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JOURNAL OF HARD MATERIALS

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No, this picture was not taken from a modern fashion magazine. Nor was it lifted from a catalog of standard summer accessories for taxi drivers. Despite resembling the layer of ventilating beads found in every warm weather cab and sharing its profile with the Bermuda shorts of bygone days or the betasseled Lederhosen of the Oktoberfest, it is none of these. And the black beads on the sides and top, although appearing to be rather superfluous decoration, are actu-ally keeping these "pants" from unraveling. This garment is, in fact, only of the order of 80 angstroms on a side and is woven from atoms of ruthenium and aluminum. The black atoms are "frozen" to prevent this lattice from relaxing outward. An apropos description, since the whole fabric is held at 1 K. To make matters worse, this is not even a picture of the actual apparel, but is merely a designer's schematic illustration (presumably waiting for a buyer). To be fair, the primary purpose of this simulation is to understand the mechanisms at play when, on application of sufficient stress, these atomic shorts split—a potentially embarrassing occurrence! Using molecular dynamics codes, the designers, C.S. Becquart, P.C. Clapp, and J.A. Rifkin, have reported (J. Mater. Res. 9 (3), 1994 p. 548) that one must consider more than just the continuum mechanics prediction of stress produced at the apex of the crotch (for the sake of decorum, they call it the crack tip) by spreading the pant legs. Apparently the fabric surface undergoes reconstruction which is likely to modify the propagation of the embarrassment. To us, it seems that anyone who chooses to don intermetallic shorts at freezing temperatures, without first testing their mechanical properties in private, deserves his or her fate.