

Geo-Synthetics



Flextegrity is proud to announce the new C6XTY line of 'Structural Fabrics'—Based on the geometry of the Bucky Ball—structural fabrics are derived from a patented synthetic lattice that can be made lightweight, flexible, resilient, and can be extended in all directions (omni-extensible). The C6XTY lattice allows engineers, architects, and designers to create forms of all types from any material.

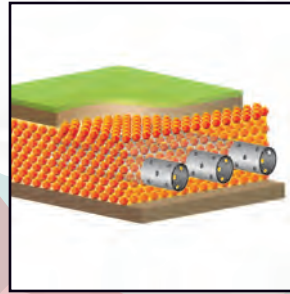
Synthetic lattices are based on the geometry of "Bucky Fullerenes"—or the carbon 60 molecule (soccer ball), that are used to create islands of compression in a sea of tension. The tensile and compressive components can be formed from almost any substance. The resulting lattice can be made stiff or flexible, large or small, for a variety of applications that require resilience, strength, lateral integrity, and reduced weight. Lattices are 'omni-extensible' meaning they can be shaped and contoured to create any surface. Lattices are omni-axial for optimum load transfer and are omni-triangulated such that the 12 degrees of freedom of the interior molecule are constrained for optimum stability.

The C6XTY line of structural fabrics is directly targeted to geohazard and civil engineering applications, where porosity and lateral force stability are paramount. Applications include: mitigating shoreline erosion, bridging and stabilizing catastrophic failures, lagoons and berms, roads in environmentally sensitive areas, multi-channel structural drainage solutions and more. From berms, dikes, weirs, retaining walls, to artificial reefs and more—C6XTY applications are only limited by the imagination. Where soft soil stabilization and lateral integrity is critical—C6XTY is the solution.

Floating structures for environmentally sensitive areas are a good example. The viral or soccer ball like components themselves can be thought of as 'inclusion bodies', embedding foam into the element will cause it to displace more water than its weight and consequently float. The compressive spheres can also be used to exclude substances for example, as a rebar replacement, a balloon can be used to 'exclude' concrete thereby reducing the total volume of concrete by 30%.

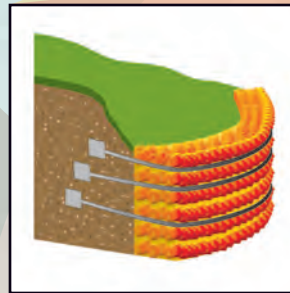
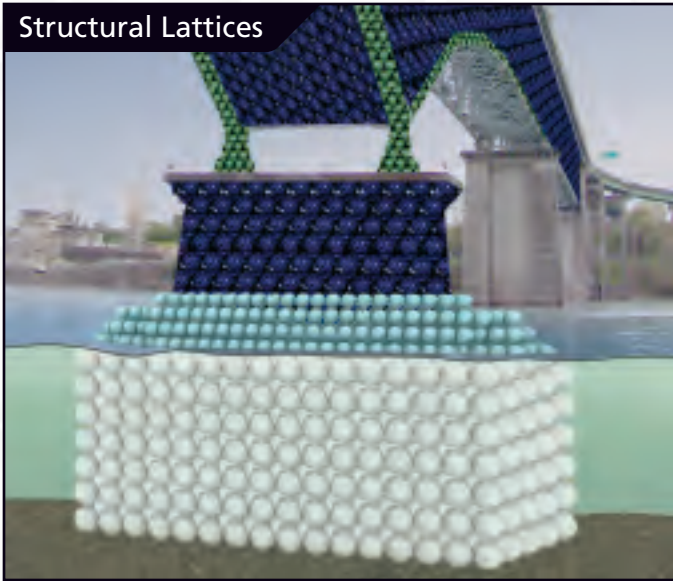


