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Authors: Liucheng Mao, Xinhua Liu, Meiying Liu, Long Huang, Dazhuang Xu, Ruming Jiang, Qiang Huang, Yuanqing Wen, Xiaoyong Zhang, Yen Wei

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Surface grafting of zwitterionic polymers onto dye doped AIE-active luminescent silica nanoparticles through surface-initiated ATRP for biological imaging applications

Liucheng Mao^{a,#}, Xinhua Liu^{a,#}, Meiying Liu^a, Long Huang^a, Dazhuang Xu^a, Ruming Jiang^a, Qiang Huang^a, Yuanqing Wen^{a,*}, Xiaoyong Zhang^{a,*}, Yen Wei^{b,*}

^a Department of Chemistry, Nanchang University, 999 Xuefu Avenue, Nanchang 330031, China.

^b Department of Chemistry and the Tsinghua Center for Frontier Polymer Research, Tsinghua University, Beijing, 100084, P. R. China.

These authors contributed equally to this work

$\begin{array}{c} \overrightarrow{H_{1}} \cdot H_{2}O, TEOS \\ \overrightarrow{H_{1}} \cdot H_{2}O, TEOS \\ \overrightarrow{H_{1}} \cdot H_{2}O, TEOS \\ \overrightarrow{H_{2}}O, Ethanol \\ \overrightarrow{H_{2}}O, Ethanol \\ \overrightarrow{H_{2}}O, Ethanol \\ \overrightarrow{SNPS-AIE} \\ \overrightarrow{SNPS-AIE-NH_{2}} \\ \overrightarrow{SNPS-AIE-Br} \\ \end{array}$

The dye-doped luminescent silica nanoparticles were obtained via directly encapsulated with aggregation-induced emission dye and subsequently functionalized with zwitterionic polymers through surface-initiated atom transfer radical polymerization

Highlights

- Dye doped luminescent silica nanoparticles
- Surface modification of luminescent silica nanoparticle via surface-initiated ATRP
- ►Aggregation-induced emission dyes based nanocomposites
- ► The AIE-active luminescent silica nanoparticles for biological imaging

Graphical abstract

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