Title (en)

METHOD FOR PROCESSING A MEASURING PROBE FOR DETECTING SURFACE PROPERTIES OR FOR MODIFYING SURFACE STRUCTURES IN THE SUB-MICROMETER RANGE, AND MEASURING PROBE

Title (de)

VERFAHREN ZUR BEARBEITUNG EINER MESSSONDE ZUR ERFASSUNG VON OBERFLÄCHENEIGENSCHAFTEN ODER ZUR MODIFIKATION VON OBERFLÄCHENSTRUKTUREN IM SUB-MIKROMETERBEREICH SOWIE MESSSONDE

Title (fr)

PROCÉDÉ DE TRAITEMENT D'UNE SONDE DE MESURE DESTINÉE À DÉTECTER DES PROPRIÉTÉS DE SURFACE OU À MODIFIER DES STRUCTURES DE SURFACE DE L'ORDRE DU SOUS-MICRON ET SONDE DE MESURE

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Abstract (en)

[origin: WO2023001920A1] The invention relates to a method for processing a measuring probe which is provided to detect surface properties or modify surface structures in the sub-micrometer range. The method according to the invention comprises at least the following steps: Initially providing: a precursor which contains molecules that are polymerizable by light beams or electron beams; and a measuring probe at least comprising a holder with a tip with an upper end opposite the holder; and a light source or electron source for emitting light beams or electron beams at a wavelength and intensity satisfying a minimally required energy input for a polymerization of the precursor; and means for variably positioning the light source or electron source; and a control file and an electronic data processing device, with the control file describing at least a portion of the surface of the measuring probe and serving to control a change in position of the light source or electron source. In the subsequent step, the measuring probe is covered by the precursor and the measuring probe is arranged in the beam path of the light beams or electron beams, whereupon the precursor is exposed to the light beam or electron beam at a plurality of contacting positions, as specified in the control file, with the tip of the measuring probe being left out. Subsequently, the non-exposed regions of the precursor are removed by means of a water or solvent bath or a controlled air or gas flow, and optionally finally developing the regions polymerized by exposure. Furthermore, the invention comprises measuring probes that are manufactured by the method according to the invention.

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