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FUTURE PROSPECTS OF ELECTRIC-HYBRID VEHICLES

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Annotation: Electric-hybrid vehicles (EHV) combine internal combustion and electric propulsion to balance performance, efficiency, and sustainability. This paper examines the technological evolution, challenges, and future prospects of EHVs within the global automotive industry.

Keywords: Electric-hybrid vehicles, battery technology, mobility, sustainability, automotive innovation

Main Text

The rapid adoption of electric-hybrid vehicles represents a transitional phase between conventional and fully electric transport. Advances in lithium-ion and solid-state battery technologies have significantly increased energy density, while reducing charging time. Intelligent power management systems enable efficient energy distribution between internal combustion engines and electric motors.

Future developments are expected to focus on improving battery recyclability, integrating solar-assisted charging systems, and expanding fast-charging infrastructure. Additionally, AI-driven predictive maintenance will optimize energy use and extend vehicle lifespan. By 2035, hybrids are predicted to play a key role in achieving net-zero transportation goals, especially in regions with limited charging infrastructure.

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