



Electronic Supplementary Information: Fluorescein molecule's structure strongly depends on the pH of buffer solution. Fluorescein becomes a cation ($pK_a < 2.08$), a neutral molecule ($pK_a = 2.08 \sim 4.31$), an anion ($pK_a = 4.31 \sim 6.43$) or a dianion ($pK_a > 2.08$) by protonation or deprotonation of carboxyl group and OH group on the molecule in response to the pH of buffer solutions.