

## ABSTRACT

The use of nanofluids for cooling is an attracting considerable attention in various industrial applications. Compared with conventional fluids, nanofluids improve the heat transfer rate, as well as the optical properties, thermal properties, efficiency, transmission and extinction coefficients of solar systems. As the nanofluids enhances the cooling rate and efficiency of solar systems can be experimentally investigated by using Nano-fluid Heat exchanger sink. The various solar energy technologies exist and they have different application techniques in the generation of electrical power. The widespread use of photovoltaic (PV) modules in such technologies has been relatively high costs and low efficiencies. The efficiency of PV panel decreases as the operating temperature increases. This is due to reflection from the top surface, absorption of heat by the parts other than the cell and the absorption of heat from the other portion of the spectrum. For that the temperature should be maintained in prescribed limit. In this work, the cooling system is used for maintaining the temperature at prescribed limit.

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