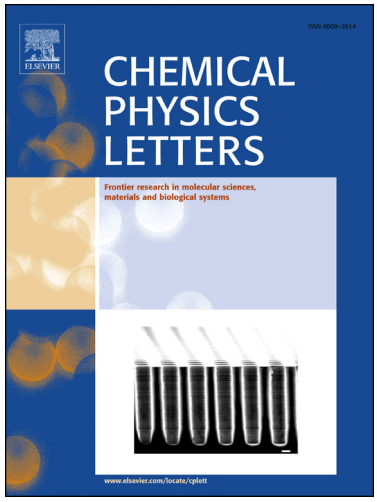

Research paper

Dendritic copper phthalocyanine with aggregation induced blue emission and solid-state fluorescence

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Dendritic copper phthalocyanine with aggregation induced blue emission and solid-state fluorescence

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Abstract

In this work, dendritic copper phthalocyanine (CuPc) showing obvious aggregation induced emission (AIE) and strong solid-state fluorescence was synthesized. It was found that synthesized CuPc can be easily solubilized in polar aprotic solvent, where no fluorescence signal was detected. Interestingly, both the CuPc aggregates in solution and solid-state powder exhibited strong fluorescence emission around 480 nm, which should be attributed to the restriction of intramolecular rotation as rationalized in aggregation induced emission framework. Meanwhile the obvious crystalline enhanced solid-state fluorescent emission is observed for CuPc powder.

Keywords: copper phthalocyanine, fluorescence, aggregation induced emission, solid state luminescence, crystalline

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