國立臺灣大學技術行銷表

台大案號:___06A-100518___(由產學合作中心填寫)

產學合作中心聯絡人: 電話: e-mail:

產品/技術名稱	具有高折射率之聚醯亞胺硫醚
發明人/單位	劉貴生、顏宏儒、陳文章/高分子科學與工程學研究所
產品/技術說明	本發明為高折射率之新穎聚醯亞胺硫醚,其係光學各向同性、透明且熱塑性之高分子。本發明之高分子易溶於各種有機溶劑且顯示高熱安定性、高玻璃轉移溫度,其亦顯示高的光折射率及超低雙折射率。
應用範圍	有機發光二極體(OLED)之封裝物
產品/技術優勢	依據本發明,可易於藉由 Michael 聚加成反應自各種雙馬來醯亞胺及二硫醇製備一系列熱塑性聚醯亞胺硫醚,且所獲得之聚合物顯示有用之熱加工範圍。本發明所獲得之聚醯亞胺硫醚在 323-353nm 範圍內之截取波長展現高光學透明度,且顯示高的折射率及 Abbe's 數且雙折射率最低亦可達到 0.0002。
市場潛力	本發明之聚醯亞胺硫醚聚合物為光學各向同性之熱塑性材料而展現充分平衡之光學性質,且由於在有機溶劑中之良好溶解度而可利用溶液澆鑄法、旋轉塗佈法、噴墨印刷法、射出模製法等簡便方法應用於光學應用中。
產品/技術智財權保護方式	(由產學合作中心填寫)
圖片	

Marketing Abstract of NTU's Invention Disclosure

NTU's docket no:_____(由產學合作中心填寫)

CIAC contact： Tel： e-mail：

Title	Polyimidethioethers Having High Refractive Index
Inventor (s)	Guey-Sheng Liou, Hung-Ju Yen, Wen-Chang Chen/ Institute of Polymer Science and Engineering
Brief Description	A series of novel optically isotropic, transparent, and thermoplastic polyimidothioethers (PITEs) with high refractive index were prepared *via* Michael polyaddition from commercially available bismaleimides and dithiols. These polymers were readily soluble in various organic solvents and showed useful thermal stability associated with high glass-transition temperatures. These PITEs also exhibit high refractive index and ultra-low birefringence.
Fields of Application	LEDs encapsulatio
Advantages	By this facile approaching, a series of thermoplastic PITEs could be readily prepared from the BMIs and dithiols *via* Michael polyaddition. The obtained polymers showed useful thermal processing window up to 190 °C. All the amorphous polymers exhibited high optical transparency with cutoff wavelength in the range of 323-353 nm, and revealed high refractive index and Abbe's numbers, in the range of 1.6763 to 1.6243 and 20.1 to 32.2, respectively. Moreover, the lowest birefringence of 0.0002 could also be achieved.
Market Potential	These novel optically isotropic thermoplastic PITEs exhibiting well-balanced optical properties are promising candidates for optical waveguide or encapsulant materials in advanced optical applications by both solution casting and injection molding techniques.
IP Right(s)	
Picture	