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Title: Evaluation of mechanism of non-thermal plasma effect on the surface of polypropylene films for enhancement of adhesive and hemo compatible properties

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## ACCEPTED MANUSCRIPT

## **Research Highlights**

- Investigated the mechanism of effect of various gaseous plasma treatments on the surface properties of Polypropylene (PP) films.
- The improvement in surface energy is basically due to the incorporation of polar functional groups onto the PP films.
- The extent of surface modification and hydrophobic recovery depends upon the type of plasma forming gas.
- Due to the significant morphological and chemical changes induced by the gaseous plasma treatment, improved the blood compatibility as well as adhesive strength of the PP films.

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