Artificial Reef

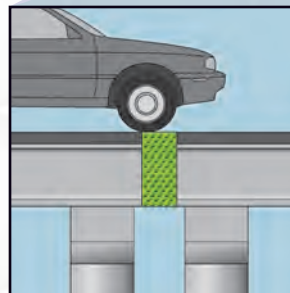


Structural Lattices,  
Ground Stabilization &  
Load Support

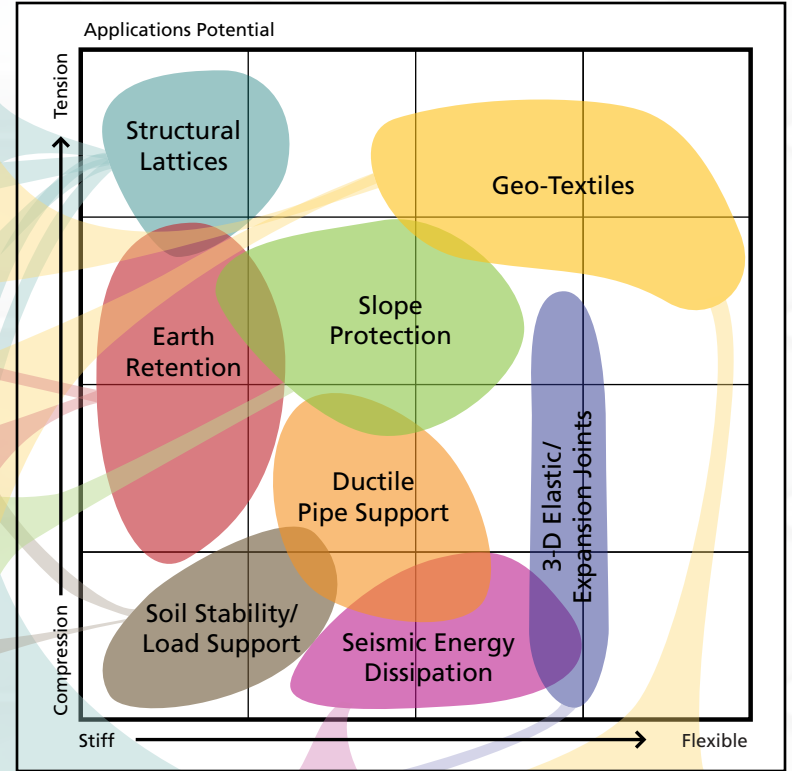
Structural Lattices



Earth Retention &  
Slope Protection

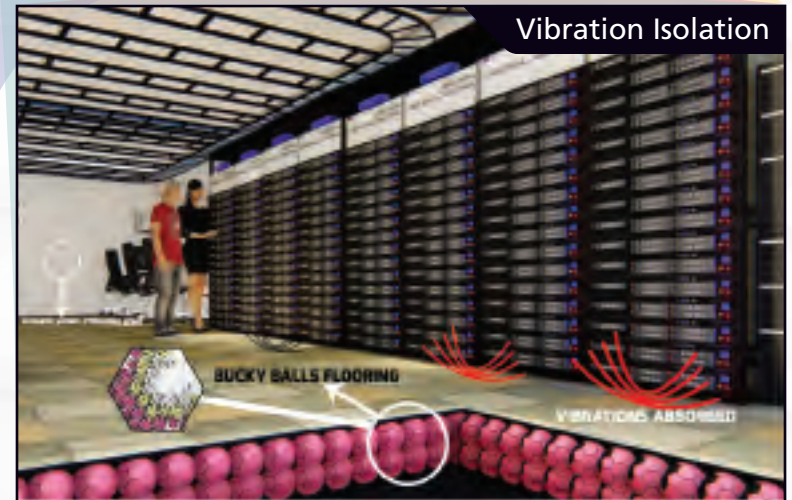


3-D Elastic  
Expansion Joints



FLEXTEGRITY™

Sam Lanahan, President  
www.c6xty.com





Art & Design

C6XTY

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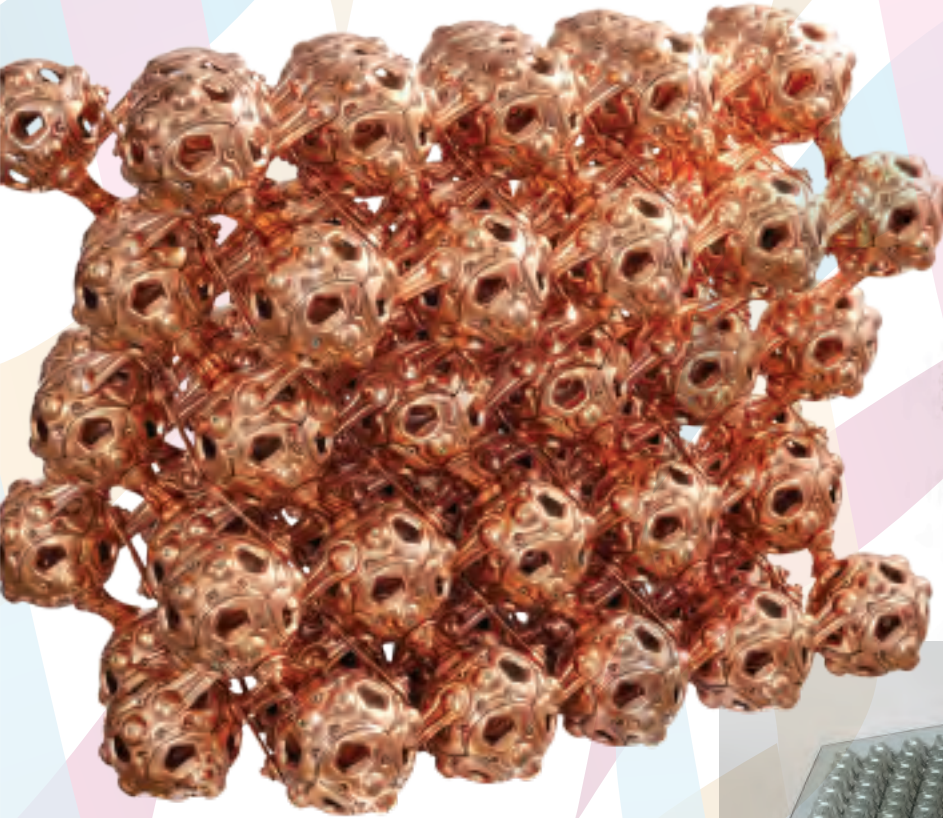
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For visionaries and architects this is an epic paradigm shift from stone piling to bio-mechanical wholistic habitats woven from structural fabrics. Synthetic lattices adhere to the simple principle of doing the most with the least and are supremely economical in the use of materials.

