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Electrically Percolating Clusters in Sheared Carbon Nanotube Composites KALMAN MIGLER, DOYOUNG MOON, JAN OBRZUT, JACK DOUGLAS, Materials Science and Engineering Division, NIST, Gaithersburg, MD, THOMAS LAM, RENU SHARMA, ALEX JAMES LIDDLE, Center for Nanoscale Science and Technology, NIST, Gaithersburg, MD — The electrical conductivity of polymer nanotube composites can be dramatically modified by processing flows and subsequent annealing. The mechanism is widely believed to be nanotube structural rearrangements that occur during flow and alter the percolating pathways. We seek to directly visualize these flow-induced three-dimensional percolating clusters through three-dimensional confocal microscopy and image analysis.

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