

The Invention of the Solar Panel

How scientists learned to turn sunlight into electricity

BY UMAIR BAHADUR

Children! You already know that the sun gives us not only light and warmth, but electricity too. You have surely seen solar panels fitted on the roofs of houses, quietly turning sunlight into electricity. But do you know who actually invented them?

The historical journey behind the solar panel's invention began in 1839, with the discovery of what is known as the "photovoltaic" effect. It was the result of a long scientific journey in which several scientists played their part. Even so, Edmond Becquerel is regarded as its true discoverer, while it was Charles Fritts who went on to build the first practical solar cell.

THE JOURNEY, STEP BY STEP

1839

Edmond Becquerel

The French physicist discovered the photovoltaic effect at just 19 years old while running various experiments. His early trials were modest, yet they laid the very foundation on which all solar technology would later be built.

1883

Charles Fritts

The American inventor built the first working solar cell by coating selenium with an extremely thin layer of gold. It was only around 1 to 2 per cent efficient, but it stands as the first genuine attempt to generate electricity this way.

1905

Albert Einstein

Einstein set out a mathematical explanation of the photoelectric effect, showing how light causes a material to release electrons. This very piece of research would later earn him the Nobel Prize.

1954

Chapin, Fuller & Pearson • Bell Labs

At the Bell Labs research institute, scientists Daryl Chapin, Calvin Fuller and Gerald Pearson built the first silicon-based photovoltaic cell, reaching an efficiency of around 6 per cent — a huge leap forward.

Every solar panel on every rooftop today traces its story back to these **curious minds** — proof that even sunlight has a history worth knowing.