

### Control of porous structure and wetting properties of layer-by-layer film

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Porous layer-by-layer(LbL) assemblies of poly(allylamine hydrochloride)(PAH) and poly(acrylic acid)(PAA) were constructed using well-known post acid treatment method. PAHs with two different average molecular weight were blended to control the porous structure. In addition, post acid treatment condition such as acid pH and treatment time were varied to fine-tune the porous structure. Thickness and roughness was studied using profilometer. Surface morphologies were examined using scanning electron microscope. These LbL films were coated with perfluoroalkyl silane by chemical vapor deposition method, and water contact angle was measured. The wetting properties were significantly influenced by LbL porous structure. This work was supported by the National Research Foundation of Korea(NRF) grant funded by the Korea government(MSIT) (No. NRF-2018R1C1B5085125).