

Abstract Submitted
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X-ray scattering studies of surface and pore morphologies on nanoporous organosilicate films¹ JEEUN KIM, HEEJU LEE, YOUNGSUK BYUN, SANGHOON SONG, HYUNJUNG KIM, Dept. of Physics & Interdisciplinary Program of Integrated Biotechnology, Sogang University, Korea, SUNGKYU MIN, TAEHOON LEE, GUNWOO PARK, HEEWOO RHEE, Dept. of Chemical Biomolecular Engineering, Sogang University, Korea, GWANGWOO KIM, Pohang Accelerator Laboratory, Korea, XUEFA LI, JIN WANG, Argonne National Laboratory, Argonne, IL 60439 — We have studied surface and pore morphologies and structure of nanoporous organosilicate films. We have employed the grazing incidence small angle x-ray scattering (GISAXS) and x-ray reflectivity (XRR) for characterizing the pore size distribution, shape, porosity, and electron density, roughness, respectively. We have measured in situ the pore morphologies depending on the types of porogens, loading densities along the pore generation process. The results will be discussed with the mechanical properties for finding the optimized condition for low dielectric constant.

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