Synthesis and isolation of a stable perylenediimide radical anion and its exceptionally electron-deficient precursor.

Autorzy

Yogendra Kumar

Sharvan Kumar

Deepak Bansal

Pritam Mukhopadhyay

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The synthesis and isolation of an ambient stable perylenediimide radical anion is reported, and its precursor is established as one of the strongest electron acceptors. The radical anion shows absorption up to 1400 nm and is stable in mixed aqueous solution. Interestingly, the radical anion can organize two electron-deficient molecules over its surface to form a π-stacked array. Calculations revealed weak spin polarization via noncovalent interactions. Such interactions are of significance for magnetic exchange and catalysis.

Adres publiczny

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https://www.acs.org/content/acs/en.html