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(54) **METHOD OF MAKING INFORMATION STORAGE DEVICES BY MOLECULAR PHOTOLITHOGRAPHY**

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(58) **Field of Classification Search** 430/311, 430/394, 966, 942, 944; 365/151, 153, 106
See application file for complete search history.

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(57) **ABSTRACT**

A photolithographic method of making an information storage device having different storage characteristics at a plurality of discrete memory locations thereon, comprises the steps of: (a) providing a substrate having a surface portion, said surface portion having a linking group coupled thereto or charge storage group coupled thereto, said linking group or charge storage group having a photocleavable protecting group thereon; (b) exposing at least one first discrete segment of said surface portion to radiant energy sufficient to cleave said protecting group from said linking group or charge storage group and generate a deprotected group, so that said group is deprotected in at least one first discrete memory location and preferably said group remains protected in at least one second discrete memory location. Additional groups are then coupled to the deprotected group as desired. Products produced by such methods are also described.

22 Claims, 6 Drawing Sheets