

STUDY OF THERMAL-MAGNETIC DRIVING FOR NEXT-GENERATION INKJET

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Abstract: In this paper, the authors proposed a novel type of inkjet where the ink is driving by maxwell stress employing the characteristic of thermalmagnetic. Different with the traditional inkjet technology like the piezo-vibration driving type or bubble driving type, in the proposed approach the moving elements or high temperature is absolutely unnecessary and having simple structure, so that high durability and reliability is promising with small size and strong pumping force. The working mechanism of the proposed method was explained and demonstrated by analysis and experiment.

Index terms: inkjet, thermalmagnetic, magnetic fluid, functional ink, direct drawing, wiring, micro pattern, coating film, environment, energy saving.