
When buckyballs turn to jelly

SOMETIMES pure carbon can turn to jelly. That's what Patrick Royall at the University of Bristol, UK, found when he simulated cooling the carbon cages called buckyballs.

The simulation heated the balls to over 2000 °C and cooled them in less than a billionth of a second. This caused a loosely connected solid network to emerge that behaved like a wobbly gel (arxiv.org/abs/1102.2959). Conventional gels consist of small liquid molecules trapped in a network of larger solid molecules. This is the first example of a gel made of just a solid network, Royall says.

The experiment is currently not feasible in practice, but since we now know that a buckyball gel is a possibility, Royall suggests trying to make it in other ways.