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(54) Title: FILM, MID INFRARED DETECTION SYSTEM, METHODS OF FORMING AND OPERATING THE SAME

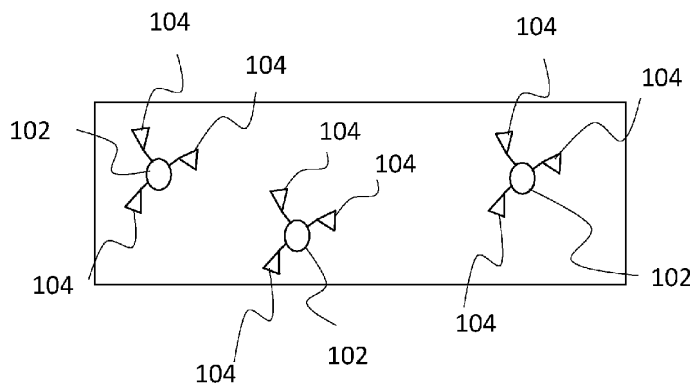


FIG. 1

(57) Abstract: Various embodiments may relate to a film. The film may include one or more types of nanostructures. The film may also include one or more types of ligands bonded to the one or more types of nanostructures. The one or more types of nanostructures may include neodymium (Nd) and ytterbium (Yb). A ratio of a molar concentration of neodymium (Nd) to a molar concentration of ytterbium (Yb) may be more than 1 : 1.

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