At present, we are already published three international standards as the following:

1. SEMI PV57-1214 (Test Method for Current-Voltage (I-V) Performance Measurement of Organic Photovoltaic (OPV) and Dye-Sensitized Solar Cell (DSSC))
2. SEMI PV69-1015 (Test Method for Spectrum Response (SR) Measurement of Organic Photovoltaic (OPV) and Dye-Sensitized Solar Cell (DSSC))
3. SEMI PV76-0117 (Test Method for Durability of Low Light Intensity Organic Photovoltaic (OPV) and Dye-Sensitized Solar Cell (DSSC))

and 3 more standards for indoor application are under development.

Based on Internet of Things (IOT) and industry 4.0 application blooming, Everlight Chemical will demonstrate Eversolar organic dye of DSSC in wireless sensors of IOT application.