

**Molecular Material &
Biochemical Engineering
Laboratory**

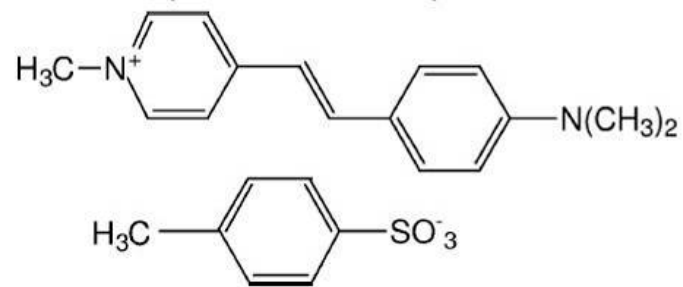
分子材料與生化工程實驗室

指導老師
余琬琴 教授

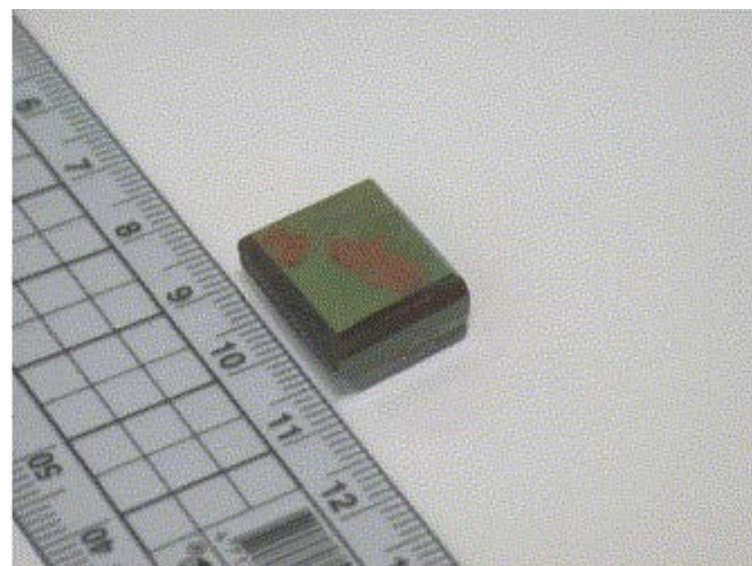
有機非線性光學單晶生長

DAST

4'-dimethylamino-N-methyl-4-stilbazolium tosylate



