

**Increasing dyeability of polyester fabrics by photochemical treatment at
room-temperature using H₂O₂ in air
- Supplementary Information-**

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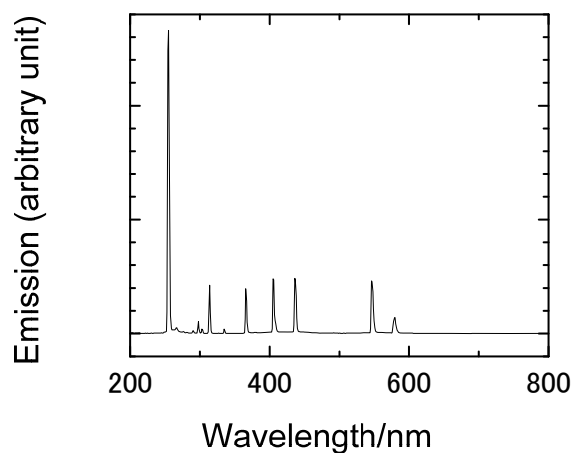


Fig. S1 Emission spectra of a germicidal lamp.^{S1}

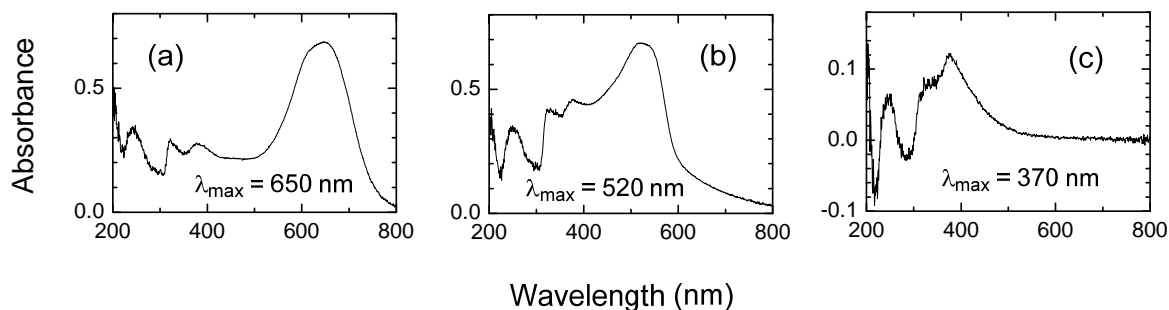


Fig. S2 UV absorption spectra of (a) Cathilon Blue, (b) Cathilon Red, and (c) hydrazone formed by DNPH treatment. Difference absorption spectra between original PET fabrics and photochemically modified PET fabrics dyed with cationic dyes or treated with DNPH.

Reference

S1. A. Ouchi, H. Sakai, T. Oishi, T. Hayashi, W. Ando, J. Ito, *Green Chem.*, 2003, **5**, 516–523.

