

Title: Developing and commercializing photovoltaic products.

Abstract:

Dow Chemical embarked on a journey in 2008 to develop a vertically integrated business starting with a roll of stainless steel and finishing with a building integrated photovoltaic module. In 2015, with the launch of POWERHOUSE 2.0™ with NuvoSun CIGS the first leg of this journey is complete. This effort began through an internal R&D program to develop CIGS (copper, gallium, Indium, di-selenide), this program pulled together world experts from academia, and hired students from some of the best schools in the world to rapidly scale up a sputtering based precursor CIGS process targeting high efficiency and low cost. Despite significant progress, it was determined that the best option was to access technology in the hot bed of solar (silicon valley) and a strategic investments was made in NuvoSun. NuvoSun, located in Milpitas CA, is a second generation solar company started by the same people that founded MiaSole. NuvoSun began with a laser focus on developing a low cost approach to solar born out of the data storage industry. This focus on rapid innovation and ruthless cost reduction resulted in a holistic approach that addresses all of the critical costs of solar cells (capital, raw material, labor, energy, maintenance, facilities). When coupled with Dow, a suite of products is being developed to deliver innovative solar solutions.

In this talk, I will discuss both the technical and commercial challenges of scaling up CIGS thin film solar cells into an array of solar products.