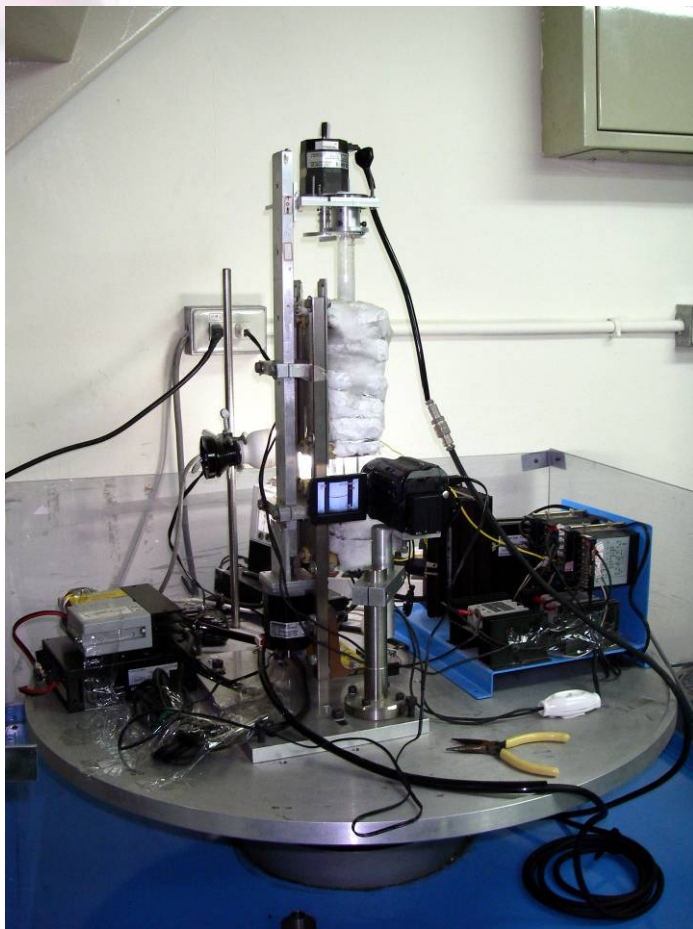
單晶生長系統



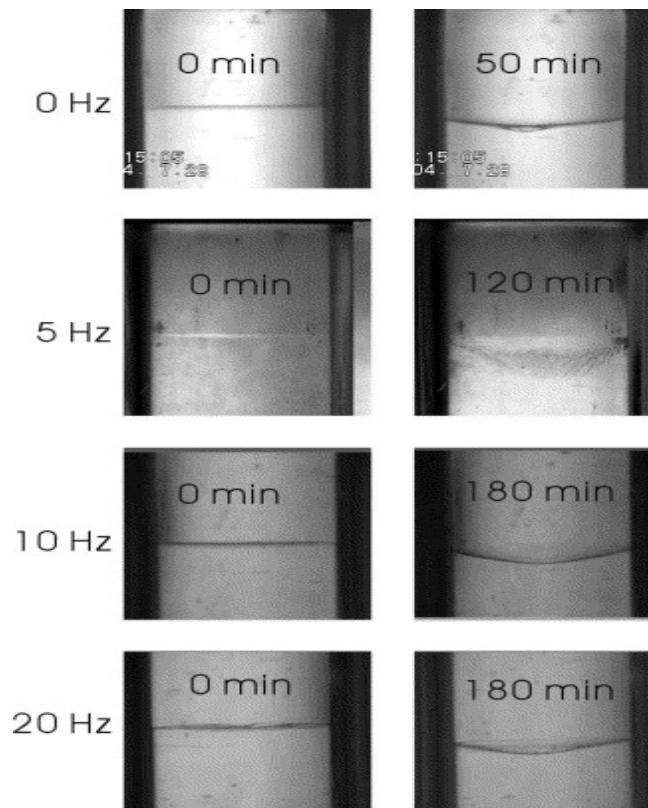
DAST 晶體



垂直凝固系統於旋轉振動場下 雙擴散流型態的研究

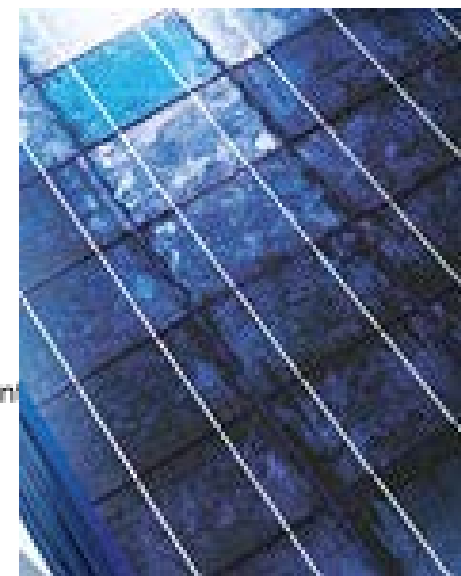
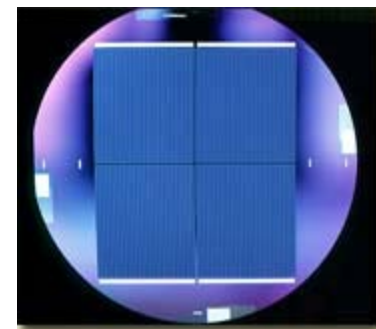
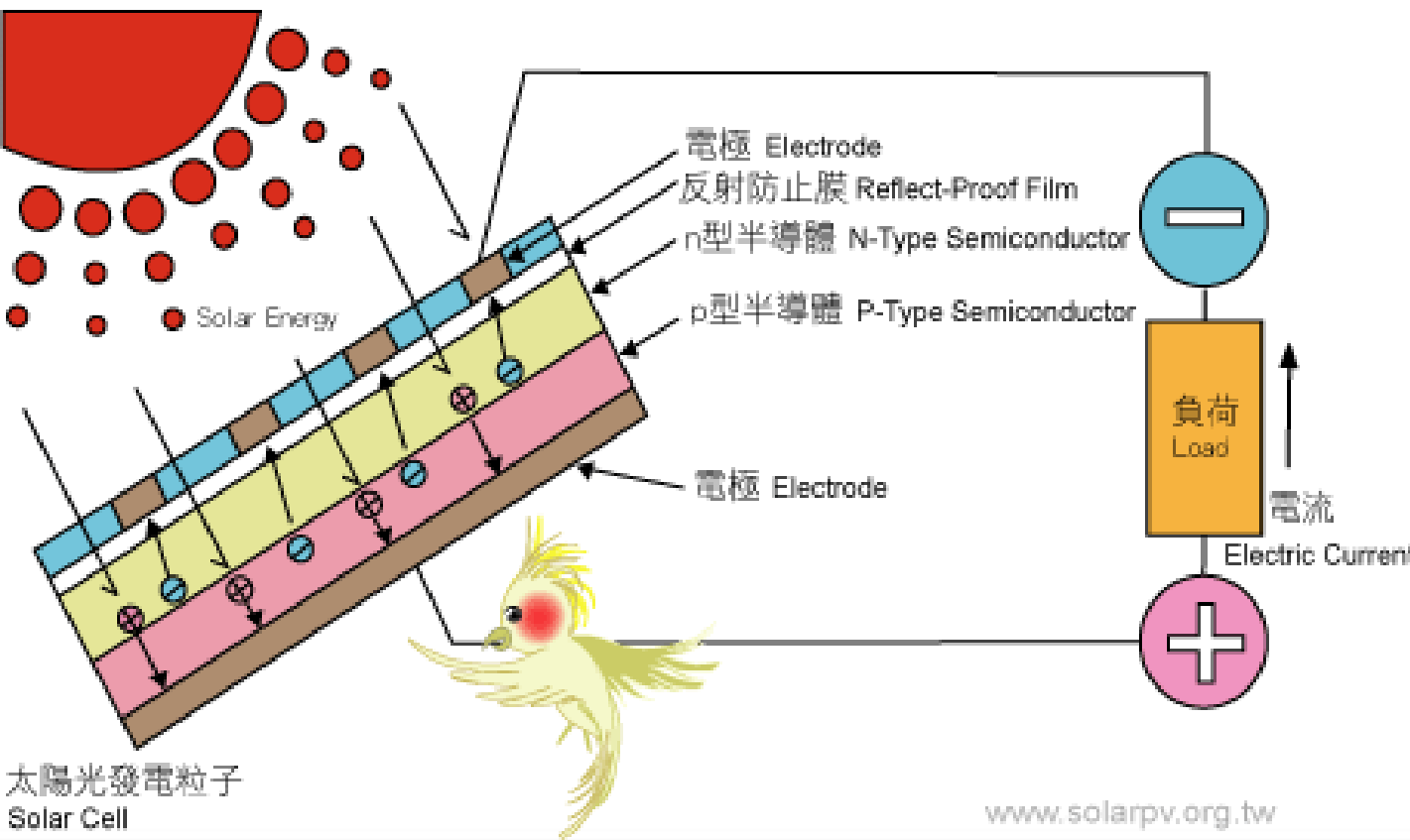


