**Congo Red Dye: Toxicity, Environmental Impacts and Sustainable Remediation Approaches**

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**Abstract.** The demand for various dyes has increased with the rapid growth of the worldwide printing and dyeing industry. The discharge of untreated colored textile effluents into receiving water bodies is a serious concern due to the toxicity of most industrial dyes, including Congo Red dye, which is one of the most prevalent carcinogenic diazo dyes used in the dyeing sector as well as for imaging probes and therapeutic purposes. There has been significant attention given to remediating dye-containing effluents due to the growing knowledge and concern of the worldwide population regarding their toxicity. Numerous physical, chemical, and biological techniques can be used to eliminate Congo Red, but the biodegradation of Congo Red by various bacteria, fungi, algae and plant is emerging as an efficient and promising method among existing environmental sustainable approaches. This review provides an overview of Congo Red dye chemistry and its effects on the environment and human health, as well as exploring various treatment strategies for the effluent containing Congo Red dye discharged by the industry.

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