

1 Article

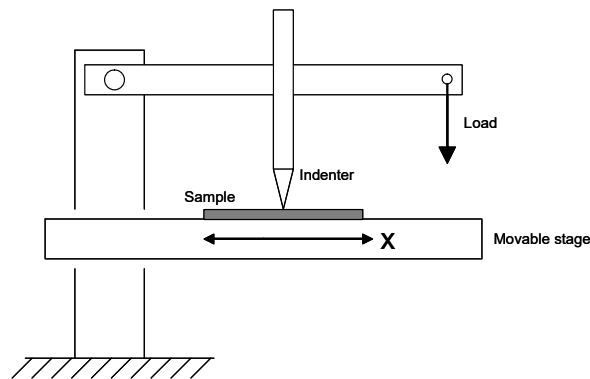
2 **Multiple Hydrogen-Bonding Assisted Scratch-**
 3 **Healing of Transparent Coatings**

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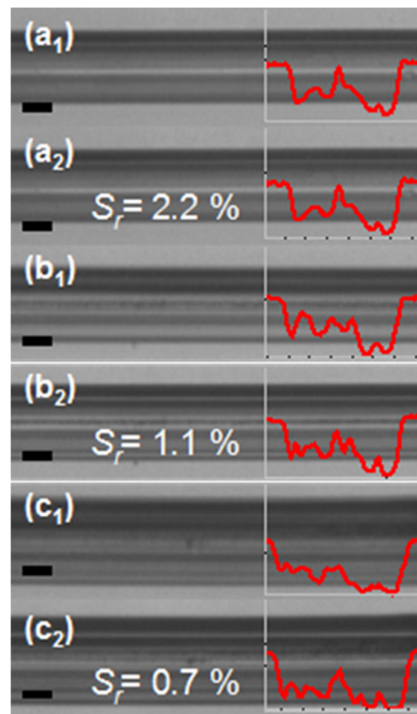
8 **Supplementary Materials**



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Figure S1. Schematic diagram of used scratch tester.



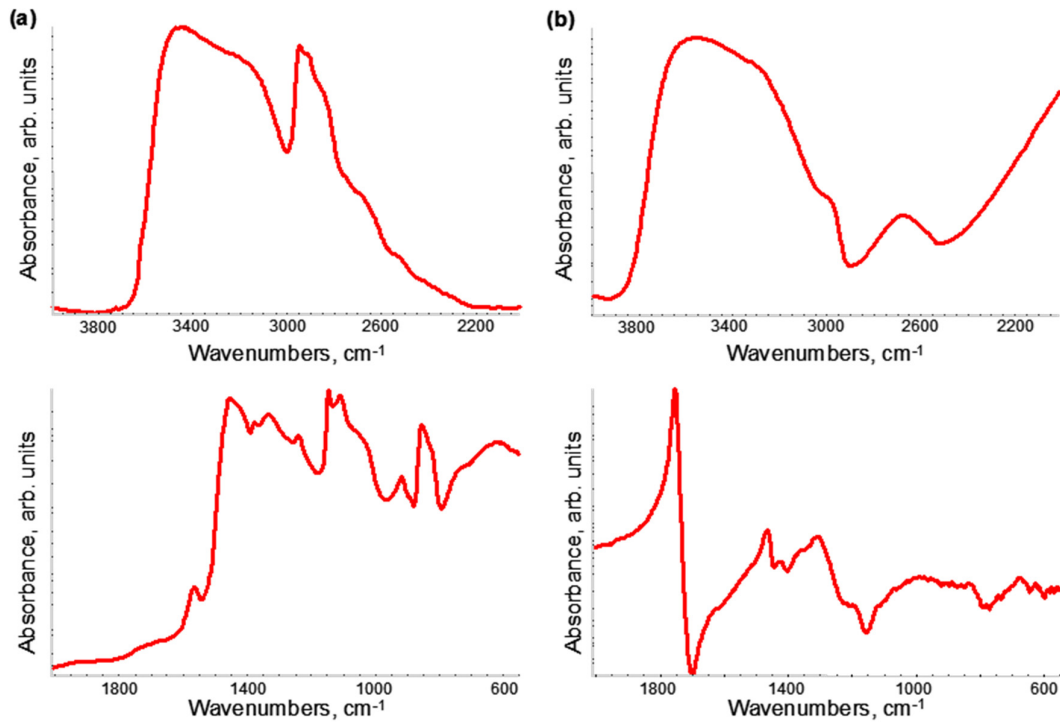
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Figure S2. Scratch-healing of the partially cross-linked at 150 °C for 5 min PVA–PAA polymer coatings (molar ratio between hydroxyl and carboxyl groups of 1.5:1), with scratch-healing ratio S_r

14 calculated according to Equation (1). Optical microscope digital photographs show characteristic
15 scratch track sections (a_1 – c_1) before and (a_2 – c_2) after 30 min at temperature of 20 °C and relative
16 humidity (RH) of 40%. Scratch constant loading of (a_1) 1.5 N, (b_1) 1.8 N and (c_1) 2.7 N. Insets show
17 characteristic scratch track profiles. Mark size on the bottom left of each digital photograph is 50 μm .



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Figure S3. FTIR spectra of pure (a) PVA and (b) PAA coatings annealed at 150 °C for 5 min.