

MATERIAL WORLD EXHIBITION DAC: ENVIRONMENTAL FRIENDLY BUILDING MATERIALS



All-eyes-on the intrinsic features of the latest building materials. Selected to inform and inspire.

Our cities' infrastructure, buildings and interiors ooze the aesthetics and functionality of the materials in use. Yes, beyond the contours of initial ideas, remains the tangible core. The building envelopes react with the outdoor environment and the interiors' floor-to-ceiling composition influence the indoor climate. From this perspective, it is all about materials! Architecture itself was shaped throughout history according to the available resources and technology.

The Danish Architecture Centre in Copenhagen constantly facilitates and accommodates fresh initiatives for innovation. If it is the case of lectures, guided tours or exhibitions, it fuels a local motor for evolution and inspires internationally. This time, the collaboration with the innovation unit from 3XN, whose members teamed up to research and promote a sustainable approach unveils a collection of ultimate building materials.

Ranging from structural pieces to stylish façades and interior finishes; from smart, interactive materials to ideal, cradle-to-cradle concepts, the collection exhibits over one hundred samples. Bold design proposals might implement self-cleaning roofs, phase-change materials, photobiotic facades or ground-breaking components inspired from the aerospace` industry. For instance, PCM materials could radically shift the rules of mass construction. A gypsum plasterboard containing PCM has the same heat-storage capacity as 9cm of concrete or 12cm of brick. Other highlights: the recyclable insulation types seem to flourish and glass is maximizing it`s qualities and range of appliance. The cradle-to-cradle paradigm has spread world-wide; raising awareness and ecological standards.

In addition, twelve ambitious, real-life projects were selected for detailed analysis. Further close-ups of the cases are provided through accompanying mock-ups of specific building components.

Revolutionary techniques make boost the architectural world. Designing the Elbphilharmonie in Hamburg, Germany above a warehouse from the 60`s cut possible escalating costs when using special concrete decks with hollow plastic balls that made the new structure 30% lighter. Another example, the Halley IV Research Station in Antarctica incorporates highly-insulated windows filled with nanogel to resist the cold. On the other hand, Arup`s project on algae façade systems sets an example on-going research on CO2 consumers and biomass alternative resources.



Also exhibited is a machine which sculpts concrete, a 3D façades` printer. Tailor Crete undertakes infinite design patterns, saves time and is praised for its effectiveness and detailed work quality.

Source: <http://www.globalsiteplans.com/environmental-design/material-world-exhibition-da-environmental-friendly-building-materials/>