

## 고분자 태양전지에서 Donor 와 Acceptor 나노 도메인의 역할

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### The Roles of Donor and Acceptor Nanodomains in Thermally Annealed Polymer Photovoltaics

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**Key words** : organic photovoltaic (유기태양전지), nano domain (나노 도메인)

**Abstract** : We have fabricated thin film polymer photovoltaics using 1-(3 methoxycarbonyl) propyl-1-phenyl-(6,6)C61 within regioregular poly(3-hexylthiophene) bulk heterojunction absorbing layers. Using thermal annealing at temperatures approaching the glass transition temperature we have examined the formation of nanodomains within the matrix. Such domains modify charge transport pathways in such a way as to allow for the efficient use of thicker absorbing layers. This results in a nearly 20% gain in overall performance for this polymer system with external power efficiencies exceeding 6%.

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