

论文

石英表面蚀刻保护涂料的制备及其性能

唐冬雁,吕祖顺,强亮生等

哈尔滨工业大学应用化学系 哈尔滨 150001

摘要:

采用聚苯乙烯(PS)和丁二烯与苯乙烯的嵌段共聚物(SBS)为成膜物,以硫酸钡、聚异丁烯为填料和改性剂,并加入偶联剂,获得有较强防腐能力的蚀刻用保护涂料并筛选出最佳工艺条件.在较高温度下,该涂料对饱和氟化氢、饱和氟化氢铵溶液等强腐蚀性介质有良好的化学稳定性,可用于玻璃、石英蚀刻中的表面防腐.

关键词: 蚀刻 保护涂料 聚苯乙烯 硫酸钡

PREPARATION AND PROPERTY OF PROTECTIVE COATING FOR QUARTZ SURFACE

DongyanTang

Abstract:

A kind of higher anticorrosion coating used for etching processes of quartz was prepared by selecting polystyrene(PS) and styrene-butylidene-styrene(SBS) as main membrane-forming materials,barium sulfate as filler and polyisobutene as modified agent.The affections of every component in the system were examined and discussed in detail.The optimal processing parameters were determined by orthogonal design based upon the basic experiments.The properties were determined by the process analogue to glass plate.The results indicated that,when the ratios of PS to SBS,of total amount of PS to SBS with polyisobutene and the amount of additives were 1:1, 5:1 and 2%mass%),respectively,the immersion ratio(mass/mass) was 63.9. Additionally,the obtained coating had relative high anticorrosion effect to strong acidic medium such as HF and NH_4HF_2 ,and showed a good prospect in application as protective coating for etching process of inorganic components.

Keywords: etching protective coating polystyrene barium sulfate

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通讯作者: 唐冬雁 Email: tangdy@0451.com

作者简介:

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