Sustainability of the Automotive Recycling Infrastructure:
Review of Current Research and Identification of Future Challenges

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Abstract

In addition to rising fuel prices, government policy-makers are endeavoring to reduce the environmental impact of the automotive industry through directives and standards. Automotive manufacturers are working to reduce the use phase environmental impact of automobiles by introducing innovative vehicle designs. However, these product design changes may jeopardize the profitability of the business entities within the automotive recovery infrastructure leading to deleterious environmental impacts. This paper focuses on describing past research relative to the automotive recovery infrastructure and those research challenges that may arise in the future. The aim is identify the research gaps in order to ensure the sustainability of the recovery infrastructure.

Keywords: automobile industry; product recovery; recycling infrastructure; sustainability; future vehicular material composition; new powertrain technologies; automotive recycling; environmental impact; vehicle design; sustainable manufacturing.