Abstract Submitted
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Nanostructures of Weakly Fluorinated Bottlebrush Polymers in Thin Films[1] DONGSOOK CHANG, MATTHEW BURCH, JAN-MICHAEL CARRILLO, YINGDONG LUO, ALEX BELIANINOV, KUNLUN HONG, OLGA OVCHINNIKOVA, BOBBY SUMPTER, Oak Ridge National Lab — The surface and internal nanostructures of weakly fluorinated bottlebrush polymers are studied in detail. Annealed films demonstrate the formation of holes on the surface, presumably due to a mismatch between the film thickness and the bottlebrush size. The formation of holes is analyzed with varied film thickness, backbone length, and annealing condition. The internal nanostructures of bottlebrush films are characterized using microscopy techniques in conjunction with plasma etching.

[1]This research was conducted at the Center for Nanophase Materials Sciences (CNMS) of Oak Ridge National Lab (ORNL), which is a DOE Office of Science User Facility.

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