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Research paper

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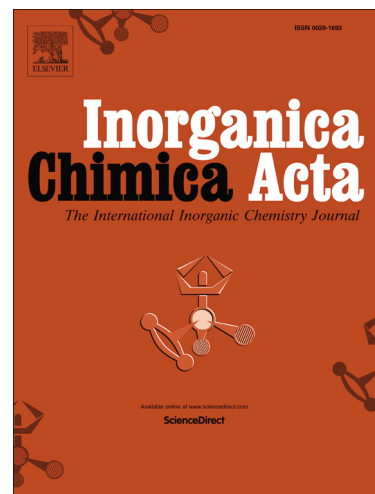
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Effect of doping vs covalent linking of a low symmetry zinc phthalocyanine to silica nanoparticles on singlet oxygen production

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### **Abstract**

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Tris[(4-(pyridin-4-ylthio)-2-thio-4-methylthiazol-5-yl)acetic acid phthalocyaninato] zinc (II) (**3**) was covalently linked to and doped onto SiNPs. An increase in triplet quantum yields for **3**-SiNPs (linked) with decreasing lifetimes was observed. For **3**-SiNPs (doped) there was a decrease in both the triplet quantum yield and lifetimes when compared to **3** alone. There was an increase in singlet quantum yields for **3**-SiNPs (linked) compared to **3** from 0.67 to 0.80, while there was a decrease for **3**-SiNPs (doped) to 0.25.

**Keywords:** Zn phthalocyanine, Silica nanoparticles, singlet oxygen quantum yield, triplet state quantum yield.

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