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(54) Title: REACTOR AND METHOD FOR DEPOSITING ATOMIC LAYERS AND FOR FABRICATING FRESNEL ZONE
PLATES

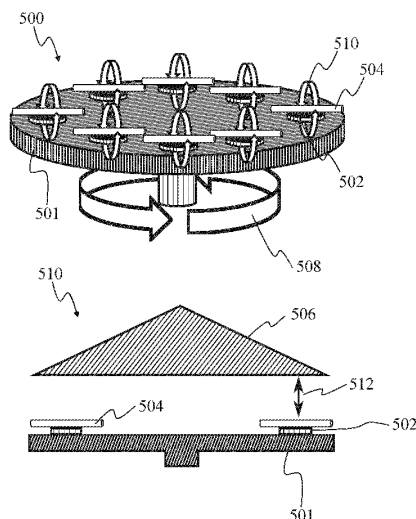


Fig. 5

(57) Abstract: The present invention relates to a reactor and to a method for depositing one or more atomic layers of at least one material onto a substrate. The reactor comprises a reaction chamber accommodating a showerhead, a base stage and at least one substrate holder. The showerhead comprises at least one gas outlet that is configured for providing a gas stream of the at least material or of at least one component of the at least one material. The base stage is rotatable around a base stage rotation axis. The at least one substrate holder is arranged on the base stage and configured for rotating the substrate around a substrate rotation axis. In particular, the substrate holder is configured for rotating the substrate around a substrate rotation axis in such a way that the base stage rotation axis and the substrate rotation axis are inclined with respect to each other. The present invention also relates to an X-ray microscope for producing a magnified image of an object using X-rays.

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