

综合评述

## 陆生植物体内酶系统对UV-B辐射增强的响应

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**摘要** 臭氧层减薄导致地表中波紫外线UV-B(280~320 nm)辐射的增强,UV-B辐射能量远高于可见光,且能被植物体内蛋白质和核酸等生物大分子吸收.酶是植物体内起催化作用的一类蛋白质,酶的数量和活性对UV-B辐射增强有强烈的响应.本文将近年来增强UV-B辐射对植物体内酶影响的研究工作进行了综述.主要包括抗氧化酶、核酮糖-1,5-二磷酸羧化酶、硝酸还原酶和谷氨酰胺合成酶.并就今后该方面的研究提出建议.

**关键词** [UV-B辐射](#) [酶](#) [酶活性](#)

分类号

## Responses of enzymes in terrestrial plants to enhanced UV-B radiation

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### Abstract

With the destruction of ozone layer, ultraviolet-B (UV-B, 280~320nm) radiation has been enhanced at the earth's surface. The energy of UV-B irradiation is far higher than that of visible light, which could be absorbed by biomacromolecules such as protein and nucleic acid. Enzyme is a sort of protein catalyzing the biochemical processes, and its content and activity in plant have strong responses to enhanced UV-B radiation. This paper summarized the research advances in the effects of enhanced UV-B radiation on the key enzymes, mainly including antioxidant enzymes, ribulose-1,5-diphosphocarboxylase, nitrate reductase and glutamine synthetase in terrestrial plants. Some suggestions for future research in this field were put forward.

**Key words** [UV-B radiation](#) [Enzyme](#) [Enzyme activity](#)

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