

## Composition Analysis on Deterioration of Electric Match Charge in Storage

TU Xiao-zhen<sup>1</sup>, YAN Nan<sup>1</sup>, HUA Qi<sup>2</sup>, LI Ping-xuan<sup>2</sup>

(State Key Laboratory of Prevention and Control of Explosion Disasters, BIT, Beijing 100081, China;

2. Xi'an North Qing Hua Electric Apparatus Group CO. LTD., Xi'an 710025, China)

**Abstract:** The changes of the electric match composition at different time simulating accelerated life test were analysed by X-ray diffraction. The conditions of the life test were temperature ( $60 \pm 2$ ) °C, relative humidity  $95\% \pm 3\%$ . It was found from the test that when high humidity and high temperature atmosphere exist, the electric match composition would deteriorate easily. Results show that the composition is not changed after the life test proceeds 1.5 days, but the relative peak value of  $\text{Pb}(\text{SCN})_2$  become weaken after 3 days. Any of its original material could not be found from X-ray spectrogram after 6 days. The characteristic peaks were observed after 9 days lifetest, like after 6 days life test. Furthermore,  $\text{PbSO}_4$  diffraction peak and green material  $\text{Cr}_2\text{O}_3$  were also found when 9 days.

**Key words:** analytic chemistry; electric explosive initiator; powder; accelerated life test; X-ray diffraction analysis



### 《含能材料》第四届编委会第二次会议在厦门召开

在"2004年全国含能材料发展与应用学术研讨会"期间,《含能材料》编辑部于2004年11月17日在厦门组织召开了第四届编委会第二次会议,来自北京理工大学、南京理工大学、西安近代化学研究所、中北大学及中国工程物理研究院等单位的编委参加了会议。应编辑部邀请,经福谦院士、傅依备院士、徐志磊院士、孙承纬院士、孙颖主任、中国科协冯长根书记及中国兵工学会许毅达副理事长也出席了本次会议。

会议由本刊名誉主编董海山院士主持,黄辉主编代表期刊主办单位及编辑部欢迎各位编委老师的参会,舒远杰副主编就编辑部在新一届编委会领导下近两年工作情况向与会者作了报告并提出了今后工作设想。各位编委在认真听取编辑部工作报告的基础上展开了热烈的讨论,与会编委一致认为《含能材料》近两年来在采取由季刊改为双月刊、增加页码及拓宽刊登内容等一系列新举措后,载文量迅速上升,被EI收录率逐步增加,在各相关院校的影响和被认可程度得到提高,所取得的成绩是显著的,但与同类期刊相比还存在一定差距,尚需继续努力提高刊物的学术水平和编辑出版质量,才能促进期刊的良好发展,跻身于优秀期刊行列。

与会编委畅所欲言,对《含能材料》寄予了关怀和厚望,编辑部全体同志表示,一定不辜负大家的期望,尽快将所提建议进行整理,并进行落实。相信在各位编委的关心和支持下,在编辑部全体同志的努力下,《含能材料》一定会在不久的将来取得更大进步。(相关图片见彩页)