Dr. B. Jill Venton is a Professor and Chair of the Chemistry Department at the University of Virginia, with affiliations with the Neuroscience Graduate Program and the UVA Brain Institute. She received her BS in Chemistry from University of Delaware (1998), her PhD in Chemistry from UNC-Chapel Hill (with Mark Wightman, 2003), and did postdoctoral training at University of Michigan (with Bob Kennedy and Terry Robinson, 2003-2005). Her research interests are in developing analytical chemistry tools for neuroscience research and her lab studies many neuroscience diseases, from Parkinson disease, to addiction, to stroke, and aging. At home, she has 2 young children keep her busy.

**New carbon electrodes for electrochemistry**

Carbon-fiber microelectrodes have been used for decades for neurochemical research but they have some drawbacks for temporal and spatial resolution. In this talk, I will cover carbon nanomaterial and carbon nanopipette electrodes, which overcome the problems of temporal resolution by creating cavities in which dopamine can momentarily be trapped. These thin layer cells make the current response frequency independent. In the end, I will talk about how we can now design microstructured electrodes with 3D printing, which allows any shape and geometry to be fabricated.