

Electrochromic device using ZnO nanowire

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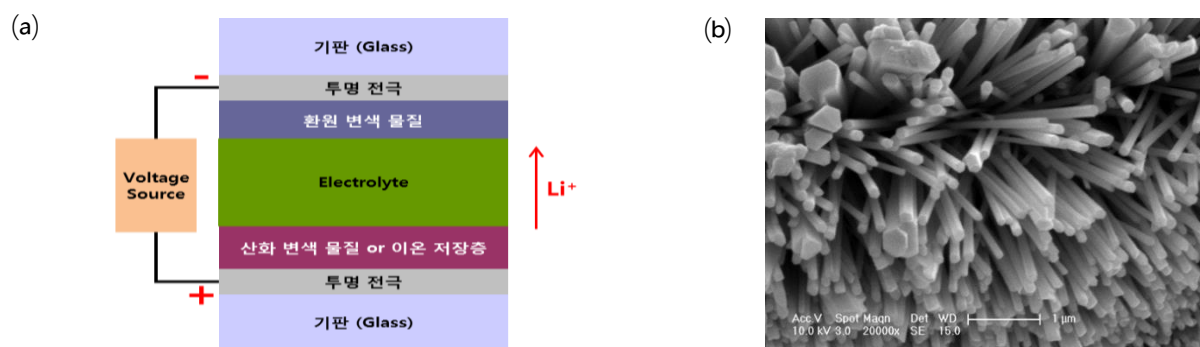
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The electrochromism is a phenomenon that can change their color by electrochemical oxidation-reduction reaction. The electrochromic (EC) cell has wide viewing angles, memory effects and low power consumption. It is useful to make smart windows, electrochromic mirrors and electronic papers [1-3].

The Zinc oxide (ZnO) is available material to the EC cell as the working electrode. It can be grown to nanowire by a simple aqueous thermal decomposition method developed by Vayssieres. This EC cell using the ZnO nanowire has good properties of response time, coloration efficiency and stability [2]. Moreover, the ZnO nanowire EC cell is appropriate to flexible display and printed electronics. To obtain faster response time and higher coloration efficiency, we fabricated several types of the ZnO nanowire EC cells and measured electronic properties.

Figure 1-(a) is the schematic illustration of the EC cell and 1-(b) is the Scanning electron microscope (SEM) image of ZnO nanowire grown by a simple aqueous thermal decomposition method developed by Vayssieres.



**Fig. 1. (a) The schematic illustration of the EC cell
(b) The Scanning electron microscope (SEM) image of ZnO nanowire grown by a simple aqueous thermal decomposition method developed by Vayssieres (<100 °C)**

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Acknowledgment

References

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