

Axially Dissymmetric Biaryls

4. A Facile Synthesis of Enantiomerically Pure 1,1'-Bis-2-naphthyl Alkyl Ethers

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Abstract

The O-alkylation of S(-)-1,1'-bis-2-naphthol [S(-)-1], or R(+)-1 with various alkyl halides in the presence of potassium fluoride hydrate was studied. It was found that mono-alkyl ether (3) was the major product, when S-1 or R-1 reacted with aliphatic monobromide or iodide in DMF at 100°C under neutral reaction conditions. A good to excellent yield of 3 was obtained when primary or secondary alkyl halide was used. No racemization was determined by the method of either optical rotation or proton nuclear magnetic resonance with chiral shift reagent. This synthetic method was also extended to methylene dihalide. When it reacted with S-1, for example, a cyclic ether S-5 was obtained in the yield of 84%.

Keywords 1,1'-Bi-2-naphthol, 1,1'-Bi-2-naphthyl alkyl ethers, Alkylation, Axially dissymmetric biaryls, Potassium fluoride

· 简讯 ·

新型发光塑料通过新产品技术鉴定

一种新型发光塑料——XYS-1型光致荧光塑料已于1986年12月通过广东省的新产品技术鉴定。这一产品是中山大学化学系与国家教委签订的稀土有机发光材料技术开发合同，由李源英、何宜、龚孟濂、李美球、王金英和杨燕生等研制，并与中山市塑料三厂共同进行工业扩试和进行小批量生产。该产品是从我国蕴藏丰富的稀土元素合成荧光剂再与某些塑料配合而成的。在近紫外线激发下，XYS-1型光致荧光塑料发射出鲜艳荧光，具有霓虹管的效果。经用户试用表明，用于招牌广告比霓虹管耗电减少80%以上，造价可以降低一半，而且二次加工方便，不易破损，可以大面积堆砌复杂的图案，并可用于宾馆、商场和娱乐场所的室内装饰及特种灯饰，具有较广阔的使用前景。这种新型发光塑料，经广东省科技情报所国际联机检索，国外尚未见专利与报导。

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