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INDEX

SR. NO.	IMCCRT ID NO	TITLE	PAGE NO.
1	IMCCRT-2023-4104	Driving Competitive Advantage in Luxury Fashion Accessories: A Case Study of BACHI Barcelona's Cost Leadership, Differentiation, and Focus Strategies	1
2	IMCCRT-2023-4106	Internet Usage and Psychological Wellbeing among Undergraduate Students	2
3	IMCCRT-2023-4109	Effect of Parenting Style in Increasing Patterns of Nomophobia Behavioural Pattern in Childrens	3
4	IMCCRT-2023-4111	Self-Care Practices and Knowledges on Menstrual Hygiene Management among Adolescent girls	4
5	IMCCRT-2023-4113	Effectiveness of Electronic Performance Management E-Pm Practices in Garden Silk Mills Pvt. Ltd.	5
6	IMCCRT-2023-4118	Automatic Wireless Health Monitoring System Using GPS Tracking System	6
7	IMCCRT-2023-4120	An Overview and Future Reflection of Battery Management Systems in Electric Vehicles	7
8	IMCCRT-2023-4123	The Influence of Profitability, Solvency, and Sales Growth on Profit Quality	8
9	IMCCRT-2023-4126	Flood Forecasting, Detection and Monitoring System Using IOT	9
10	IMCCRT-2023-4127	A Hidden Markov Model and Internet of Things Hybrid Based Smart Women Safety Device	10

An Overview and Future Reflection of Battery Management Systems in Electric Vehicles

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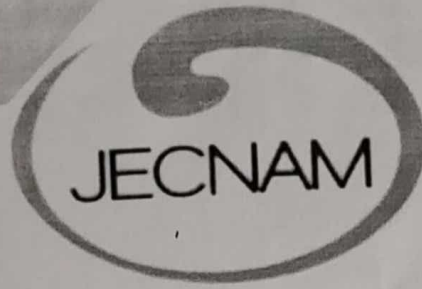
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Abstract: Researchers are becoming more interested in electric vehicle (EV) because it assist to minimise greenhouse impacts, reduce noise and air pollution, and provide freedom from fossil fuels. Electric vehicles depend on their batteries to safely supply the necessary power. The duration of time needed to charge the electric batteries is the biggest drawback of modern electric vehicles. Significant progress has been achieved in recent years to manage energy storage and speed up the charging process for electric vehicle batteries. In order to reduce energy consumption, boost system efficiency, lengthen battery life, and create a clean, efficient transportation system, it is crucial to build a battery management system that ensures long product life and a safe driving experience. This article attempts to provide a concise overview of various important battery management system features, including battery charging optimization, temperature control, and cell voltage balancing. The conclusion and recommendation of the article highlight the potential for further study in the area of electric vehicles.

Keywords: Battery-Management System (BMS), Battery Charging Optimization, Managing Thermal Temperature, Cell Voltage Balance.

1. INTRODUCTION

A Battery Management System (BMS) in a electric vehicles which manages every rechargeable parts in the vehicles, so for this reason it becomes one of the very critical parts in the vehicles in terms of managing the safety in EV. The main aim of battery management



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