Improved PV Technology for Integrated Energy Management of Plug-in Electric Vehicles in the Power Grid

Electric vehicles have become increasingly common in the automotive industry in recent years. Automobile vehicles are being rejected as a result of the decreased and increased demand for gasoline and diesel. Furthermore, pollution plays a significant role in our climate, making it necessary to expand the use of electric vehicles in the future. As a result, we will be able to help save our environment from pollution. However, in order to introduce electric cars, we must deal with the implications of high demand for charging stations. Charging stations will play a critical role in the commercialization of electric vehicles today. The aim of my proposed system is to maximize the performance of the solar panel by coating it with silver nanoparticles. This powerful solar PV input can be fed to charging stations, resulting in charging stations that are more efficient than traditional methods. Various modes can be used to analyze the EV, and various optimization methods can be used to apply it effectively. Modeling and simulation was used to increase the performance of solar panels coated with silver nanoparticles by optimizing energy usage with algorithms.