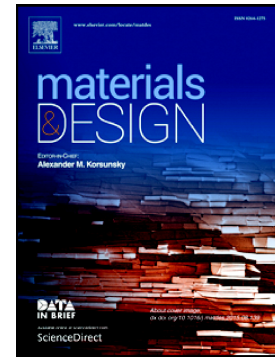


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## **Fabrication of Hydrophilic and Oil-Repellent Surface via CF<sub>4</sub> Plasma Treatment**

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### **Abstract:**

Special wetting surface with hydrophilic and oil-repellent characteristic is successfully prepared by treating hydrophilic PEGylated surface with CF<sub>4</sub> plasma. Wettability and structure of the modified PEGylated polymer surfaces are investigated by contact angle (CA) measurements and X-ray photoelectron spectroscopy (XPS). The results of contact angle measurements show that water CA and hexadecane CA have different dependences with CF<sub>4</sub> plasma treating time. After a 5 min treatment with CF<sub>4</sub> plasma, the difference between water and oil CA reaches a maximum value on the modified PEGylated surface, wherein water and oil CA is 30.7° and 60.7°, respectively. We believe the technique can be further used for construction of textiles with anti-contamination and easy-decontamination properties.

**Keywords:** *CF<sub>4</sub> plasma; Hydrophilic; Oil-repellent*

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