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A solar responsive photocatalytic fuel cell with the membrane electrode assembly design for simultaneous wastewater treatment and electricity generation

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Highlights

- A solar responsive PFC with the MEA design is developed.
- The air-breathing cathode is employed to enhance the oxygen transport.
- Performance of the developed PFC is evaluated under various conditions.
- Experimental results indicate the feasibility of the developed PFC.

Abstract

In this work, a photocatalytic fuel cell (PFC) with membrane electrode assembly (MEA) structure was designed for simultaneous degrading organic compounds and electricity generation. For the photoanode, the TiO₂ with the quantum-dot

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