

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Simulations of Indentation on a Polymer Thin Film and Properties Analysis WENLU SHI, Nankai University, GRAHAM CROSS, Trinity College Dublin — Using finite element simulation, we have verified for the case of that uniform uniaxial strain deformation test is independent of the geometric properties. A simple elastic-plastic material for aspect ratios as high as 12:1, the stress vs. strain behavior consists of a linear elastic region, a linear plastic region and a extrusion region is also verified. A new way to find extrusion point (wall failure) comes up, using the analysis of the changing of inner part volume.

Wenlu Shi
Nankai University

Date submitted: 09 Nov 2016

Electronic form version 1.4