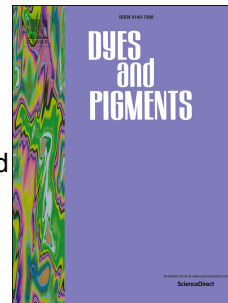


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Porphyrin sensitizers containing an auxiliary benzotriazole acceptor for dye-sensitized solar cells: Effects of steric hindrance and cosensitization

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1 **Porphyrin sensitizers containing an auxiliary benzotriazole**  
2 **acceptor for dye-sensitized solar cells: effects of steric**  
3 **hindrance and cosensitization**

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12 **Abstract:** Dye-sensitized solar cells (DSSCs) have attracted intensive attention in  
13 developing photovoltaic devices for employing solar energy. For developing  
14 panchromatic and efficient porphyrin sensitizers, it has been demonstrated to be an  
15 effective approach to introduce an electron-withdrawing benzothiadiazole unit as an  
16 extra electron acceptor. In contrast, the structurally similar benzotriazole moiety  
17 remains relatively unknown in this respect. In this work, we have synthesized a novel  
18 porphyrin dye containing an extra electron acceptor of benzotriazole. Photophysical  
19 and electrochemical investigations revealed red-shifted absorption and a narrower

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