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# Second generation thin film solar cells

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### Introduction

Solar cells are designed to convert solar energy into electrical energy.

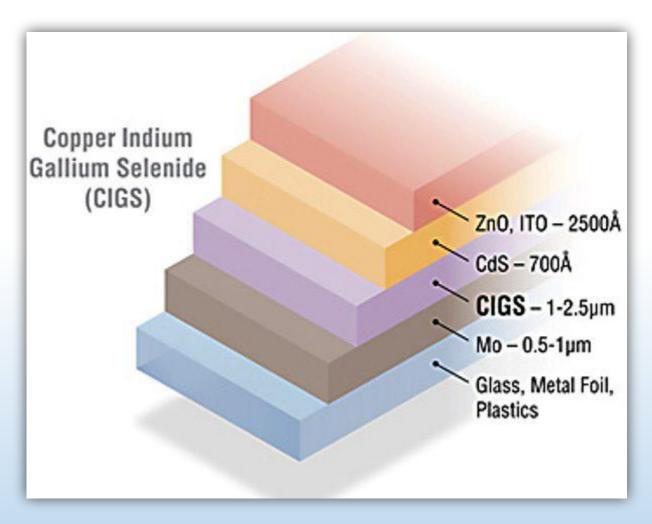


# Second generation thin film solar cells

Thin film solar cells are introduced and developed as the second generation of solar cells to provide high production capacity at lower energy and material consumption



This type of solar cell is made on cheap, large area such as glass, metal foil or plastic.



In 1976, three separate research groups had formed the thin-film cell. Each group had used different absorber materials.

## The absorber materials

amorphous silicon (a-Si) cadmiuīm telluride (CdTe)

copper-indium-gal lium-diselenide (CIGS)

#### **CIGS** cell structure

Copper-indium-gallium-diselenide (CIGS) thin-film solar cells are multilayer thin film devices with nanocrystalline bulk semiconductor as the absorber material.

