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(54) Title: CYLINDRIC DECOMPOSITION FOR EFFICIENT MITIGATION OF SUBSTRATE DEFORMATION WITH FILM DEPOSITION AND ION IMPLANTATION

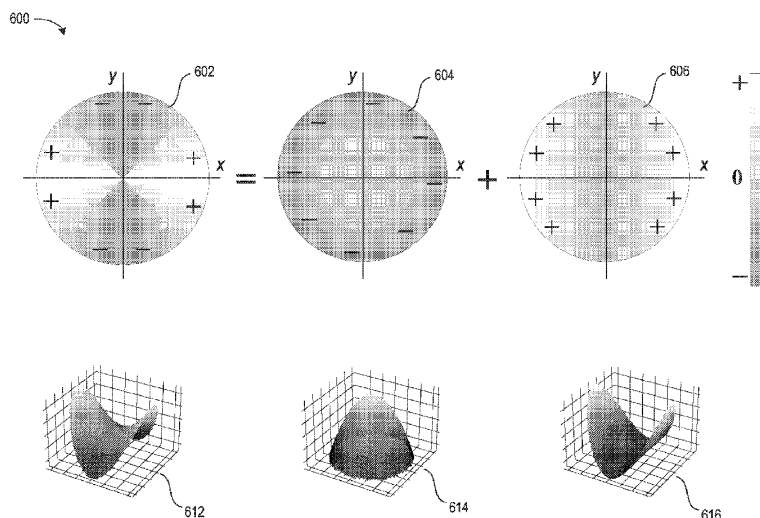


FIG. 6A

(57) Abstract: Disclosed systems and techniques are directed to correct an out-of-plane deformation (OPD) of a substrate. The techniques include obtaining, using optical inspection data, an OPD profile of the substrate and obtaining a polynomial representation of the OPD profile to determine a plurality of polynomial coefficients characterizing respective elemental deformation shapes of the substrate. The techniques further include identifying one or more cylindric decompositions of a quadratic part of the OPD profile and computing, using a selected cylindric decomposition of the one or more cylindric decompositions, one or more characteristics of a stress-compensation layer (SCL) for the substrate. The techniques further include causing the SCL to be deposited on the substrate and the SCL to be exposed to a stress-mitigation beam.

[Continued on next page]

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