

## Designing Elevations by Photocatalysis of Precast Concrete Materials, in Reducing Energy Consumption of Buildings: Case Study of Tabriz

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**Abstract :** The important issues that are addressed in most advanced industrial countries in recent decades, discussion of minimizing heat losses through the buildings. And the most influential parameters in the calculation of building energy consumption, is heat exchange, which takes place between the interior and outer space. One of the solutions to reduce heat loss is using materials with low thermal conductivity. The purpose of this article, is the effect of using some frontages with nano-concrete photo catalytic precast materials for reducing energy consumption in buildings. For this purpose, estimating the energy dissipation through the facade built with nano-concrete photo catalytic precast materials on a sample building in Tabriz city by BCS 19 software ( topic 19 simulation) is done and the results demonstrate reduce heat loss through the facade nano-concrete.

**Keywords :** nano materials, optimize energy consumption, themal, stability

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