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Polycyclic aromatic hydrocarbons : Characteristics and its degradation by biocatalysis remediation

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## Abstract

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## Abstract

An excessive released of polycyclic aromatic hydrocarbons (PAHs) to surroundings is one of the major factors that cause environmental pollution to increase globally. This issue had gained scientist's attention to study PAHs biodegradation pathways and their toxicity towards humans and the environment. They found that the major mechanism responsible for the ecological recovery of PAH-contaminated sites happened to be from the microbial degradation process. However, there are a few limitations faced by the PAHs degrading bacteria where the bacteria die due to extremely polluted areas. This leads the researchers to utilize genetic engineering to produce enzymes that can withstand and survive in extreme environments. Recent information and technology such as path sources, properties and biochemical pathways by means to produce the simplest and less harmful components in polluted ecosystems are discussed in this review. In-depth studies in regards to bacteria biocatalysis involving bacterial-produced-enzymes to degrade PAHs help develop new methods to enhance the bioremediation effectiveness in the future. © 2020 Malaysian Society for Biochemistry and Molecular Biology. All rights reserved.

## Author keywords

Anthracene; Biodegradation; Microorganisms; Naphthalene; Polycyclic Aromatic Hydrocarbons

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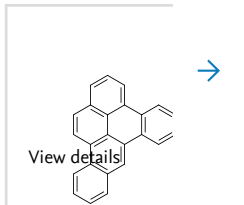
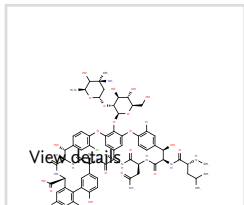
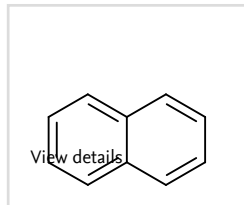
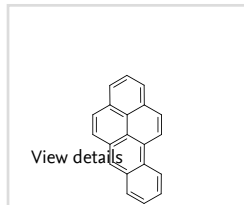
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