

SMART HOMES AND THE USE OF SOLAR PANELS: ACHIEVING SUSTAINABILITY AND ENERGY EFFICIENCY

MARAM N. A. SALLAM (*Student, Scientific Association for Research and Innovations- Yemen*)

Scientific supervisor: Marwan F.S.H. AL-Kamali, Ph.D., Associate Professor

Relevance. Smart homes and the use of solar panels represent a promising field in modern technology where solar energy is harnessed as a sustainable and efficient source to meet energy needs in households.

Goal of the work – To explore smart homes and their utilization of solar panels, with a focus on the sustainability and energy efficiency aspects related to this innovative technology.

Result analysis – The integration of smart homes and the use of solar panels has yielded significant results in achieving sustainability and energy efficiency. Here are some of the most important outcomes [1]:

1. **Environmental Impact:** The adoption of solar panels in smart homes has led to a considerable reduction in greenhouse gas emissions and reliance on fossil fuels. By harnessing solar energy, homeowners contribute to mitigating climate change and preserving the environment for future generations.
2. **Energy Independence:** Solar panels provide homeowners with greater control and independence over their energy consumption. By generating their electricity, homeowners become less dependent on the traditional power grid, reducing vulnerability to power outages and fluctuations in energy prices.
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4. **Promoting Renewable Energy:** The integration of solar panels in smart homes serves as a tangible demonstration of the possibilities and benefits of renewable energy. By highlighting the effectiveness and reliability of solar power, smart homes inspire others to adopt sustainable practices and contribute to a renewable energy future.

Conclusion. The environmental impact is significant, with reduced emissions and reliance on fossil fuels. Homeowners benefit from increased energy independence, cost savings, and enhanced energy efficiency. These results highlight the transformative potential of smart homes and solar panels in creating a more sustainable and energy-efficient future.

Литература

1. Электрические свойства тонких пленок $\text{SiO}_2:\text{Cu}^0$, нанесенных методом импульсного лазерного испарения/ М.Ф.С.Х. Аль-Камали, Д.И. Зализный, А.А. Бойко, Н.Н. Федосенко/ Проблемы физики, математики и техники, № 2 (51), 2022. С.7-11.