

MAGNETIC LAYERING FOR BIT-PATTERNED MEDIA

ABSTRACT

A perpendicular magnetic recording layer of a magnetic recording medium includes a plurality of bit-patterned magnetic islands, wherein each of the plurality of islands overlay a soft magnetic under-layer. Each of the magnetic islands includes a first magnetic sub-layer adjacent a second magnetic sub-layer, wherein the first sub-layer has a relatively high magnetic anisotropy that is greater than a magnetic anisotropy of the second sub-layer. The magnetic recording layer further includes a third sub-layer, which extends to connect each of the plurality of islands. The third sub-layer may have a magnetic anisotropy that is less than that of the second sub-layer of each of the magnetic islands and/or may serve as an interlayer, extending between the first sub-layer and the soft magnetic under-layer of the recording medium, and having a structure to help to produce the greater anisotropy first magnetic sub-layer.

FIGURE 5