

PHYSICAL CHEMISTRY SEMINAR



Prof. Deji Akinwande
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Monday, Feb. 22, 2021
4:00 PM
via Zoom

“Adventures with Atomic Materials: from Flexible/Wearable Electronics to Memory Devices”



This talk will present our latest research adventures on 2D nanomaterials towards greater scientific understanding and advanced engineering applications. In particular, the talk will highlight our work on flexible electronics, zero-power devices, monolayer memory (atomristors), non-volatile RF switches, and wearable tattoo sensors. Non-volatile memory devices based on 2D materials are an application of defects and is a rapidly advancing field with rich physics that can be attributed to sulfur vacancies or metal diffusion. Atomistic modeling and atomic resolution imaging are contemporary tools under use to elucidate the memory phenomena. Likewise, from a practical point, electronic tattoos based on graphene have ushered a new material platform that has highly desirable practical attributes including optical transparency, mechanical imperceptibility, and is the thinnest conductive electrode sensor that can be integrated on skin for physiological measurements. Much of this research achievements have been published in nature, advanced materials, IEEE and ACS journals.