垂直固化旋轉震動系統



不同頻率對界面型態的影響

太陽能電池





生 化 工 程

動物細胞無血清培養製程開發 (財團法人生物技術開發中心)
生物質資源化之研究 (NSC 96-2623-7-129-002-ET)



HPLC



生物反應器



國際論文(SCI)

1. A.S. Haja Hameed, S. Rohani, W.C. Yu, C.Y. Tai and C.W. Lan, Growth and characterization of a new chelating agent added 4-dimethylamino-N-methyl-4-stilbazolium tosylate (DAST) single crystals, *Mater. Chem. Phys.* 102(2007)60
2. W.C. Yu, Z.B. Chen, W.T. Hsu, B. Roux, T.P. Lyubimova and C.W. Lan, Effects of angular vibration on the flow, segregation, and interface morphology in vertical Bridgman crystal growth, *Int. J. Heat Mass Transf.* 50 (2007)58
3. A.S. Haja Hameed, S. Rohani, W.C. Yu, C.Y. Tai and C.W. Lan, Surface defects and mechanical hardness of rapidly grown DAST crystals, *J. Cryst. Growth* 297(2006)146
4. Y.C. Liu, W.C. Yu, B. Roux, T.P. Lyubimova and C.W. Lan, Thermal-solutal flows and segregation and their control by angular vibration in vertical Bridgman crystal growth, *Chem. Eng. Sci.* 61(2006)7766



國際論文(SCI)

5. A.S. Haja Hameed, W.C. Yu, C.Y. Tai and C.W. Lan, Effect of sodium toluene sulfonate on the nucleation, growth and characterization of DAST single crystals, *J. Cryst. Growth* 292(2006)510
6. A.S. Haja Hameed, W.C. Yu, Z.B. Chen, C.Y. Tai and C.W. Lan, An investigation on the growth and characterization of DAST crystals grown by two zone growth technique, *J. Cryst. Growth* 282(2005)117
7. W.C. Yu, Z.B. Chen, W.T. Hue, B. Roux, T.P. Lyubimova and C.W. Lan, Reversing radial segregation and suppressing morphological instability during Bridgman crystal growth by angular vibration, *J. Cryst. Growth* 271(2004)474