

Preparation of substrates

Pellets of PE and PET were purchased from Scientific Polymer Products, Inc., USA. A polymer plate with a thickness of 1 mm was produced by hot pressing the pellets of each polymer. The polymer plate was cut into 10 mm × 10 mm (35 mm × 10 mm only for absorption measurements) square substrates using a lever-controlled sample cutter (SDL-200, DUMBELL Co., Ltd., Japan). The substrates were ultrasonically washed and dried under vacuum for 24 h. Substrates of EVOH with an ethylene content of 32 mol% were prepared from pellets (generously supplied by Kuraray Co., Ltd., Japan) by the method described elsewhere⁷.

Figures in ESI

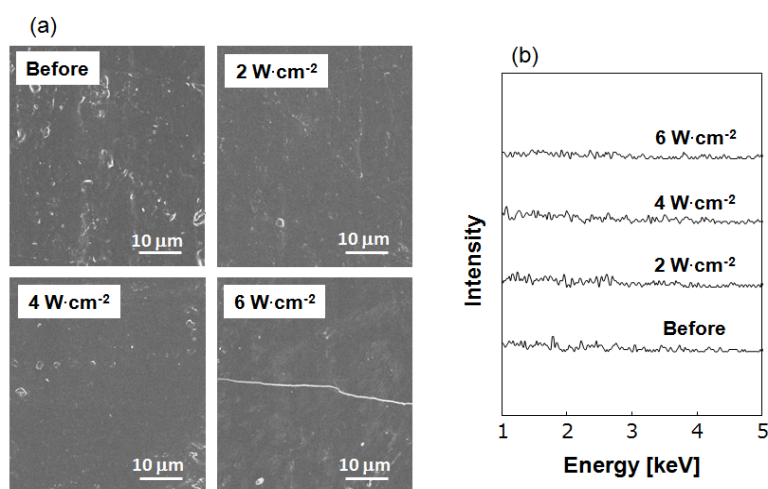


Fig. S1 (a) SEM images and (b) EDX spectra of the surfaces of the PE substrate before and after the LAB process at 2, 4, or 6 W·cm⁻².

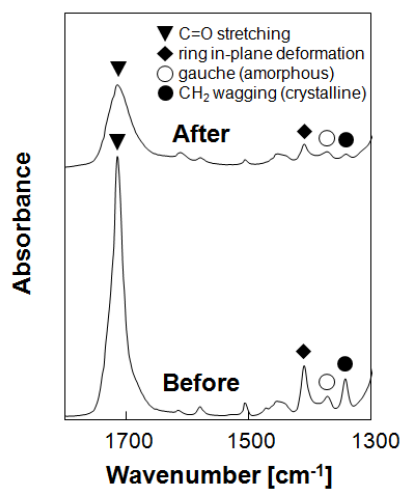


Fig. S2 FT-IR spectra of the surface of the PET substrate before and after laser irradiation in ultrapure water for 30 min.