

Abstract Submitted
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Organic photovoltaic based on copper phthalocyanine with high open circuit voltage and significant current and voltage stability KHALIL HAMAM, MOHAMMAD AL-AMAR, CLEMENT BURNS, Western Michigan University — Organic semiconductors are under investigation as a possible material to create low cost solar cells. We fabricated photovoltaic devices consisting of copper phthalocyanine (CuPc) modified with a sulfonated group /perylene-3, 4, 9, 10-tetracarboxylic dianhydride (PTCDA)/ bathocuproine (BCP) A large open circuit voltage (V_{OC}) of 0.74 V was recorded, superior to cells based on CuPc/PTCDA ($V_{OC} = 0.55V$). Our solar cells exhibits little change in their voltage and current for more than 7 months, superior to many organic solar cells which degrade significantly over days or weeks.

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