

WATER DISPERSIBLE AUTOFLUORESCENT POLYMER DOTS COMPRISING OF NON-CONJUGATED POLYMERS

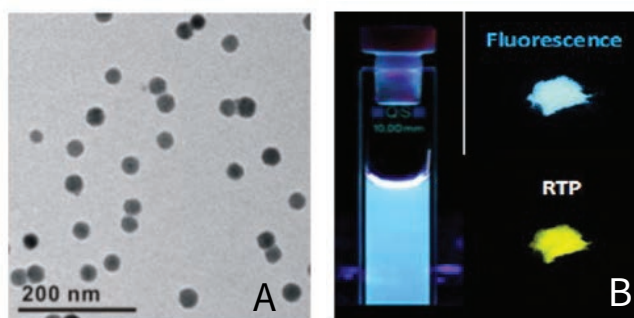


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This new type of photoluminescent nanoparticles uses inexpensive nonconjugated polymers as building blocks, and has the ability to display ultra-bright and multi-color fluorescence upon excitations in both water and dry states. It also has excellent water dispersibility, low toxicity, high absorptivity, good photostability, and high quantum yield. This innovation has various potential applications, including serving as: bioimaging markers for in vitro cell imaging; autofluorescent nano-carriers for image-guided therapy; nanofillers in plastics for LED diffuser applications; fluorescent ink in anti-counterfeiting applications; chemosensors for heavy metal detection and structural health monitoring.

NOVEL FEATURES

- * Ultra-bright photoluminescence with good photo-stability
- * Excellent water dispersibility and low cytotoxicity
- * Simple and versatile synthetic strategy adopted
- * No aggregation-caused quenching effect
- * All materials easily available at low cost



A Nanoscale Polymer Dots with autofluorescence

B Ultra-bright photoluminescence in both aqueous and dry states

POTENTIAL APPLICATIONS

