

Title (en)

METHOD AND DEVICE FOR APPLYING AN ELECTRICALLY CONDUCTIVE TRANSPARENT COATING TO A SUBSTRATE

Title (de)

VERFAHREN UND VORRICHTUNG ZUM AUFBRINGEN EINER ELEKTRISCHEN LEITFÄHIGEN TRANSPARENTEN BESCHICHTUNG AUF EIN SUBSTRAT

Title (fr)

PROCEDE ET DISPOSITIF POUR DEPOSER UN REVETEMENT TRANSPARENT ELECTROCONDUCTEUR SUR UN SUBSTRAT

Publication

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Application

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Abstract (en)

[origin: WO2006029743A1] The invention relates to a plasma impulse CVD method (PICVD method) for applying an electrically conductive transparent coating or a TCO coating to a substrate in the plasma chamber of a reactor into which microwave pulses of suitable intensity and pulse duration are injected via a microwave injection device in order to generate a plasma. The formation of an electrically conductive coating on the microwave injection device is specifically suppressed by means of a protective device since otherwise the plasma intensity would be reduced by an increasing attenuation of microwave transmission, thereby eventually preventing plasma formation. The protective device used to suppress layer formation can, for example, be a microwave-permeable covering, masking or separating device between the plasma chamber and the microwave injection device, for example, a film or an adhesive tape which is optionally cleaned or replaced in certain intervals. The substrate as such can also be used as the covering or separating device. Undesired formation of layers can also be effectively suppressed by controlling the gas composition inside the plasma chamber. The microwave injection device and/or the protective device can be cooled down to a temperature level at which a coating is deposited which substantially does not impede microwave transmission and which is electrically non-conductive or poorly conductive. The invention also relates to a PICVD reactor for carrying out the inventive method.

IPC 8 full level

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