Biosensing Applications of Quantum Emitters in Diamond and Phosphors

 $P HEMMER^1$

¹Electrical and Computer Engineering Department, Texas A&M University, College Station TX, USA
Contact Email: prhemmer@ece.tamu.edu

Fluorescent nanoparticles can probe biological processes on the nanoscale. In some systems, the potential exists for quantum-enhanced sensing. I will give a brief overview of the field with emphasis on what is still needed. Then I will discuss some particular examples of fluorescent diamond and upconversion phosphor particles that have shown recent promise in these areas.