

## **Planar texture developed in plasma treated polypropylene films**

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Plasma modification of polymer surfaces has a great interest in many application fields like painting, adhesion, biomaterials, electronics... Until now, this technique may be considered as a green method as no solvent is necessary, rapid as in few minutes the treatment is achieved and universal since with the apparatus, hydrophilic or hydrophobic surfaces can be obtained. One of the most important claims of the technique is that this modification affects only few layers of the materials. However with polymers, this assumption must be carefully verified.

The QTA analysis of plasma-treated polypropylene films revealed the stabilisation of a planar texture with the long axis at random but in the plane of the treated films. This texture development is associated to the crystallisation of the polypropylene film under plasma irradiation, and to the increase of the crystallite sizes, as seen from the x-ray peak profiles.

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