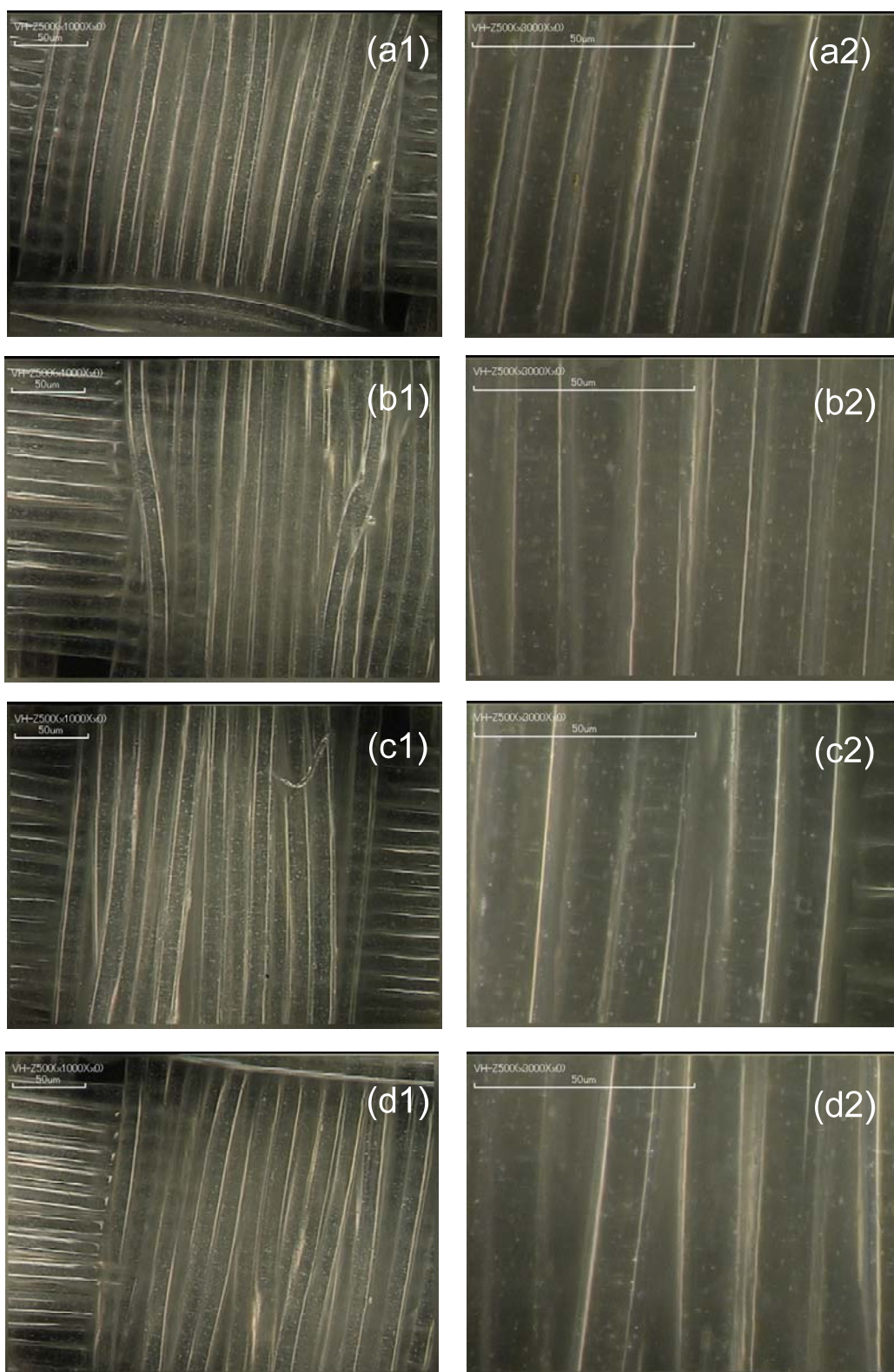


Fig. S3 Micrograph of photochemically treated PET fabrics. (a) Original fabric and photochemically treated fabric using (b) H₂O (condition I), (c) 0.5 M H₂O₂ (condition II), (d) 0.5 M H₂O₂ + 0.5 M acrylic acid (condition III). Photochemical treatment: germicidal lamp (1.08 mW cm⁻²), 10 min, in air. Scale bars: 50 μm.

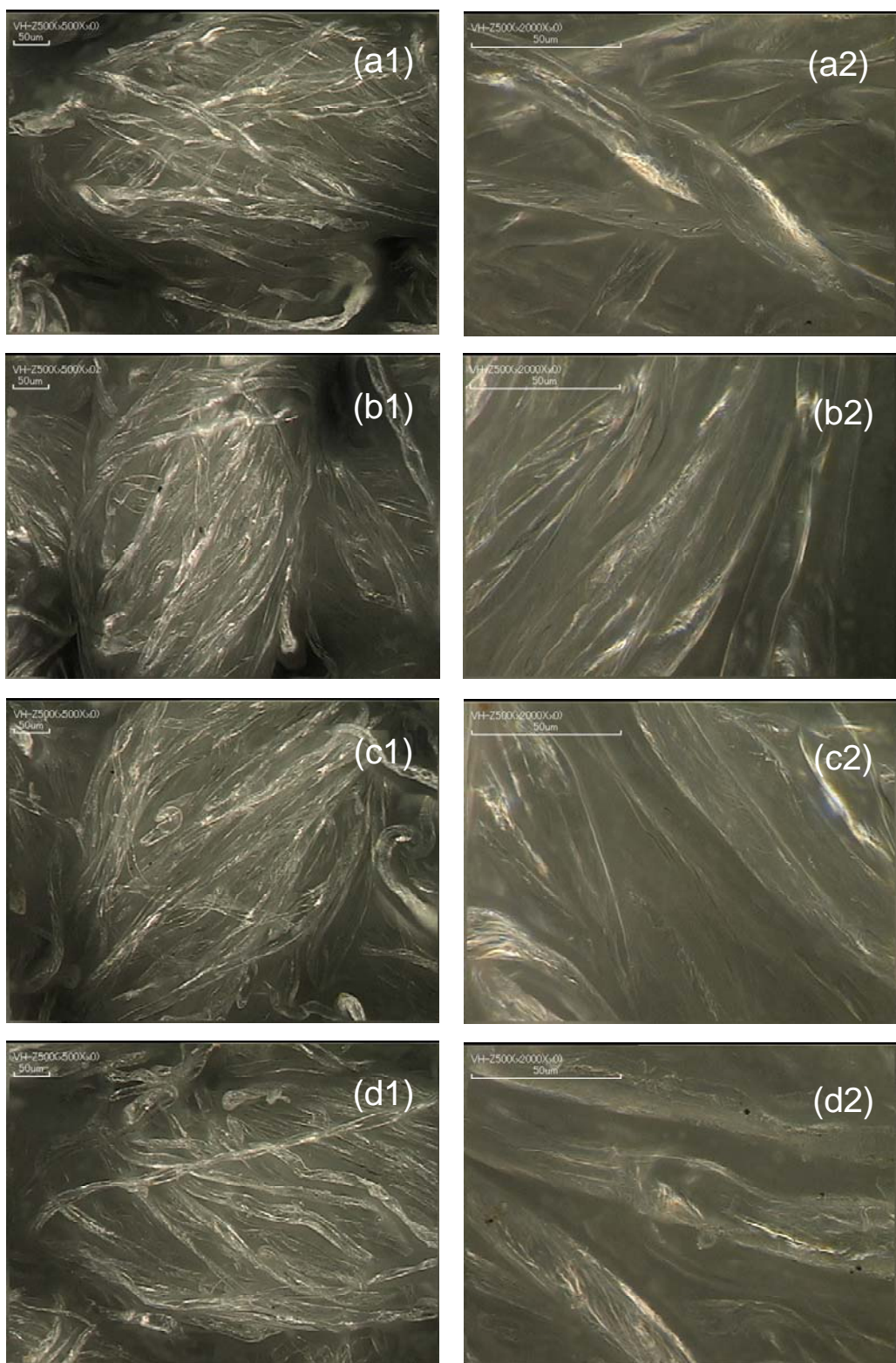


Fig. S4 Micrograph of photochemically treated cotton fabrics. (a) Original fabric and photochemically treated fabric using (b) H₂O (condition I), (c) 0.5 M H₂O₂ (condition II), (d) 0.5 M H₂O₂ + 0.5 M acrylic acid (condition III). Photochemical treatment: germicidal lamp (1.08 mW cm⁻²), 10 min, in air. Scale bars: 50 μm.