

## 國立台灣大學技術行銷表

台大案號: \_\_\_\_\_ (由產學組填寫)

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產品/技術名稱	摻鈦藍寶石晶體光纖
發明人/單位	許光裕, 鄭東祐, 廖奕涵, 黃升龍 / 光電工程學研究所
產品/技術說明	一種摻鈦藍寶石晶體光纖, 可作為寬頻光源、光纖雷射之增益介質, 具有低激發光源功率, 高效率之特性。
應用範圍	寬頻光源, 光纖雷射
產品/技術優勢	目前市場上之摻鈦藍寶石雷射, 皆使用塊材晶體作為增益介質, 動輒需要數瓦的激發光源。利用此晶體光纖, 可以降低激發光功率, 及提昇光學效率, 其應用包含製作光學同調斷層掃瞄術所需的寬頻光源, 或是可調式固態光纖雷射。目前國外研究團體, 尚無法做到此目標。
市場潛力	目前市面上尚未有相關之摻鈦藍寶石晶體光纖。此種晶體光纖, 可以降低激發光源所需要的功率, 進而縮小光纖寬頻光源或是光纖雷射的體積, 對於各種寬頻光源及可調式雷射的實用化, 可以有很大的幫助。
產品/技術 智財權保護方式	

## Marketing Abstract of NTU's Invention Disclosure

NTU's docket no: \_\_\_\_\_ (由技轉室填寫)

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<b>Title</b>	Ti:sapphire crystal fiber
<b>Inventor (s)</b>	Kuang-Yu Hsu, Dong-Yo Jheng, Yi-Han Liao, and Sheng-Lung Huang
<b>Brief Description</b>	A kind of crystal fiber, with its applications for broadband light sources and tunable lasers. The features include the reduced pump power and high optical efficiency.
<b>Fields of Application</b>	Broadband light source Tunable fiber laser
<b>Advantages</b>	The commercial Ti:sapphire lasers use bulk crystals as the gain media. The pump powers needed are typically several watts. By using the crystal fiber, the pump power can be reduced and the optical efficiency can be improved. The applications include the broadband light sources for optical coherence tomography, and tunable solid-state fiber lasers.
<b>Market Potential</b>	The Ti:sapphire crystal fiber is not commercially available so far. It is useful to reduce the pump power, and the size of the light source. Such improvements are very critical to the field applications of the broadband light sources and the tunable lasers.
<b>IP Right(s)</b>	(由技轉室填寫)