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《化学通报》网络版 2003 年第一期论文摘要**[w03001] Si₃N₄ 陶瓷的连接研究进展****The Development of Si₃N₄ Ceramic Joining Process**郑仕远 曹优明 胡德斌 陈健[#] (渝西学院化学与环境科学系 重庆永川 402168)([#] 清华大学材料科学与工程系 新型陶瓷与精细工艺国家重点实验室 北京 100084)

在系统介绍陶瓷与陶瓷、金属的连接方法基础上,重点评述了 Si₃N₄ 陶瓷的直接钎焊法和 Si₃N₄ 陶瓷的间接钎焊法的连接工艺进展及其存在的问题和解决的措施,同时对目前研究较少的 Si₃N₄ 陶瓷的玻璃焊法也进行了评述,并简介了 Si₃N₄ 陶瓷固相压力扩散焊法。

In this paper, a systematic description of joining techniques of ceramic to itself and with metal, especially the development of Si₃N₄ ceramic direct brazing method, Si₃N₄ ceramic indirect brazing method, as well as the existing problem and resolving method were introduced; in the meantime, Si₃N₄ ceramic solid phase pressure diffusion soldering method and the rarely studied joining technique of Si₃N₄ ceramic glass soldering method were also discussed.

[w03002] 手性金属络合物的立体选择性合成**Stereoselective Synthesis of Chiral Metal Complexes**

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手性金属络合物的立体选择性合成是一项重要且具有挑战性的课题。本文着重介绍几类手性多齿配体的设计合成及其对具有中心金属手性的八面体络合物立体选择性合成的手性诱导作用,概述了近年来手性金属络合物立体选择性合成的新进展。同时还涉及了手性金属络合物催化剂立体选择性合成的新课题。

The stereoselective synthesis of chiral metal complexes is important and challenging. In this article, an account on its new developments including the stereoselective synthesis of some chiral metal catalysts was briefly reviewed, especially focusing on the design and synthesis of the chiral polydentate ligands which are capable of inducing chirality at the metal centers in octahedral complexes.

[w03003] 微细化马铃薯淀粉颗粒的表面形态及分子链变化的研究**The Study on the Change of Micrograph and Molecular Chain of Micronized Potato Starch Particle**

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采用扫描电镜、凝胶色谱及化学分析技术等测试手段,探讨了马铃薯淀粉颗粒在用机械球磨微细粉碎过程中的粉碎模型及分子链变化的规律。结果表明,马铃薯淀粉的粉碎模型是体积粉碎模型和表面粉碎模型的叠加,但以体积粉碎模型为主。随着球磨时间的延长,机械力化学效应使淀粉中大分子数量不断减少,小分子数量不断增加,同时链淀粉含量不断增加。

Potato starch was mechanically ground by ball milling. The pulverization model and variation rules of molecular chain of starch in the process of ball milling were studied by SEM, GPC and chemical analysis technology, respectively. The results showed that the pulverized model of potato starch was a mixture of surface pulverized model and volume pulverized model, but mainly showed by the latter. The amount of large molecule decreased, small molecule increased with the lengthening of milled time, amylase content also increased under mechanochemical effect.

[w03004] 偶联剂汞代异烟酸-N-丁二酰亚胺酯的合成研究**Synthesis of N-Saccinimidyl-chlormercuriisonicotinazate**周继萌 罗雯[#] (四川大学原子核科学技术研究所 成都 610064 [#] 成都大学生物工程系 成都 610081)

用亲电取代法通过异烟酸与氧化汞直接反应,合成汞代吡啶羧酸再进行酯化,制得一种适合于各种蛋白质碘标记的偶联剂:氯化汞代异烟酸-N-丁二酰亚胺酯。用该试剂结合固相分离技术来建立一简便的标记抗体途径。其蛋白质标记率可达 40% ~ 60%。

By virtue of isonicotinic acid as precursor compound, N-saccinimidyl isonicotinazate has been synthesized through electrophilic reaction and then being esterified, one kind of conjugate reagent adapted to all kinds of protein can be obtained. Moreover, a quick and convenient way of labelling antibody has been established, combining this conjugate reagent with the technique of the fixed phase separation. The rate of its protein labelling thus can reach 40% ~ 60% averagely.