Go, change the world

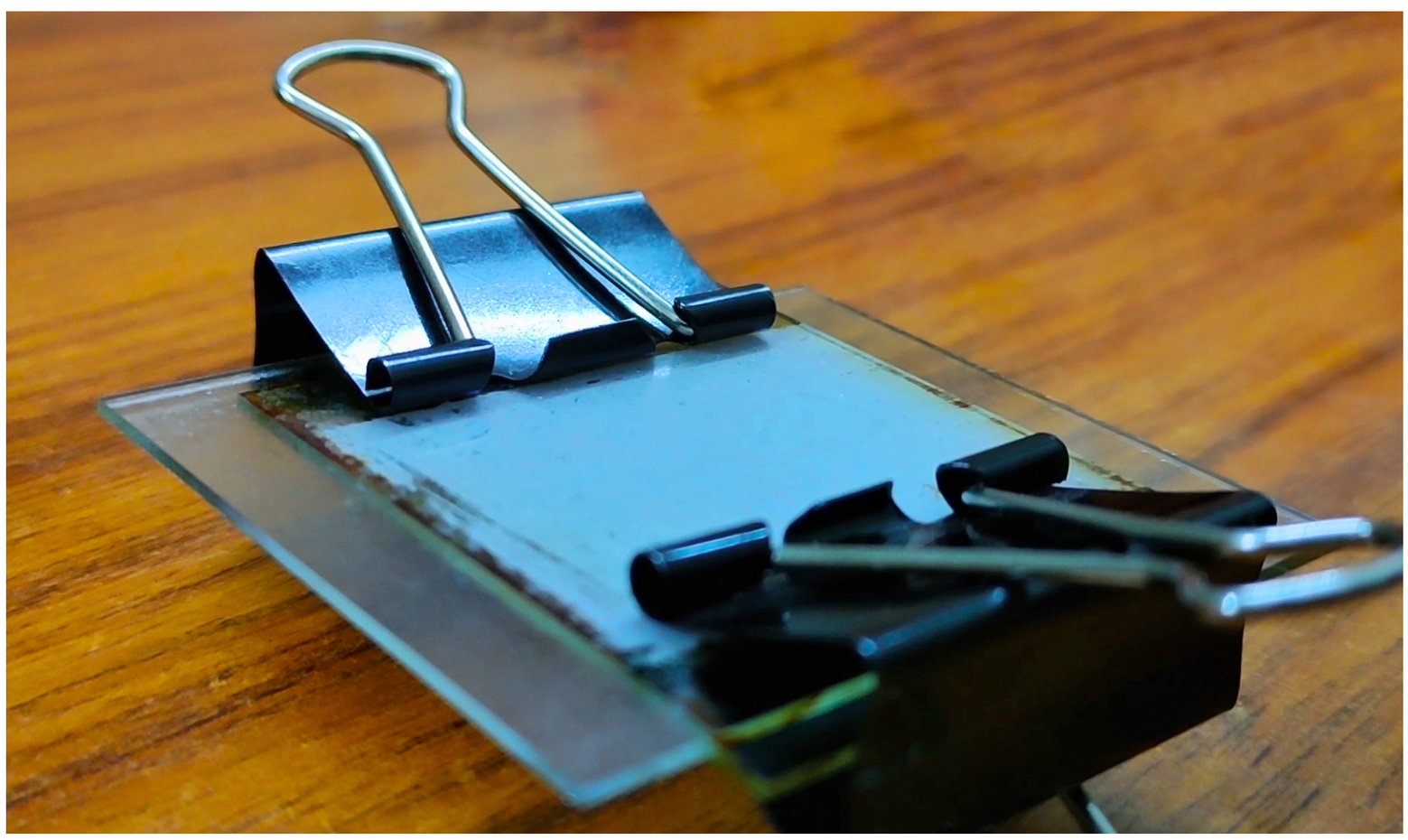
RV College of Engineering

DYE SENSITISED SOLAR CELL

BY KUSHAL MANDHYAN 1RV22EI028
SANDEEP N UTTARKAR 1RV22EI045
SHIKHAR VERMA 1RV22EI050
SHUBHAM RAJENDRA 1RV22EI054

INTRODUCTION

In the pursuit of sustainable and renewable energy sources, solar cells have emerged as a promising technology for harnessing sunlight and converting it into electricity. Among the various types of solar cells, Dye-Sensitized Solar Cells (DSSCs), also known as Grätzel cells, represent an innovative and environmentally friendly approach to photovoltaic energy conversion. Their potential to reshape the renewable energy landscape is evident, making them a subject of extensive research and a promising candidate for clean and accessible energy solutions. In this brief overview, we delve into the core principles and prospects of DSSCs.



WORKING

Dye-Sensitized Solar Cells (DSSCs) absorb sunlight using organic dyes, generating electrons. These electrons move through a semiconductor, creating an electrical current. Electrolytes regenerate the dye, allowing for a continuous cycle of photon absorption and electricity production, even in low-light conditions.

WHY DSSC?

Dye-Sensitized Solar Cells (DSSCs) offer numerous advantages, including low manufacturing costs, flexibility, and ease of production. They operate efficiently in low-light conditions, making them suitable for various applications. DSSCs also have a smaller environmental footprint and can be incorporated into building materials, promising a sustainable and versatile solution for clean energy generation.

RESULTS & DISCUSSION

Creating a DSSC model as a project in college had a positive impact on our academic as well as practical fields. It helped us gain hands-on experience on fabricating a solar cell, combining interdisciplinary subjects and use our problem solving skills to come up with a full fledged working model. Using DSSC as clean form of energy gave us an idea about the solar industry. This project had a huge impact on our innovative and creativeness, opening doors for research opportunities.