

Title (en)

METHOD FOR PRODUCING TWO-DIMENSIONAL SANDWICH NANO-MATERIALS ON THE BASIS OF GRAPHENE

Title (de)

VERFAHREN ZUR HERSTELLUNG VON ZWEIDIMENSIONALEN SANDWICH-NANOMATERIALIEN AUF BASIS VON GRAPHEN

Title (fr)

PROCÉDÉ DE PRODUCTION DE NANOMATÉRIAUX EN SANDWICH BIDIMENSIONNELS À BASE DE GRAPHÈNE

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Application

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Abstract (en)

[origin: WO2011131722A1] The invention relates to a method for producing two-dimensional nano-materials, comprising the following steps: (a) providing (a1) a mixture containing graphene oxide particles, water and at least one cationic surfactant and/or non-ionic surfactant or (a2) a mixture containing graphene particles, at least one solvent that can be used for chemically splitting graphite, and at least one cationic surfactant and/or non-ionic surfactant, (b) adding at least one sol precursor compound to the mixture from step (a), (c) allowing the mixture from step (b) to react in a sol-gel process forming gel from the at least one sol precursor compound on the graphene oxide particles or the graphene particles, (d) removing the at least one surfactant and (e) optionally heating the graphene oxide particles coated with gel for at least 1 minute to at least 500°C in an inert gas atmosphere in order to reduce the graphene oxide to graphene.

IPC 8 full level

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