

Dr Sonal Singhal, Assistant Professor, Electrical Engineering awarded the SERB Fast Track Young Scientist Scheme Grant



Dr Sonal Singhal aims to utilize the grant for a research project in the field of Photovoltaic (PV) conversion of solar energy which is one of the most promising ways of meeting the increasing energy demands of the future when conventional sources of energy are limited. Most of the energy currently consumed is supplied from fossil fuels. The main problems arising from the use of those sources is sustainability, especially with the continuous increase of the demand for energy. Moreover, burning of fossil fuel produces pollutants such as carbon monoxides, nitrogen oxides, sulphur dioxide etc. These pollutants are responsible for the greenhouse effect and global warming. Renewable energy such as photovoltaic/solar seems to be promising substitutes for replacing fossil fuels. However, it has its own problems such as the cost of PV and lack of understanding of PV systems other than crystalline Si. Thin film solar cells are among the leading candidates for low-cost, large scale terrestrial photovoltaic applications [1, 3, 7]. Explaining the objectives of the project, Dr Sonal said, “The main aims are to enhance the total-area, thin-film cell efficiency, identifying structural issues that can lead to improved cell efficiency and stability, including junction interface properties at junction interfaces.”