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不同酸介质对TiO₂光催化还原Cr(VI)体系的影响

李俊杰¹, 左永福², 阎智英¹, 方华¹, 王家强¹

1. 云南大学, 应用化学系, 云南, 昆明, 650091;
2. 大理州环境监测站, 云南, 大理, 671000

The effect of different acidic medium on photocatalytic reduction of Cr(VI)

LI Jun-jie¹, ZUO Yong-fu², YAN Zhi-ying¹, FANG Hua¹, WANG Jia-qiang¹

1. Department of Applied Chemistry, Yunnan University, Kunming 650091, China;
2. Dali Monitoring Station of Environment, Dali 671000, China

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全文: PDF (729 KB) HTML (KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 研究了不同酸介质对TiO₂光催化还原低浓度Cr(VI)体系的影响,发现在110 W紫外灯3、h照射条件下Cr(VI)质量浓度低于20μg/mL时受空白影响大.通过无TiO₂光催化剂的空白实验,表明在HCl介质中不用考虑空白带来的影响,而H₂SO₄,HNO₃,CH₃COOH均有不可忽略的影响.

关键词: 光催化还原 Cr(VI) TiO₂ 酸介质 空白影响

Abstract: The effect of different acidic medium on the activity for the photocatalytic reduction of Cr(VI)with TiO₂was studied,especially for the low concentration of Cr(VI).It was found that blank test effect was significant when Cr(VI)concentration was below 20μg/mL under UV light irradiation 110 W and 253.7 nm.The blank test also indicated that without TiO₂,the UV light has negligible effect on the reduction of Cr(VI)when HCl was used as acidic medium,whereas UV light has significant effect when HNO₃,CH₃COOH,and H₂SO₄was used.

Key words: photocatalytic reduction Cr(VI) TiO₂ acidic medium blank test effect

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电话: 0871-5033829(传真) 5031498 5031662 E-mail: yndxxb@ynu.edu.cn yndxxb@163.com