**Sensor Skin**

A platform for highly stretchable, biocompatible, transparent sensors



In work reported in *Science* (August 20, 2013) a Harvard MRSEC team led by **Suo** and **Whitesides** developed a transparent “ionic skin,” a sensor skin using ionic conductors. It senses signals with high stability and wide dynamic range, from a gentle touch of a finger to strains over 500%. The new ionic skin has attributes required for biocompatibility in medical devices and transparency for use in tunable optics. (**a**) As a demonstration, the electrodes were tin-plated copper, the ionic conductors were a salt-containing hydrogel, and the dielectric was an acylic elastomer (VHB). VHB was also used to cover the faces of the ionic skin. (**b**) The ionic skin was attached to a straight finger. (**c**) When the finger bent, the ionic skin stretched. (**d**) As the finger bent cyclically, the capacitance changed accordingly. ‘B’ denotes bent finger, and ‘S’ denotes straight finger. (**e**) The ionic skin was transparent. The scale bars in b, c, e are 2 cm.