Patent Search

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Abstract:

PHOTO ELECTRO-CHEMCIAL REACTION DEVICE AND METHOD THEREOF ABSTRACT The present invention relates a photo electrochemical reaction device(100), compr (1) secured with a power source (2), hot plate (3), bi-sidewalls (4,5) secured with brackets (6,7), a reaction vessel (8), an oil bath (9), one or more electrodes (10), closure cylindrical flexible tubing (12), cooling element (13), supporting panel (14), and digital controller (15) thereby the photo electrochemical reaction device (100) is configu perform electro-chemical, photo-chemical, and photo-electrochemical reactions by employing pulse width modulation unit (PWM) unit. Figure 1.

Complete Specification

Description:PHOTO ELECTROCHEMICAL REACTION DEVICE AND METHOD THEREOF

FIELD OF THE INVENTION

The present invention generally relates to the field of electro photo-chemistry. Specifically, the present invention relates to photo electro chemical reaction device. M specifically, the present invention relates to a photo electrochemical reaction device for performing thermochemical, photo-chemical reactions, electro-chemical rea and photo electrochemical reactions. More particularly, the present invention also relates to the method of photo electrochemical reaction device.

BACKGROUND OF THE INVENTION

In electro photo-chemistry, generally electrochemical devices either generate electricity from a chemical reaction (like a battery) or use electrical energy to cause a chemical reaction (like a catalyst); photochemical reaction is a chemical reaction that occurs due to the absorption of light energy; whereas photo electro-chemical r is a subfield of study within physical chemistry concerned with the interaction of light with electrochemical systems.

In past few decades, both electrochemical and photo-chemical reactions have provided sustainable ways for organic transformations. Generally, they had been sepa used to facilitate organic reactions. However, there are examples where both the techniques are used simultaneously to drive organic reactions through photo - electrochemical processes. Seminal reviews and publications in the recent past indicate the emerging potentiality of this hybrid approach, i.e. photo-electrochemica reaction.

There are few of the reports available in the state of art about the existence of photo electrochemical reaction devices.

US20170241026A1 discloses Electrochemical reaction device, this invention includes: a first electrolytic solution tank including first and second storage parts storing

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