CITIES IN A CHANGING WORLD: QUESTIONS OF CULTURE, CLIMATE AND DESIGN

• Paper / Proposal Title:
How architectural green-planted modules can play a role as a controller against air pollution in megacities

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• Abstract (300 words):
The purpose of this research is to propose a solution to the air pollution issue in megacities, which is caused by urbanization and overcrowded population through the use of architecture. Urbanization leads to air pollution because of the lack of greenery and the multiplicity of pollutants. When there is more air pollution, it warms the Earth. Drought and heat will destroy plants that have so far survived. As the cycle will repeat itself, now is the time to find solutions in different aspects of society to stop and decrease its harmful effects. I propose an architecture module, which consists of advanced technology and materials in conjunction with the concept of plant respiration. The new architecture item shall have the ability to be integrated with exterior walls. It shall be an improved version of green walls with the same goals but a higher efficiency and with fewer defects.

This research aims to achieve effective cooperation between several elements in new ways, including new and pre-existing architecture as well as well-established technology that has not been purposed for this field along with new and emerging technologies. These new advancements shall also work conjointly with nature’s capabilities to solve the issue of air pollution using architecture.
The results of this study can be used to increase public awareness about the significant potential of green spaces to perform the function of air purification. In addition, a secondary objective is to cement the definition of the role of architects and architecture in relation to solving the air pollution issue. The results of this research shall culminate in a final product, which is an advancement of the concept of green walls and shall be launched onto the architecture market as an essential component for use in architectural design alongside traditional elements and materials.

• Author(s) Biography (200 words each):

Bita Rezazadegan holds a Master degree (MSc) in Media Architecture from Bauhaus-Universität Weimar, Germany and a Bachelor degree in Architecture from Shiraz Azad University, Iran.

She is extern Ph.D. Candidate at Bauhaus-Universität Weimar with the thesis topic: "How Architectural Green-Planted Modules Can Play a Role as a Controller against Air Pollution in Megacities". She practices practical architecture parallelly.

Her research work and design has been presented internationally.