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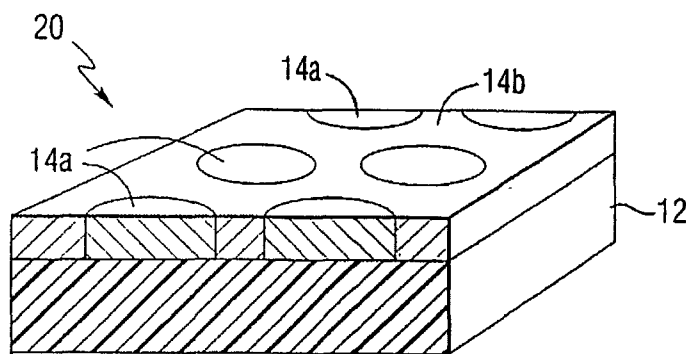
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(54) Title: MAGNETIC FILMS HAVING MAGNETIC AND NON-MAGNETIC REGIONS AND METHOD OF PRODUCING SUCH FILMS BY ION IRRADIATION



(57) Abstract: Magnetic films (14) having magnetic regions (14a) and non-magnetic regions (14b) are disclosed. The film (14) is subjected to ion irradiation in order to produce chemically disordered regions in the film. The irradiated disordered regions may correspond to the non-magnetic regions of the film (14). Alternatively, the irradiated disordered regions may correspond to the magnetic regions of the film (14). In one embodiment, portions of a magnetic CrPt₃ film (14) are converted to non-magnetic regions (14b) by irradiating the regions with boron ions which disorder the CrPt₃ film in the treated regions. The film (14) may be patterned into magnetic regions (14a) and

non-magnetic regions (14b) for applications such as magnetic recording media in computer disc drive systems.



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