

Abstract Submitted
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Polymerization-Enhanced Alignment Order in Carbon Nanotube Composites HOWARD WANG, YAYONG LIU, NARANYAN DAS, Binghamton University, SUNY, KUNLUN HONG, GYULA ERES, DAVID URIG, Oak Ridge National Laboratory — Polymer nanocomposites containing vertically aligned carbon nanotubes (VACNTs) have been synthesized via vacuum infiltration of monomers into confined VACNT arrays followed by in situ polymerization. The alignment order of VACNTs before and after polymerization has been quantitatively assessed using small angle neutron and x-ray scattering. The trend of continuous variation of alignment order along the height of VACNTs remains unaltered whereas the degree of order is enhanced upon polymerization. Polymerization-enhanced alignment order may assist preparing better carbon nanotube composites.

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