

# PLASMA TECHNIQUES IN POLYMERIC TREATMENT FOR MEMBRANE APPLICATIONS: A REVIEW

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## **Abstract**

Polymers are the most often applicable materials in biomedicine. Technical developments require materials with specific surface properties. Low temperature plasma treatment is a method that competes with a classic physical or chemical treatment due to its time saving, economy. It also ensures modification of very thin surfaces of materials without any changes in bulk properties.

The article describes plasma techniques that modify materials which are used as substrates for proteins immobilisation, cellular or tissue cultures and materials which are exploited to produce artificial organs. Author focused on the popular polymers: polyarylosulfones, polyurethanes and polyacrylonitrile and its modification to various application: artificial organs, cellular and tissue cultures, bioreactors, biosensors and medicine dosage. The paper also provides the description of some technical solutions concerning plasma reactors with both vacuuous and atmospheric pressure.

**Keywords:** low temperature plasma surface modification, plasma generator, membrane's modifications, plasma treatment