عنوان مقاله:

Development of stable bismuth vanadate as high performance photoanode

محل انتشار:

پنجمین کنفرانس بین المللی پژوهش کاربردی در شیمی و مهندسی شیمی با تاکید بر فناوری های بومی ایران (سال: 1397)

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خلاصه مقاله:

High performance photoanodes are based on the availability of semiconductors that are chemically stable and can efficiently capture solar energy. Although metal oxide semiconductors have been investigated for their promise to resist oxidative attack, materials in this class can suffer from chemical and photochemical instability. Metal oxides are generally very stable in aqueous solutions and cheap, but their photochemical activity is usually limited by poor charge carrier separation. Bismuth vanadate (BiVO4) has attracted interest as one of the most promising photocatalysts for water oxidation; but the mentioned problem can be solved by introducing it in the films or doping with other metals. In this paper we investigated on the photocatalytic activity of bismuth vanadate and propose some solution for developingof stable photochemical material.

کلمات کلیدی:

Bismuth vanadate, photo anode, doping