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Authors: Sangmo Kim, Myoung Geun Song, Chung Wung  
Bark



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# **Efficiency Enhancement using Voltage Biasing for Ferroelectric**

## **Polarization in Dye-sensitized Solar Cells**

Sangmo Kim, Myoung Geun Song, and Chung Wung Bark\*

Department of Electrical Engineering, Gachon University, Seongnam 13120 Korea

Email: bark@gachon.ac.kr

### **Highlight**

1. We employed ferroelectric Fe-doped bismuth titanate (Fe-BLT) to apply to Dye-sensitized solar cells (DSSCs).
2. Nanometer-size Fe-doped bismuth titanate (Fe-BLT) particles were prepared via a high-energy ball milling process.
3. To improve the efficiency, we fabricated DSSC cells with TiO<sub>2</sub> and nFe-BLT mixed compound powder.
4. With applying DC bias, the light-to-electricity conversion efficiency (PCE) of DSSC unit cells could be improved about 64 % compared to that without applying DC bias.

### **Abstract**

Dye-sensitized solar cells (DSSCs) are one of the most promising third generation solar cells that have been extensively researched over the past decade as alternative to silicon-based solar cells, due to their low production cost and high energy-conversion

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