

## **Comprehensive review and compilation of treatment for azo dyes using microbial fuel cells**

### **Abstract**

Microbial fuel cells (MFCs) represent an emerging technology that focuses on power generation and effluent treatment. This review compiles articles related to MFCs using azo dye as the substrate. The significance of the general components in MFCs and systems of MFCs treating azo dye is depicted in this review. In addition, degradation of azo dyes such as Congo red, methyl orange, active brilliant red X-3B, amaranth, reactive blue 221, and acid orange 7 in MFCs are summarized. Further exploration and operational modification are suggested to address the challenges of complete removal of azo dye with maximum power generation in an MFC. In addition, a sequential treatment system with MFCs is suggested for complete mineralization of azo dye.

### **Keywords**

Azo dye; Decolorization; Microbial fuel cell; Power generation; Substrate