

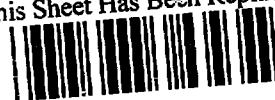
ATOMIC BEAM ALIGNMENT OF LIQUID CRYSTALS

ABSTRACT

We have found that liquid crystals can be aligned on a polyimide surface exposed to a low energy and neutral Argon ion beam (52). The energy of the incident ions were varied between 75 and 500 eV, the integrated current density from $100\mu\text{A}/\text{cm}^2$ to $500\text{mA}/\text{cm}^2$, and the angle of incidence over which alignment was measured was between 10 and 80 degrees. The pretilt angle (60) of the liquid crystals (58) could be varied between 0 and 8 degrees, by controlling the processing conditions. Degradation of the polyimide, which leads to charge migration, can be avoided by operating at low accelerating voltages.

Fig. 6.

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