Abstract

A data-driven misregistration parameter configuration and measurement system and method including simulating a plurality of measurement simulations of at least one multilayered semiconductor device, selected from a batch of multilayered semiconductor devices intended to be identical, using ~~a plurality of~~ sets of measurement parameter configurations, ~~thereby~~ generating simulation data for the ~~at least one multilayered semiconductor~~ device, identifying ~~at least one set of~~ recommended measurement parameter configurations~~,~~ ~~which is~~ selected from the ~~plurality of~~ sets of measurement parameter configurations, providing a multilayered semiconductor device selected from the batch ~~of multilayered semiconductor devices~~, providing the at least one recommended set of measurement parameter configurations to a misregistration metrology tool having multiple possible sets of measurement parameter configurations, measuring at least one multilayered semiconductor device, selected from the batch ~~of multilayered semiconductor devices intended to be identical~~, using the ~~at least one~~ recommended set ~~of measurement parameter configurations~~, thereby generating measurement data for the ~~at least one multilayered semiconductor~~ device, thereafter identifying a final recommended set of measurement parameter configurations and measuring misregistration of at least one multilayered semiconductor device, selected from the batch ~~of multilayered semiconductor devices intended to be identical~~, using the final recommended set ~~of measurement parameter configurations.~~.