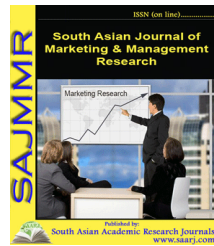




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A REVIEW ON ELECTRIC VEHICLES AND ITS FUTURE

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ABSTRACT

Electric vehicles (EVs) are gaining popularity as a result of a number of causes, including lower prices and increased climate and environmental consciousness. This article examines the advancements of electric vehicles (EVs) in terms of battery technological trends, charging techniques, and new research problems and possibilities. More specifically, an analysis of the global market situation for electric vehicles (EVs) and their future prospects is conducted. Given that the battery is one of the most important components of electric vehicles, the article provides a comprehensive overview of battery technologies, ranging from lead-acid through lithium-ion. Furthermore, we examine the various charging protocols available for electric vehicles, as well as suggestions for power regulation and battery energy management. Finally, we give our view of what may be expected in the near future in this subject, as well as the research areas that are still accessible to both business and academic groups.

KEYWORDS: *Electric Vehicles, Plug-In Hybrid Electric Vehicle, Battery charging, Batteries technology, charging modes, EV plugs.*

REFERENCES

1. F. Liao, E. Molin, and B. van Wee, "Consumer preferences for electric vehicles: a literature review," *Transp. Rev.*, 2017, doi: 10.1080/01441647.2016.1230794.
2. N. Daina, A. Sivakumar, and J. W. Polak, "Modelling electric vehicles use: a survey on the methods," *Renewable and Sustainable Energy Reviews*. 2017, doi: 10.1016/j.rser.2016.10.005.
3. C. Panchal, S. Stegen, and J. Lu, "Review of static and dynamic wireless electric vehicle charging system," *Engineering Science and Technology, an International Journal*. 2018, doi: 10.1016/j.jestch.2018.06.015.
4. O. M. Govardhan, "Fundamentals and Classification of Hybrid Electric Vehicles," *Int. J. Eng. Tech.*, 2017.

5. N. Bodenschatz, D. Schramm, M. Eider, and A. Berl, "Classification of electric vehicle fleets considering the complexity of fleet charging schedules," 2018, doi: 10.1145/3208903.3212056.
6. H. Wang, V. Anant, Q. Wang, and M. Ouyang, "An analysis on the market features of light hybrid electric vehicles in the USA," *Qiche Gongcheng/Automotive Eng.*, 2013.
7. FKA and R. Berger, "E-mobility Index Q2 2017," *Fka*, 2017.
8. P. Ahi *et al.*, "New multi-regional input–output databases for Australia – enabling timely and flexible regional analysis," *Econ. Syst. Res.*, 2015.
9. V. Alimisis and N. D. Hatziargyriou, "Evaluation of a hybrid power plant comprising used EV-batteries to complement wind power," *IEEE Trans. Sustain. Energy*, 2013, doi: 10.1109/TSTE.2012.2220160.
10. M. Aziz, T. Oda, T. Mitani, Y. Watanabe, and T. Kashiwagi, "Utilization of electric vehicles and their used batteries for peak-load shifting," *Energies*, 2015, doi: 10.3390/en8053720.