C6XTY



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Sam Lanahan, *President*  
[www.c6xty.com](http://www.c6xty.com)





Architecture

COXTY

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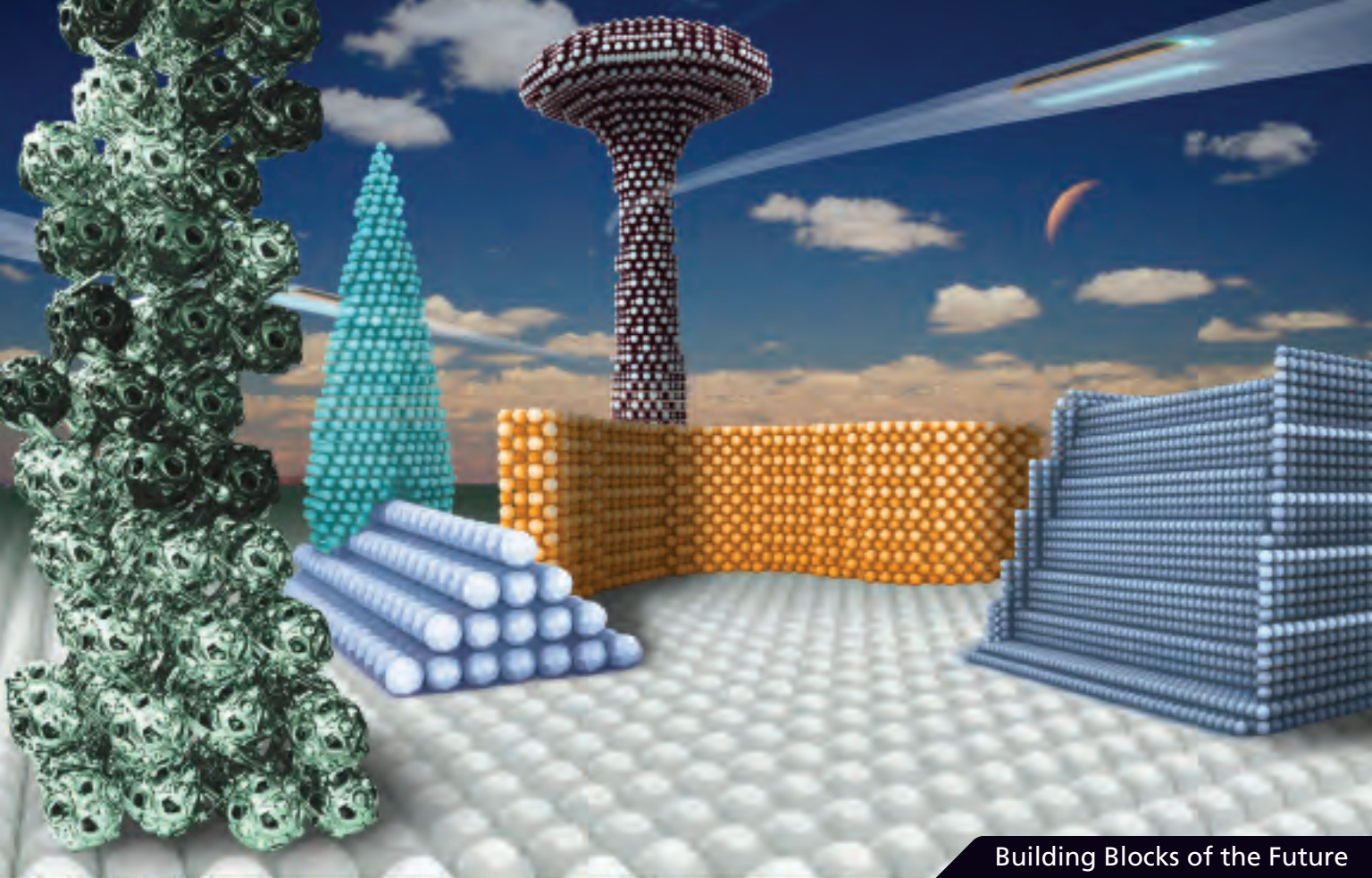
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C6XTY



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Building Blocks of the Future



Urban Landscapes



Notre Dame Roof

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