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(54) **Title:** SCANNING SCATTEROMETRY OVERLAY METROLOGY

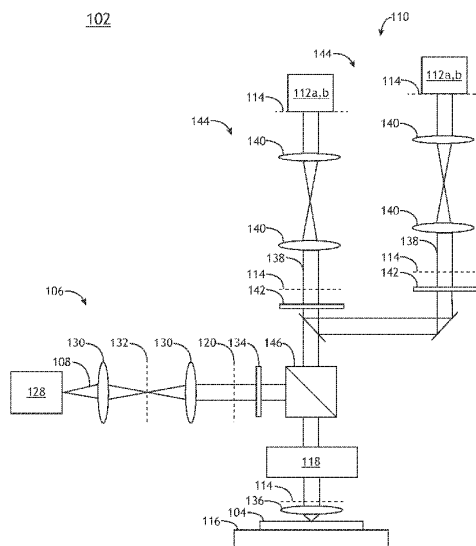


FIG. 1B

(57) **Abstract:** An overlay metrology system may include an illumination source to generate an illumination beam, one or more illumination optics to direct the illumination beam to an overlay target on a sample as the sample is scanned relative to the illumination beam along a scan direction, the target including one or more cells having Moiré structures. The system may also include two photodetectors at locations of a pupil plane associated with Moiré or overlapping diffraction orders from the Moiré structures. The system may then generate overlay measurements based on time-varying interference signals captured by the detector as the sample is scanned.

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