SYSTEMATIC REVIEW ARTICLE

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What has been trending in the research of polyhydroxyalkanoates? A systematic review

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Over the past decades, enormous progress has been achieved with regards to research on environmentally friendly polymers. One of the most prominent family of such biopolymers are bacterially synthesised polyhydroxyalkanoates that have been known since the 1920s. However, only as recent as the 1990s have extensive studies sprung out exponentially in this matter. Since then, different areas of exploration of these intriguing materials have been uncovered. However, no systematic review of undertaken efforts has been conducted so far. Therefore, we have performed an unbiased search of up to date literature to reveal trending topics in the research of polyhydroxyalkanoates over the past three decades by data mining of more than 2227 publications. This allowed us to identify eight past and current trends in this area. Our study provides a comprehensive review of these trends and speculates, where polyhydroxyalkanoates research is heading.

Keywords: polyhydroxyalkanoate, Data Mining, Trends, composites, Medicine, Renewable production, Pha synthesis, Biotechnology, Biodegradable Polymers, Biocompatible polymers

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