GREEN ARCHITECTURE AND INTELLIGENT FAÇADE: THE ELECTROCHROMIC GLAZING AS SMART WINDOW OF THE FUTURE

By

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ABSTRACT

This paper aims to raise the awareness of ecological design strategies and encourage an environmentally conscious attitude towards our built environment. As buildings contribute much of the global warming, there is a need for us to look into the possible solutions and directions in development of ecological buildings. In this study, we will look into some of the high technology measures that have been experimented in the green architecture.

The building façade is one of the most important factors that affect the total energy consumption level in a building. The focus of this paper will highlight one of the current façade technologies, the electrochromic glazing. This is a response to the consensus in the various articles reviewed that the electrochromic glazing possesses great potential in the future. Before that the study will look into the significance and development of building façade over the years. Then, the study will analyse the benefits and various problems associated to the smart window, electrochromic glazing.

The last part of the study looks into the potential of the glazing in the context of Singapore, highlighting the current environment technology and architecture scenes. To make a comparison, a research is made on the property of the various types of glass windows commonly use in Singapore. The study is accomplished with an evaluation of the applicability of electrochromic glazing and the future of intelligent façade. It is believed that very soon high technology will be an important feature in green architecture and electrochromic glazing, as smart window will be a promising intelligent façade of the future.

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