

## Titanium Oxide as the Window Layer for Metal Chalcogenide Photovoltaic Devices

Tech ID: 24632 / UC Case 2011-853-0

### INNOVATION

Professor Yang and colleagues have developed a transparent charge collection layer for solar cells. The technology's solution processable window results in significantly lower manufacturing costs compared to vacuum-deposited materials, such as standard zinc oxide. Solution coating can cause less damage to lower layers than magnetron sputtering, and may allow for use of a simpler, cheaper device structure that omits the cadmium selenide layer. The technology can be used in CuInSe<sub>2</sub> solar cell devices, with potential use in other types of solar cells. Other applications include UV absorbing coatings for windows.

### PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,780,238	10/03/2017	2011-853

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### INVENTORS

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### OTHER INFORMATION

#### KEYWORDS

Solar charge collection layer,  
 transparent, UV absorbing coatings

#### CATEGORIZED AS

- [Energy](#)
- [Solar](#)
- [Storage/Battery](#)

#### RELATED CASES

2011-853-0

### ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

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- [Efficient and Stable Perovskite Solar Cells with All Solution Processed Metal Oxide Transporting Layers](#)
- [High Performance and Flexible Chemical And Bio Sensors Using Metal Oxide Semiconductors](#)
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