

Title (en)

METHOD AND DEVICE FOR OPTICALLY MONITORING PROCESSES FOR MANUFACTURING MICROSTRUCTURED SURFACES IN THE PRODUCTION OF SEMICONDUCTORS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR OPTISCHEN KONTROLLE VON FERTIGUNGSPROZESSEN FEINSTRUKTURIERTER OBERFLÄCHEN IN DER HALBLEITERFERTIGUNG

Title (fr)

DISPOSITIF ET PROCEDE DE CONTROLE OPTIQUE DE PROCESSUS DE FABRICATION DE SURFACES MICROSTRUCTUREES DANS LA PRODUCTION DE SEMI-CONDUCTEURS

Publication

EP 1145303 A1 20011017 (DE)

Application

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Priority

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Abstract (en)

[origin: US2002051564A1] A method for monitoring fabrication processes of finely structured surfaces in a semiconductor fabrication includes the steps of providing reference signatures of finely structured surfaces, measuring at least one signature of a test specimen surface, comparing the measured signature with the reference signatures, and classifying the test specimen surface by using the comparison results, wherein the measurement of the reference signatures is carried out by measuring the local distribution and/or intensity distribution of diffraction images on production prototypes having a specified quality. The classification is preferably carried out here with a neural network having a learning capability and/or a fuzzy logic. Furthermore, a device for carrying out the method is provided.

IPC 1-7

H01L 21/66; **G01N 21/47**

IPC 8 full level

G01R 31/302 (2006.01); **G01N 21/21** (2006.01); **G03F 7/20** (2006.01); **H01L 21/66** (2006.01); **H01L 23/544** (2006.01)

CPC (source: EP US)

G01N 21/21 (2013.01 - EP US); **G03F 7/70491** (2013.01 - EP US); **G03F 7/70616** (2013.01 - EP US); **H01L 22/34** (2013.01 - EP US); **H01L 22/12** (2013.01 - EP US)

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