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(54) Title: METHODS OF PREPARING HIGH ORIENTATION NANOPARTICLE-CONTAINING SHEETS AND FILMS USING IONIC LIQUIDS, AND THE SHEETS AND FILMS PRODUCED THEREBY

(57) Abstract: A method is provided for the preparation of nanomaterials, which involves the dissolution and/or suspension of a combination of (a) one or more resin substrate materials and (b) one or more magnetic nanoparticulate substances, in a medium made from one or more ionic liquids, to provide a mixture, and recovering the solid nanomaterial by combining the mixture with a non-solvent (solvent for the ionic liquids but not the other components), while also applying an electromagnetic field to the mixture during the recovering step to align the magnetic nanoparticulate substances, along with the use of the resulting nanomaterials to provide unique information storage media, particularly in the form of sheets or films.



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