

- waste water[J]. *Plating and Finishing*, 2006, 28(6): 38-40.
- [13] Schrader M, Fahimi H D. Peroxisomes and oxidative stress[J]. *Biochimica et Biophysica Acta (BBA)-Molecular Cell Research*, 2006, 1763(12): 1755-1766.
- [14] Zamocky M, Furtmüller P G, Obinger C. Evolution of catalases from bacteria to humans[J]. *Antioxidants & redox signaling*, 2008, 10(9): 1527-1548.

Interference of H_2O_2 on COD Test and Removal Method for Advanced Oxidation Process

GUO Liang, JIAO Wei-zhou, LIU You-zhi, XU Cheng-cheng, LIU Wen-li, LI Jing

(Shanxi Province Key Laboratory of Hige-oriented Chemical Engineering, North University of China, North University of China, Taiyuan 030051, China)

Abstract: The chemical oxygen demand(COD) for pure water and nitrobenzene waste water sample containing different content of H_2O_2 was measured and the linear interference of H_2O_2 concentration on COD test was studied. It shows that with increase of the H_2O_2 , the COD increases. Without new interference, the ways to suppress interference of H_2O_2 on COD test were discussed including pH value, manganese dioxide catalyst, and catalase. Results show that the catalase eliminates the influence of H_2O_2 on COD determination effectively, and the alkaline environment is in favor of removing the H_2O_2 to some extent, and manganese dioxide catalyst can remove H_2O_2 in short time but it may introduce new interferences. When the reaction time is 3 min, by adjusting initial liquid pH value of 12, adding manganese dioxide catalyst and catalase, respectively, the H_2O_2 removal rate can reach 1.2%, 45.6% and 100%, indicating that catalase can conveniently remove H_2O_2 with unknown concentration, and suppress the interference of H_2O_2 on COD test.

Key words: environmental chemistry; nitrobenzene compounds; H_2O_2 ; Chemical Oxygen Demand(COD); pH; manganese dioxide; catalase

CLC number: TJ55; X131.2

Document code: A

DOI: 10.11943/j.issn.1006-9941.2014.06.030



火工烟火技术及相关技术创新学术研讨会成功举行

2014年11月12~14日,由中国兵工学会火工烟火专业委员会联合火工品安全性可靠性技术国防科技重点实验室举办的火工烟火专业委员会工作会议暨火工烟火技术及相关技术创新学术研讨会在广西南宁召开。来自防化研究院、中国工程物理研究院化工材料研究所、北京理工大学、南京理工大学、航天科工集团、船舶重工集团、兵器装备集团204厂、兵器工业集团北方华安工业集团、北方特种能源集团等15个单位40名专家学者参加了会议。会议编辑出版了论文集,共收录论文113篇。

研讨会邀请了北京理工大学、南京理工大学、213研究所、中国工程物理研究院的专家就烟火技术的发展现状与创新发展方向、起爆药研究的最新进展、基于飞片的不敏感弹药起爆技术、火工品数字化设计与仿真、烟火药剂发展、冲击片雷管设计技术发展进行了大会专题报告交流,并就火工烟火技术及相关技术的最新动态;火工烟火技术及相关技术的设计、测试;火工品的设计、仿真、工艺、制造;火工烟火技术及相关技术的现状和发展趋势等议题进行了分会讨论。

会上与会代表积极发言、相互交流,对相关议题进行了广泛深入的讨论,提出了一些具有创新性的观点和建议。本次会议将对火工烟火技术及相关技术的发展、创新起到积极的推动作用。

火工烟火专业委员会 王建华