

Realization of a low carbon society through game changing technologies

Structure-Ordered Interfaces for Effective Water Electrolysis

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Summary :

Present large-scale water electrolyzers need the extremely acidic and alkaline pH conditions to save the input energy. Such highly corrosive conditions result in the increments of the cost for the cell stack system as well as waste production with environmental consequences.

The system of water electrolyzer operates under near neutral pH condition can be constructed using the structure-ordered catalytic electrodes which selectively interact with water molecules.

Newly developed system with the electrodes is useful for the electrolysis of low-grade and saline surface water to produce green hydrogen.

