# Conjugated Polymers with Selenium Substituted Diketopyrrolopyrrole Unit for Electronics Devices

Tech ID: 23670 / UC Case 2013-071-0

## SUMMARY

Organic photovoltaic devices provide an opportunity to utilize solar energy efficiently and at low cost. To harvest a greater spectrum of light, scientists have sought to reduce the energy bandgap of the active material. UCLA researchers have developed a novel low-bandgap polymer that provides excellent photovoltaic performance in single junction devices (PCE >7%). This technology has application to organic solar cells, tandem solar cells, transparent solar cells, field-effect transistors, near infrared (NIR) organic photo-detectors, and NIR organic light emitting diodes, among others.

## PATENT STATUS

| Country | Type | Number | Dated | Case |
|---|---|---|---|---|
| United States Of America | Issued Patent | 9,663,611 | 05/30/2017 | 2013-071 |

## ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Titanium Oxide as the Window Layer for Metal Chalcogenide Photovoltaic Devices
- Two-Step Processing With Vapor Treatment Of Thin Films Of Organic-Inorganic Perovskite Materials
- Silver Nanowire-Indium Tin Oxide Nanoparticle As A Transparent Conductor For Optoelectronic Devices
- 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
- Design of Semi-Transparent, Transparent, Stacked or Top-Illuminated Organic Photovoltaic Devices
- Novel Polymers for Polymer Solar Cells, Transistors, and Sensors

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## INVENTORS

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## OTHER INFORMATION

### KEYWORDS

cleantech

### CATEGORIZED AS

- **Optics and Photonics**
  - All Optics and Photonics
- **Energy**
  - Solar
- **Materials & Chemicals**
  - Composites
  - Polymers
- **Sensors & Instrumentation**
  - Other
  - Physical Measurement

### RELATED CASES

2013-071-0

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