

The fabrication of microelectrode array biochip on PET using plate-to-plate NIL

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ABSTRACT

Polyethylene terephthalate (PET) films are useful for various applications due to the characterization of PET were flexibility, thermal resistance and chemical resistant. PET Films are widely used in both commercial and industrial today since they are highly demand in the market. In this study, microelectrode array biochip was fabricated on flexible PET film using (plate-to-plate) nanoimprint lithography (NIL). The PET films acted as substrate while PDMS as the mould. The Polydimethylsiloxane (PDMS) mould was attached on top of the PET film and additionally clamped between two pieces of glass. A mild force was applied to it for REM (replica moulding). A study was carried out upon the surface profiling of the PDMS mould and PET to monitor the possibility of deformation after applying force upon the samples. The experiment shall present the finding of required force to REM the microelectrode array biochip pattern on the PET film.

KEYWORDS

NIL; PDMS; PET

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