

# Gold Nanocluster containing Polymeric Microcapsules for Intracellular Ratiometric Fluorescence Biosensing

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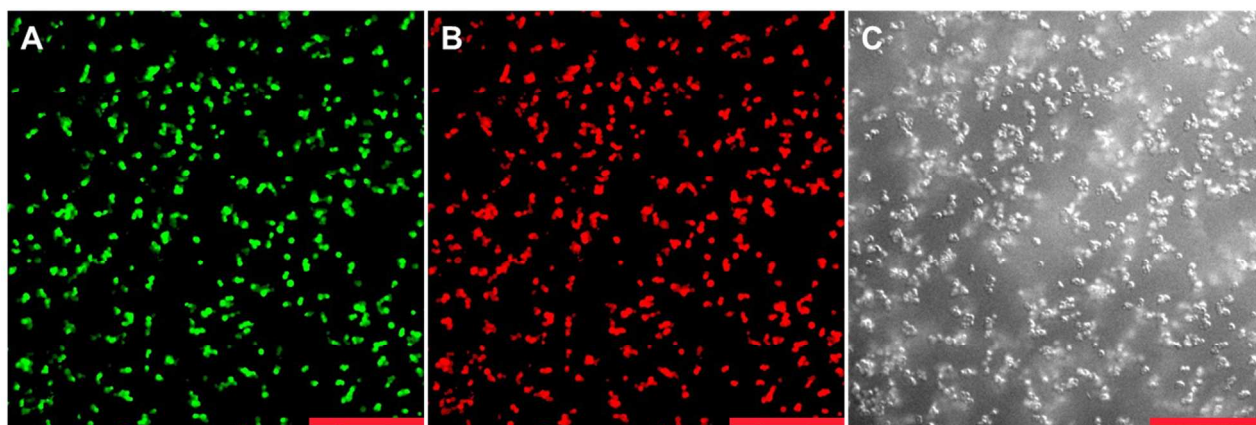
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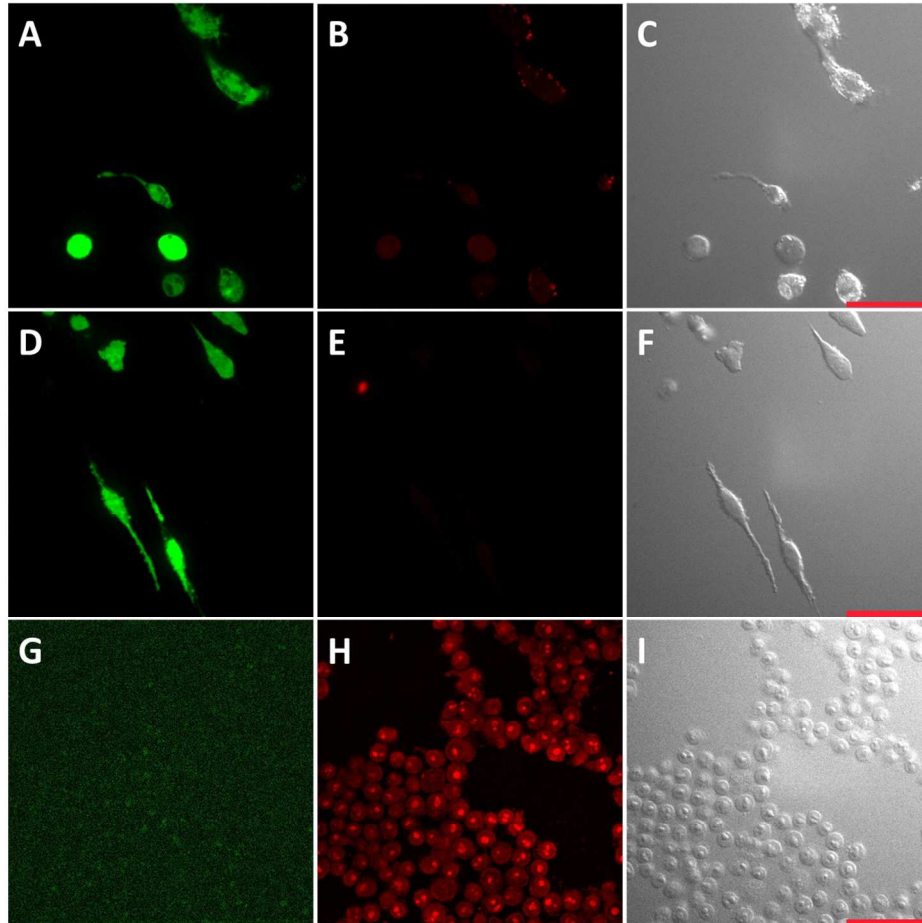
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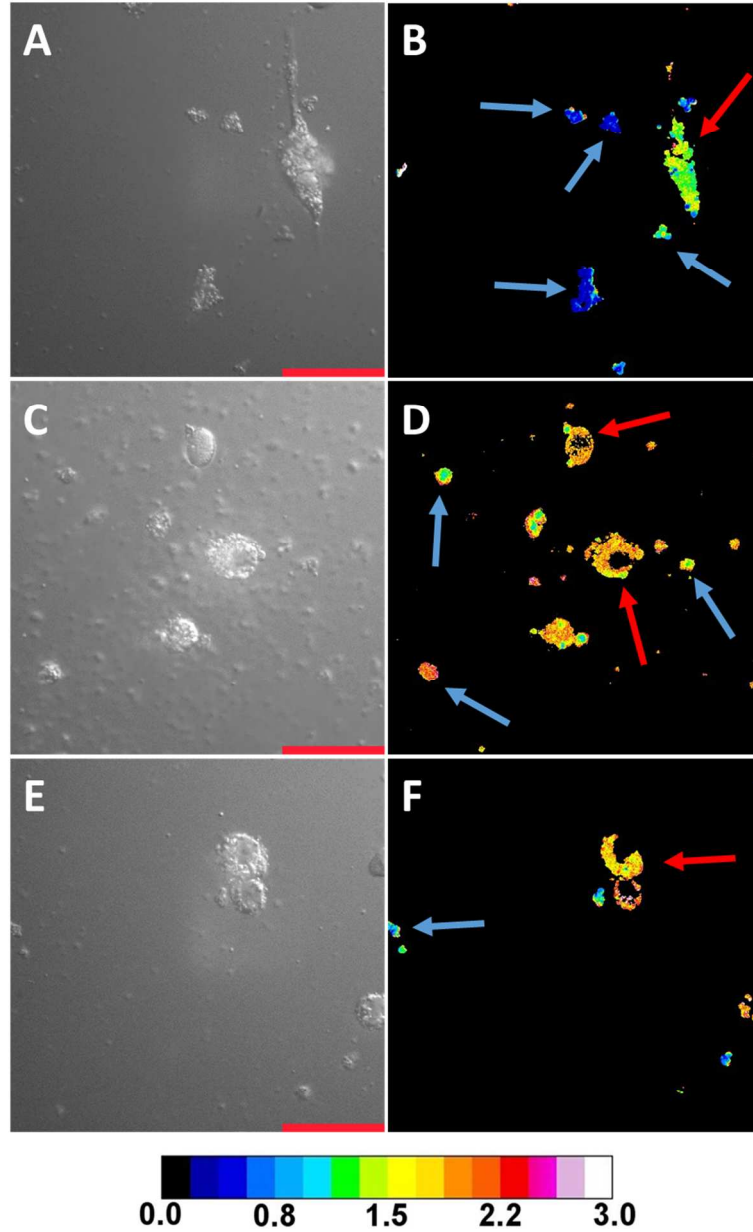
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**Figure S1.** Confocal, fluorescence images of FS / BSA-AuNC containing microcapsules at 0  $\mu\text{M}$   $\text{H}_2\text{O}_2$ . Emission intensities collected using 510-540 nm band pass filter (**A**) and 633 long pass filter (**B**), when excited at 445 nm. (**C**) Differential interference contrast (DIC) images of microcapsules. Scale bars correspond to 50  $\mu\text{m}$ .



