

Title: Clinical applications of analytical DNA nanotechnology

Abstract: Dynamic DNA nanotechnology is an important branch of DNA nanotechnology, where nanoscale devices of diverse functions have been created by rationally controlling the motion or reconfiguration of DNA sequences or nanostructures. At the interface of bioanalytical chemistry and DNA nanotechnology, our research program aims to employ the concept and strategies of dynamic DNA nanotechnology to develop bioanalytical tools amenable for *in vitro* disease diagnostics, environmental monitoring, and toxicological testing. In this talk, I will describe several recent techniques harnessing dynamic DNA nanotechnology for the detection of cancer biomarkers, infectious diseases, as well as evaluation of COVID-19 vaccination at clinical settings.

Bio: Feng Li is currently a full professor at the College of Chemistry, Sichuan University (China). Before joining Sichuan University, he was appointed as an Assistant Professor in the Department of Chemistry at Brock University (Canada) in 2014 and was promoted to Associate Professor in 2019. He received Ph.D. (2013) in Analytical Chemistry from the University of Alberta. His doctoral research focused on the development of ultrasensitive assays for protein detection under the supervision of Prof. X. Chris Le. He is currently leading a multidisciplinary research team at the interface of analytical chemistry and DNA nanotechnology, with a focus on developing novel analytical tools and dynamic DNA nanotechnologies for *in vitro* disease diagnostics. He has authored or co-authored 70 peer-reviewed publications in leading chemistry journals, such as *Nat. Commun.*, *J. Am. Chem. Soc.*, *Angew. Chem. Int. Ed.*, *ACS Nano*, and *Anal. Chem.*. His research contribution has been recognized by several awards, including CSC Fred Beamish Award (2021), Early Researcher Award by Government of Ontario (2018), Young Investigators in (Bio-)analytical Chemistry by *Analytical and Bioanalytical Chemistry* (2019), Analytical Methods Emerging Investigator by *Analytical Methods* (2019), and Emerging Investigators in Analytical Science by *Analyst* (2016).