**ABSTRACT**

A stable reduced graphene oxide (rGO) was prepared and characterized by X-ray diffraction (XRD) and laser Raman spectroscopy. Steady state and time-resolved fluorescence quenching studies have been carried out to elucidate the process of electron transfer from excited pyranine (POH) into the rGO dispersion. POH adsorbed strongly on rGO dispersion with an apparent association constant of 33.4 (mg ml)−1, and its fluorescence emission was quenched with an apparent association constant of 33.7 (mg ml)−1. Picosecond lifetime measurements gave the rate constant for the electron transfer process from the excited singlet state of POH into the rGO dispersion as 8.8 × 109 s−1. Laser flash photolysis studies demonstrated the formation of radicals for the evidence of electron transfer between POH and rGO.