

Retrofitted Electric Vehicle



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The exhaust emissions from the conventional Internal Combustion Engine (ICE) vehicles are the major source of air pollution in the cities. Use of ICE vehicles aggravates the depletion of global oil deposits, poor urban air quality and health issues. To realize a low-carbon cleaner society, electric vehicles are becoming more popular. Electric vehicles (EVs) offer an alternative to hybrid and conventional vehicles by using electric motor drive without diesel / petrol consumption. In Indian cities, people are experiencing air pollution and related health problems caused by the vehicle exhaust emissions. Therefore, there is an urgent need for an alternative, sustainable and green mobility solution. CSIR-IIP has been working to address the problems of vehicular air pollution and fuel saving by developing innovative and alternative technologies. It has been working towards development of 'smart electric conversion kits' for electric conversion of old polluting (BS-II, BS-III) ICE vehicles, especially diesel vehicles, into cleaner electric vehicles. Few of the recent R&D activities and future research in CSIR-IIP are:

- Development and demonstration of 'EV Conversion Kits' for conversion of in-use ICE vehicles into Electric Vehicles for all vehicle segment in M1 and M2 vehicle categories.
- Development and demonstration of 'Hybrid Energy Systems (HES)' for electricity generation and EV Application. The HES includes:
 - Studies and development of 'x-Solar Hybrid Charging Station and Battery Swapping Station for EVs'.
 - Studies on Super-capacitors for EV application.