

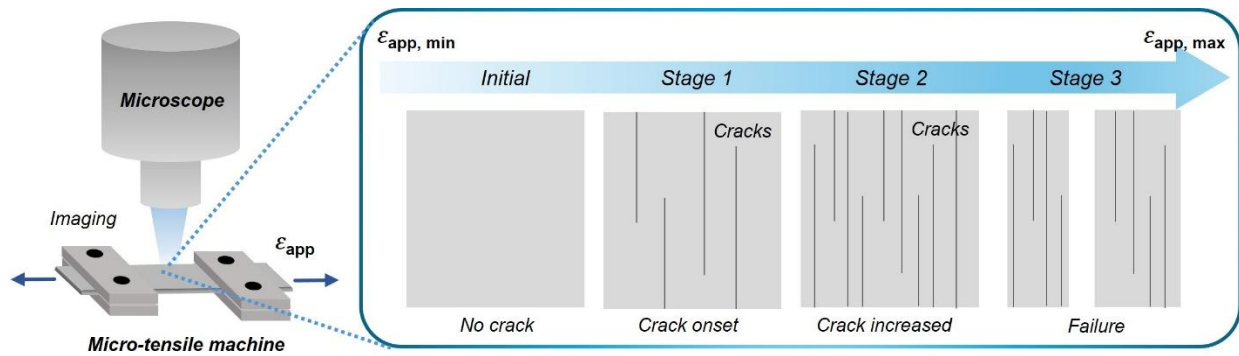


Figure 1. Schematic illustration of the in situ mechanical testing setup for quantifying the elastic modulus, crack onset strain, crack density, fracture toughness, and interfacial shear strength of ALD-coated films.

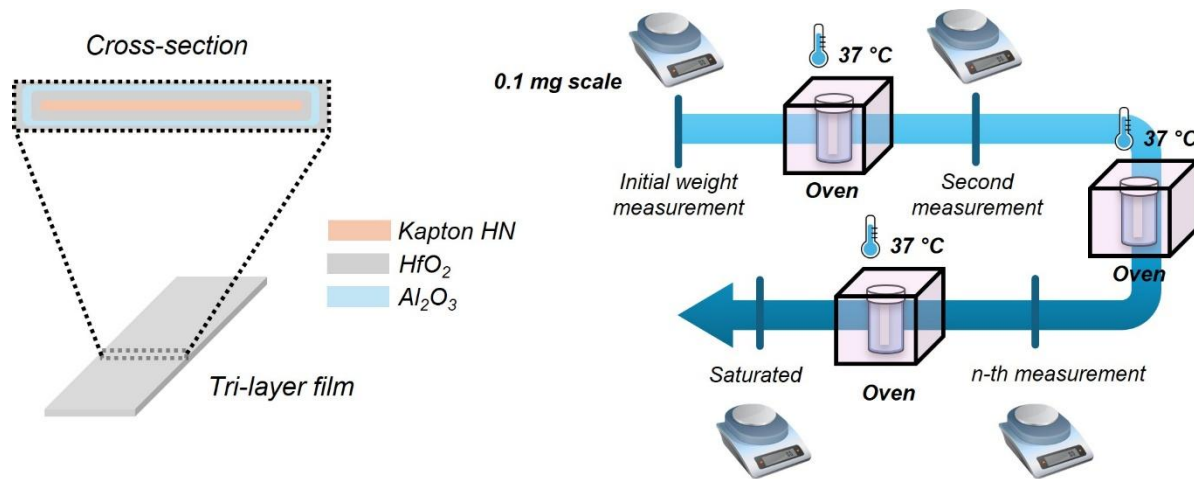


Figure 2. Schematic illustration of the tri-layer coated film, its cross-sectional structure, and the sorption testing method in DI water under physiological temperature (37°C).