

# Aqueous Electrolytes Based Dye-Sensitized Solar Cells Using Organic Sensitizers

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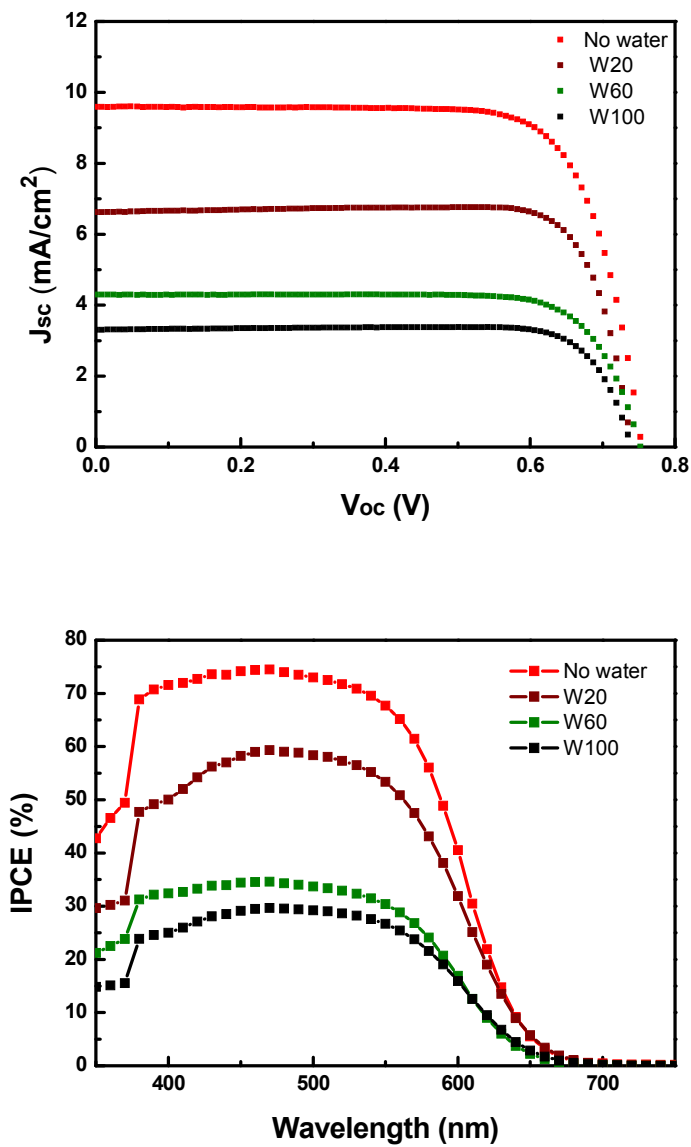
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## Table of Contents

|                                                                                            |          |
|--------------------------------------------------------------------------------------------|----------|
| <u>J-V curve and IPCE spectra of <b>JK-2</b></u>                                           | <u>2</u> |
| <u>Calculated excitation energy characteristics of the <b>JK-259</b> and <b>JK-262</b></u> | <u>3</u> |

**Figure S1.** J-V curve and IPCE spectra of **JK-2**.



**Table S1.** Calculated excitation energy characteristics of the **JK-259** and **JK-262**.

| <b>Table S1.</b> Calculated excitation energy characteristics of the <b>JK-259</b> and <b>JK-262</b> <sup>[a]</sup>                           |             |                  |                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------------|
| Compound<br>s                                                                                                                                 | energy (eV) | F <sup>[b]</sup> | Composition (%) <sup>[c]</sup> |
| <b>JK-259</b>                                                                                                                                 | 1.8894      | 0.4167           | 71 (HOMO → LUMO)               |
|                                                                                                                                               | 2.6419      | 1.4480           | 63 (HOMO-1 → LUMO)             |
|                                                                                                                                               |             |                  | 31 (HOMO → LUMO+1)             |
|                                                                                                                                               | 2.7705      | 0.1608           | 31 (LUMO → HOMO-1)             |
|                                                                                                                                               |             |                  | 63 (HOMO → LUMO+1)             |
| <b>JK-262</b>                                                                                                                                 | 2.0512      | 0.5538           | 71 (HOMO → LUMO)               |
|                                                                                                                                               | 2.9659      | 0.8528           | 68 (HOMO-1 → LUMO)             |
|                                                                                                                                               |             |                  | 16 (LUMO+1 → HOMO)             |
|                                                                                                                                               | 3.3641      | 0.2336           | 23 (LUMO → HOMO-2)             |
|                                                                                                                                               |             |                  | 13 (HOMO-1 → LUMO)             |
|                                                                                                                                               |             |                  |                                |
| [a] The characteristics were calculated by the time dependent-density functional theory (TD-DFT) using the B3LYP functional/6-31G* basis set. |             |                  |                                |
| [b] The oscillator strength ( <i>f</i> ) of a transition is a measure of its intensity and is related to the molar absorption coefficient.    |             |                  |                                |
| [c] The composition means contribution of each transition for excitation energies.                                                            |             |                  |                                |