CLAIMS

1. Method for separating a layer from a composite structure (125), the said composite structure comprising a composite stack formed from at least:

- a support substrate (105) formed from a material which is at least partially transparent at a determined wavelength;
- the layer (115) to be separated; and
- a separation layer (110) interposed between the support substrate and the layer to be separated, the method comprising irradiation of the separation layer through the support substrate by means of at least one incident light ray (122a, 124a) at the said determined wavelength in order to induce weakening or separation by exfoliation of the separation layer,

the method being characterized in that the said incident light ray is inclined so as to form an angle of incidence θ such that $\theta > \theta_{min}$, $\theta \leq \theta_{max}$ and $\theta_{min} < \theta_{max}$, wherein

$$\theta_{min} = \sin^{-1}\left(\left(n_1/n_0\right)\sin\left(\tan^{-1}\left(S/2h\right)\right)\right) \text{ and}$$
$$\theta_{max} = \tan^{-1}\left(n_1/n_0\right),$$

in which n1 and n0 are respectively the refractive index of the support substrate (105) and the refractive index of the external medium (130) in contact with the support substrate, from which the said ray comes, S being the width of the said ray and h being the thickness of the support substrate.

2. Separation method according to Claim 1, wherein the support substrate consists of silicon and the separation layer consists of silicon dioxide.

CLAIMS

1. A method for reducing optical interference when separating a layer from a composite structure, the composite structure comprising a composite stack formed from at least a support substrate formed from a material which is at least partially transparent at a determined wavelength, the layer to be separated, and a separation layer interposed between the support substrate and the layer to be separated, the method comprising:

irradiating the separation layer through the support substrate by means of at least one incident light ray at the determined wavelength;

wherein the incident light ray is inclined at an angle of incidence θ relative to a surface of the support substrate, with θ greater than θ_{min} and less than or equal to θ_{max},

wherein

$$\theta_{min} = \sin^{-1}\left(\left({}^{n_1}/_{n_0}\right)\sin\left(\tan^{-1}\left({}^{S}/_{2h}\right)\right)\right) \text{ and}$$

$$\theta_{max} = \tan^{-1}\left({}^{n_1}/_{n_0}\right),$$

wherein n1 and n0 are respectively a refractive index of the support substrate (105) and a refractive index of an external medium in contact with the support substrate from which the ray comes,

S is the width of the ray, and

h is the thickness of the support substrate.

2. The separation method according to Claim 1, wherein the support substrate consists of silicon and the separation layer consists of silicon dioxide.