

Supporting information for:
**Theoretical study of D-A'- π -A / D- π -A'- π -A triphenylamine and quinoline
derivatives as sensitizer for dye-sensitized solar cells**

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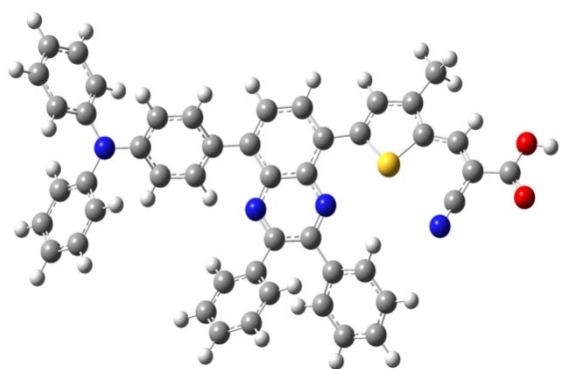
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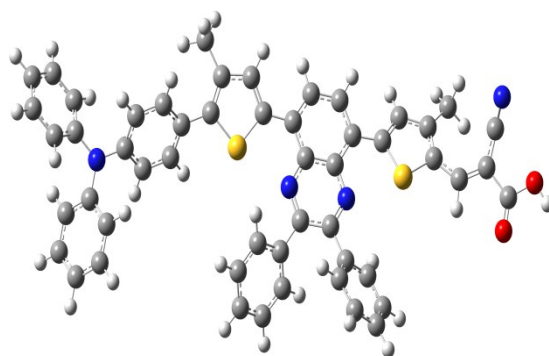
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Yan); wxueye@xtu.edu.cn (X. Wang); xubm@sustech.edu.cn (B. Xu)*

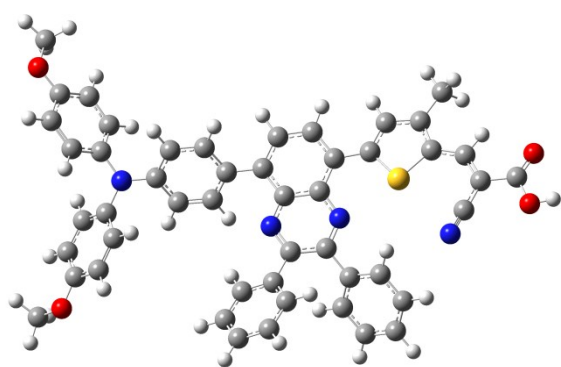
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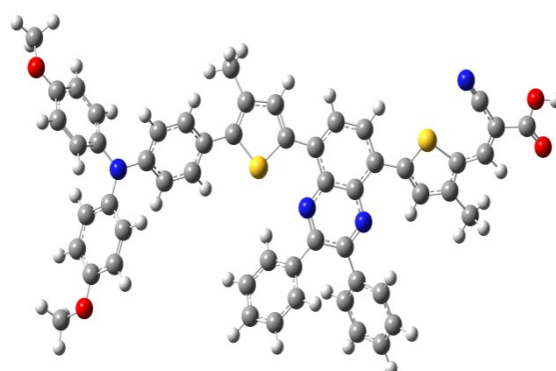
D1



D2



D3



D4

Figure S1. The optimized structures of dyes D1-D4 by DFT//B3LYP/6-311G(d,p)