

Study of Piezoelectric Droplet Generator and Micro-Droplet Impacting on Surfaces

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ABSTRACT

In this paper, we present the property of Piezoelectric Droplet Generator and testing. The first aims at the design of Piezoelectric Droplet Generator. By the finite element software, ANSYS, analysis and reality testing to fabrication a vintage Piezoelectric Droplet Generator. We observe the micro droplet size by CCD camera. To investigate the reason of micro droplet size changes. The results will be verified by experiments and finite element ANSYS modal analysis. We could understand different resonant modes property of the PZT actuator. And choose different viscosity of liquid to observe. Then, we observe the results of micro droplet impacting on hydrophobic and hydrophilic using a high-speed CCD camera.

Keywords : Piezoelectric ; Actuator ; Micro-Droplet Generator

Table of Contents

目錄 封面內頁 簽名頁 授權書.....	iii	中文摘要.....	iv	英文摘要.....	v
誌謝.....	vi	目錄.....	vii	圖目錄.....	x
表目.....	xv	第一章 緒論.....	1	1.1 前言.....	1
1.1.2 研究背景與動機.....	1	1.3 文獻回顧.....	2	1.3.1 噴墨列印技術.....	2
1.3.2 國外目前研究情形.....	6	1.3.3 國內目前研究情形.....	10	第二章 壓電式微奈米液滴產生器設計與製作.....	15
2.1 壓電式微奈米液滴產生器設計.....	15	2.1.1 最佳化設計.....	15	2.2 圓環型壓電致動器製作.....	19
2.3 噴嘴振動片製作.....	21	2.3.1 光罩設計.....	22	2.3.2 黃光製程.....	23
2.3.3 電鑄製程.....	25	2.4 壓電式微奈米液滴產生器組裝製作.....	28	第三章 實驗設備與方法.....	30
3.1 液滴觀測系統.....	30	3.1.1 CCD.....	30	3.1.2 放大鏡組.....	31
3.1.3 LED閃頻裝置.....	31	3.2 液滴撞擊系統.....	32	3.2.1 高速CCD.....	33
3.2.2 輔助光源.....	34	3.3 影像操作及處理系統.....	35	3.4 實驗方法與步驟.....	38
3.4.1 液體選用及測量.....	38	3.4.2 微奈米液滴產生方式.....	40	3.4.3 基材.....	43
3.4.4 液滴觀測實驗.....	44	3.4.5 液滴撞擊實驗.....	46	第四章 實驗結果與討論.....	48
4.1 液滴觀測.....	48	4.1.1 空中液滴觀測.....	48	4.1.2 載液觀測.....	52
4.1.3 液滴觀測實驗討論.....	53	4.2 液滴觀測之不同黏度液體比較.....	63	4.2.1 液滴撞擊討論.....	64
4.3 液滴撞擊.....	65	4.3.1 液滴撞擊討論.....	66	第五章 結論與未來展望.....	69
5.1 結論.....	69	參考文獻.....	70		

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