

Abstract Submitted  
for the MAR15 Meeting of  
The American Physical Society

**Fluid flow calculations of Graphene Composites** AMIRHESSAM  
TAHMASSEBI, ALPER BULDUM, University of Akron, Department of Physics  
— The flow of fluids through carbon nanotubes was investigated in order to get  
a better understanding of the unique properties and phenomena of nano-fluidics.  
The previous modeling and simulation efforts were based on diffusion of atoms or  
molecules that were thrown to the nanotubes with initial velocities. This talk has  
shed some light on the flow of fluids using molecular dynamic simulations of different  
types of carbon nanotubes that were embedded in liquid argon using a moving wall  
piston of graphene. We focused on analyzing pressure difference, velocities, and  
momentum conservation in different regions.

Amirhessam Tahmassebi  
University of Akron, Department of Physics

Date submitted: 14 Nov 2014

Electronic form version 1.4