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Title:	A comprehensive review on emerging constructed wetland coupled microbial fuel cell technology: Potential applications and challenges
Authors:	Patil, Sunil A (/jspui/browse?type=author&value=Patil%2C+Sunil+A)
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Abstract:	Constructed wetlands (CWs) integrated with bioelectrochemical systems (BESs) are being intensively researched with the names like constructed wetland-microbial fuel cell (CW-MFC), electro-wetlands, electroactive wetlands, and microbial electrochemical technologies-based constructed wetland since the last decade. The implantation of BES in CW facilitates the tuning of redox activities and electron flow balance in aerobic and anaerobic zones in the CW bed matrix, thereby alleviating the limitation associated with electron acceptor availability and increasing its operational controllability. The benefits of CW-MFC include high treatment efficiency, electricity generation, and recalcitrant pollutant abatement. This article presents CW-MFC technology's journey since its emergence to date, encompassing the research done so far, including the basic principle and functioning, bio-electrocatalysts as its machinery, influential factors for microbial interactions, and operational parameters controlling different processes. A few key challenges and potential applications are also discussed for the CW-MFC systems.
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