**Figure S2.** Vitality assay of RAW 264.7 macrophages. CAM emission channel of **(A)** macrophages loaded with microcapsule sensors, **(D)** macrophages not incubated with microcapsule sensors [positive control], **(G)** macrophages treated with bug buster detergent (1X) [negative control]. Ethidium homodimer emission channel of **(A)** macrophages loaded with microcapsule sensors, **(D)** macrophages not incubated with microcapsule sensors [positive control], **(G)** macrophages treated with bug buster detergent (1X) [negative control]. **(C)**, **(F)**, and **(I)** DIC images of cells in panel **(A, B)**, **(D, E)**, and **(G, H)** respectively. Scale bars correspond to 50  $\mu\text{m}$ .



**Figure S3.** Confocal ratiometric fluorescence images of RAW 264.7 macrophage cells. Pseudocolored images represent the ratio of emission intensities collected using 510-540 nm band pass filter and 633 long pass filter, when excited at 445 nm. **(B)** Cells incubated with microcapsules for 1 hr at 37 °C, **(D)** microcapsule loaded cells after H<sub>2</sub>O<sub>2</sub> (500 μM) exposure for 30 mins at 37 °C, and **(F)** microcapsule loaded cells after PMA (2 μg/mL) exposure for 30 mins at 37 °C. **(A)**, **(C)**, and **(E)** DIC images of cells in panel **(B)**, **(D)**, and **(F)** respectively. Scale bars correspond to 50 μm. Blue arrows point to extracellular microcapsule sensors whereas red arrows point to microcapsule loaded cells.