

# Removal of Antibiotic Resistant Bacteria and Genes from Wastewater using Photocatalysis

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## Abstract

The release of antibiotic resistant bacteria (ARB) and genes (ARG's) in the wastewater poses serious threat to the environment and human health all over the world. The spread of ARB and ARG's may increase antibiotic resistant pathogens in the environment which has serious human health concerns. They offer a challenge as no simple treatment process is effective for their removal. This study presents a review of the removal of ARB and ARG's from wastewater using photocatalysis. The photocatalysis mechanism, reaction parameters, ARB and ARG's removal efficiency from wastewater as compared with other wastewater treatment processes have been presented. The application of photocatalysis for remediation of ARB and ARG's is reported to be a relatively new strategy as compared with other treatment processes and require further investigations. The photocatalysis utilizing solar radiation in combination with biological and physico-chemical processes may prove to be a potential solution for removal of ARB and ARG's from wastewater.

**Keywords:** Antibiotic resistant bacteria, antibiotic resistant genes, photocatalysis, wastewater

## Thrust Areas:

- Catalysis
- Environmental chemistry

## Category:

- Faculty member