

Title (en)
METHOD FOR COATING SUBSTRATES WITH AT LEAST ONE MONOLAYER OF SELF-ASSEMBLING PROTEINS

Title (de)
VERFAHREN ZUR BESCHICHTUNG VON SUBSTRATEN MIT MINDESTENS EINER MONOLAGE SELBSTASSEMBLIERENDER PROTEINE

Title (fr)
PROCÉDÉS DE REVÊTEMENT DE SUBSTRATS PAR AU MOINS UNE MONOCOUCHE DE PROTÉINES CAPABLES D'AUTOASSEMBLAGE

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Abstract (en)
[origin: WO2013026919A1] The invention relates to methods for coating a substrate with at least one monolayer of self-assembling proteins, using stabilized aqueous solutions with self-assembling proteins, and also to substrates obtainable as a result. Methods for stabilizing solutions with self-assembling proteins, and the stabilized solutions obtainable therefrom, are likewise provided by the invention. According to the coating method, at least one monolayer of a self-assembling protein is produced on a substrate by first providing a stabilized aqueous solution which comprises at least one self-assembling protein. To provide the coating solution, protein units aggregated from an aqueous solution of self-assembling proteins are separated off, and addition of a solution of ionic surfactants and/or of a salt-containing and/or alkaline and/or acidic solution to the protein-containing coating solution generates monomers or oligomers of the self-assembling proteins, and stabilizes them, the amount of ionic surfactant added being such that only the surface-active part of each active protein monomer or predominant protein oligomer is enveloped by surfactant particles. A substrate surface is then brought into contact with the stabilized, protein-containing solution, thus producing a protein-containing coating on the substrate. The supernatant solution is removed from the coated substrate and/or the coated substrate is dried.

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Citation (search report)
See references of WO 2013026919A1

Citation (examination)
ZHANG X L ET AL: "Adsorption behavior of hydrophobin and hydrophobin/surfactant mixtures at the solid-solution interface", LANGMUIR 20110906 AMERICAN CHEMICAL SOCIETY USA, vol. 27, no. 17, 6 September 2011 (2011-09-06), pages 10464 - 10474, XP002689982, DOI: 10.1021/LA201711P

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