

# Intricate 3D Printed Ceramic Bricks Would Cool Homes With Evaporation

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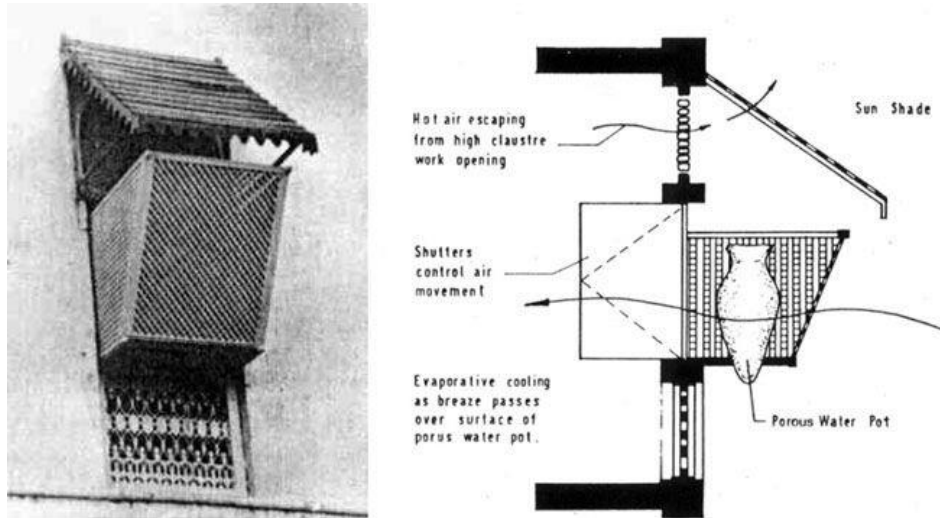


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## [Kimberley Mok](#)

Though it promises to [revolutionize design, manufacturing and distribution](#) as we know it, the hype surrounding 3D printing has been rightfully criticized for using too much non-eco-friendly plastic materials. However, some designers like Oakland, California-based [Emerging Objects](#) have been exploring how 3D printing -- [when combined with innovative and sustainable materials like salt, clay and wood pulp](#) -- could herald a new age of sustainable building. They [printed the world's first salt structure](#), and now, one of their latest experiments is the 3D printed [Cool Brick](#), which would allow homes to be cooled naturally without the need for air conditioning.

Designers Ronald Rael and Virginia San Fratello were inspired by the ages-old technique of evaporative cooling used in hot, dry climates (such as the use of [porous, ceramic vessels](#) to keep things cool), for making their digitally fabricated brick.

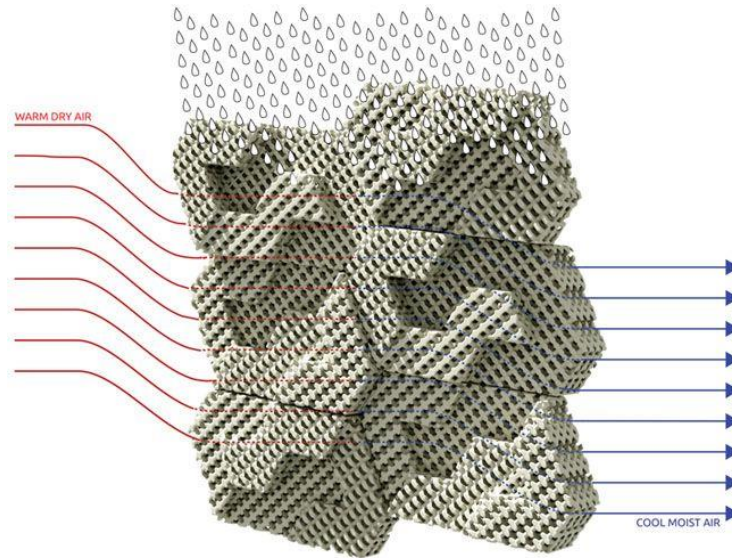


*Emerging Objects/via*

Created using a mixture of clay and organic materials, the 3D printed, porous ceramic bricks are set in mortar, and are made to soak up water like a sponge. The idea is that the modular, interlocking bricks would act like an intricate lattice that allows air -- which is cooled by the water contained in the small pores of the ceramic -- to flow through and cool the inside of the building through the process of evaporation. The particular form of the bricks also increases the amount of shading for the building's facade, thus also helping to keep the interior cooler.



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Made with the help of [TETHON 3D](#), the Cool Brick bases itself on an old concept that's been updated for modern times, using a digital means of production. It will be on view at the [Data Clay: Digital Strategies for Parsing the Earth](#) exhibition, at the San Francisco Museum of Craft and Design until April 19. More over at [Emerging Objects](#).

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