Title:	Extremophilic electroactive microorganisms: Promising biocatalysts for bioprocessing applications
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Abstract:	Electroactive microorganisms (EAMs) use extracellular electron transfer (EET) processes to access insoluble electron donors or acceptors in cellular respiration. These are used in developing microbial electrochemical technologies (METs) for biosensing and bioelectronics applications and the valorization of liquid and gaseous wastes. EAMs from extreme environments can be useful to overcome the existing limitations of METs operated with non-extreme microorganisms. Studying extreme EAMs is also necessary to improve understanding of respiratory processes involving EET. This article first discusses the advantages of using extreme EAMs in METs and summarizes the diversity of EAMs from different extreme environments. It is followed by a detailed discussion on their use as biocatalysts in various bioprocessing applications via bioelectrochemical systems. Finally, the challenges associated with operating METs under extreme conditions and promising research opportunities on fundamental and applied aspects of extreme EAMs are presented.
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