**From Single Walled Carbon Nanotubes to Holey Graphene Oxide: How to Design Targeted Non-Enzymatic Sensors for Environmental and Medical Applications**

Abstract: This talk will provide a summary of research on design of targeted sensors for detection of hydrogen hydroxide and dopamine. The SWCNTs, graphene nanoribbons and holey graphene oxide were tested as possible anchor materials. The electrochemical method was employed for the modification of nano-materials, and for the determinations of new properties. New method of obtaining holey graphene oxide (HGO) from graphite was proposed and evaluated. Manufactured sensors were extensively characterized for their properties, conditions, detection limits and stability; then tested within the range of environmental conditions.