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Use of Fullerene Derivatives for Creation of New Perovskite Solar Cells

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Abstract :

In this presentation, I discuss the use of C_{60} and fullerene derivatives for improvement of performance in perovskite solar cells (PSCs). Topics will be 1) Use of C_{60} used as electron transport layers in normal-structure PSCs, 2) high-performance electron transport fullerene derivatives for inverted PSCs, 3) fullerene derivatives interpenetration into carbon nanotubes network to make transparent cathode, and 4) doping of $Li^+@C_{60}$ into hole transport layers to realize stable PSCs with less than 10% efficiency loss under more than 1000 h continuous illumination.

主催:

東京大学大学院工学系研究科「機械システム・イノベーション」プログラム (GMSI)
「最先端融合科学イノベーション教育研究コンソーシアム」 (CIAiS)

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