

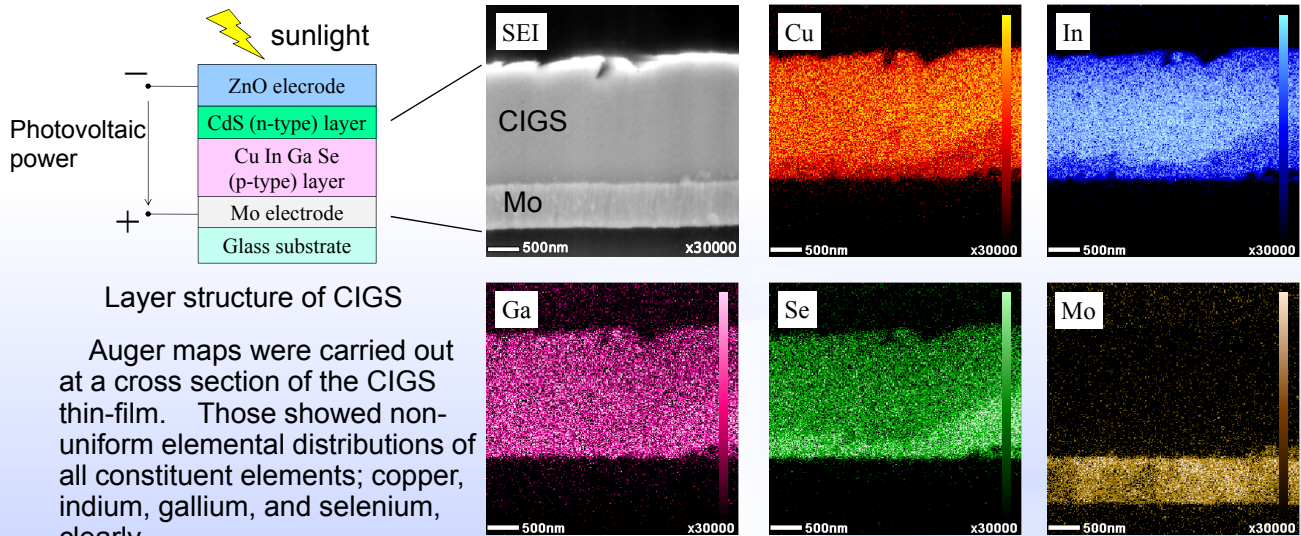
Key Word: CIGS thin-film solar cells, transition metals, valence, chemical state analysis

## Advanced analysis for CIGS thin-film solar cell

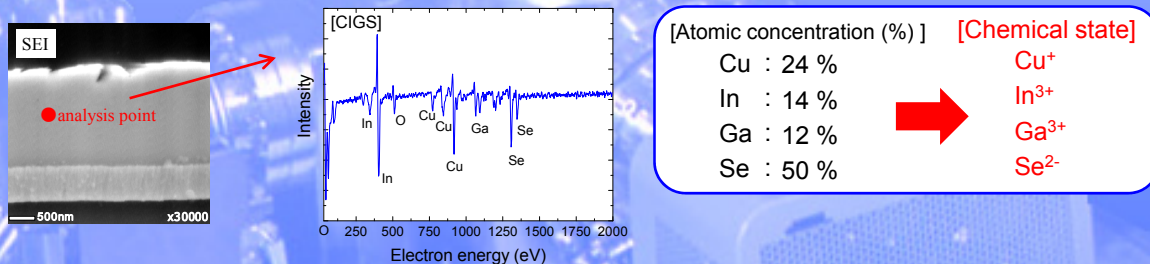
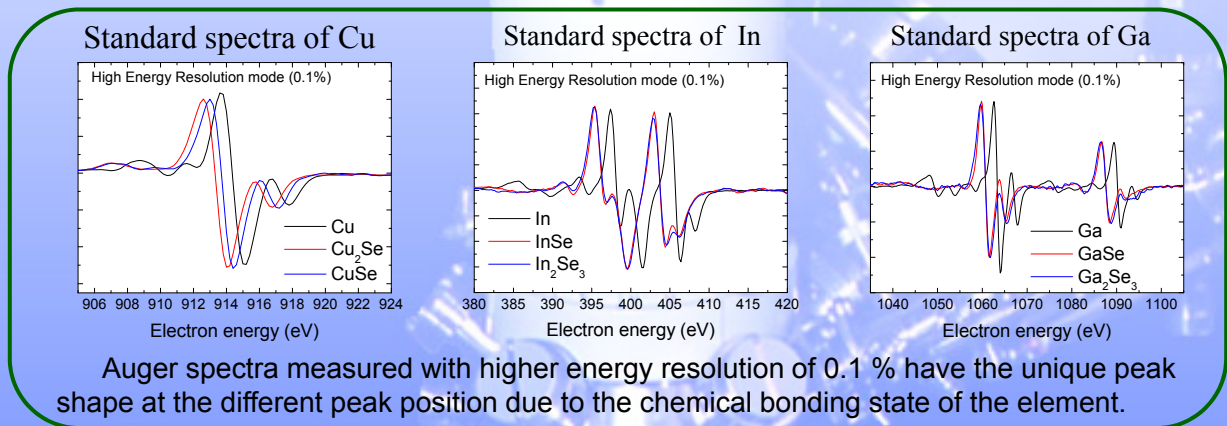
A solar cell is widely used as a clean energy capturing device with lower CO<sub>2</sub> emissions. Among many kinds of next generation solar cells, a CIGS thin-film solar cell has attracted much interest because of its energy-efficiency equaled to poly-crystalline silicon.

In order to achieve the theoretical efficiency for photovoltaic conversion, it is important to study elemental distributions and chemical states of all constituent elements in the CIGS layer. A new Auger instrument (JAMP-9510F) can be widely used to investigate them in detail.

### ● Auger maps at a cross section of a CIGS thin-film



### ● Chemical state analysis of each element in CIGS



JAMP-9510F can provide the quantitative analysis and distinguish the chemical state by means of each Auger spectra in a small area of nanometers.

Access the QR codes below for more information on the Field Emission Auger Microprobe

◆ Overview →



◆ Mechanisms →



**JEOL**  
http://www.jeol.co.jp