

# Try ferroxine for solar container

<div class="df\_qntext">Can ferrocene be used in organic solar cells?

At present, most of the top-performing organic solar cells (OSCs) are processed with high boiling point solvent additives, which usually have a negative effect on the device stability. To overcome this conundrum, we herein introduce a commercially available organic transition metal compound, ferrocene, as a highly volatile solid additive in OSCs.

<div class="df\_qntext">Does ferrocene improve photovoltaic performance?

Systematic analysis revealed that the treatment with ferrocene can effectively increase the molecular crystallinity and thus leads to improved charge transport, which accounts for the achieved higher photovoltaic performance in the corresponding OSCs.

<div class="df\_qntext">Can ferrocene be used in bulk-heterojunction systems?

Moreover, ferrocene was found to exhibit general applicability in five other bulk-heterojunction systems. This work not only demonstrates a cost effective and highly volatile solid additive, but also opens a new possibility toward further improvement of the PCE and stability of OSCs.

<div class="df\_qntext">Why are ferrocene redox potentials important?

The tailored redox potentials of ferrocene units promoted the more efficient recovery of surface vacancies (Pb 0 and I 0) and inhibit the diffusion of I 2, the long C-F chain contributed to the stabilization of the organic components and [PbI 6]<sup>4-</sup> octahedron on perovskite surface.

<div class="df\_qntext">Are ferrocene derivatives a charge-transfer complex?

Herein, we report the formation of a charge-transfer complex between newly synthesized ferrocene (Fc) derivatives and ETLs to facilitate electron extraction. Computational simulation, elemental, and optoelectronic characterizations reveal the chemical interactions and work function tuning of hybrid ETLs.

<div class="df\_qntext">Can ferrocene be used as an organic ligand?

As a class of transition metal aromatic compounds, ferrocene (Fc) not only contains metal elements, but also can be used as an organic ligand in MOFs. The corresponding Fc-based MOFs have excellent conductivity, redox performance, and chemical stability, thereby improving their electrochemical performance.

To examine the photovoltaic efficiencies of dyes 1 and 2, we have performed the dye-sensitized solar cells under sun conditions with co-adsorbent (chenodeoxycholic acid) and absence ...

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mining operations, reducing reliance on diesel generators and lowering operational costs.

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Metal-organic complex, such as ferrocene, is a promising candidate to improve organic ETL due to their excellent film-forming property, easy preparation, and high electrical properties.

Data from solar simulation support the possibilities of using the newly synthesis ferrocenyl thiophene compounds as a dye for DSSC application although it required more works for ...

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