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(54) Title: MAGNETO-OPTICAL SWITCHING DEVICE AND METHOD FOR SWITCHING A MAGNETIZABLE MEDIUM

(57) Abstract: The invention relates to a magneto-optical switching device for switching magnetization in a medium, comprising a magnetizable medium. According to the invention, a radiation system suited for imparting angular momentum to the magnetic spin system of said magnetizable medium, so as to selectively orient the magnetization of said medium. In addition, the invention relates to a method of switching a magnetizable medium, comprising providing a magnetizable medium; providing a radiation beam of a selectively chosen angular momentum; and targeting said radiation beam to said medium so as to transfer said angular momentum to a magnetic spin system of said magnetizable medium. Accordingly, spin states in magnetic materials can be manipulated using radiation of a suitable angular momentum. An effective magnetic field is generated for orienting the magnetization of the domains and can simultaneously be used to locally heat the material.